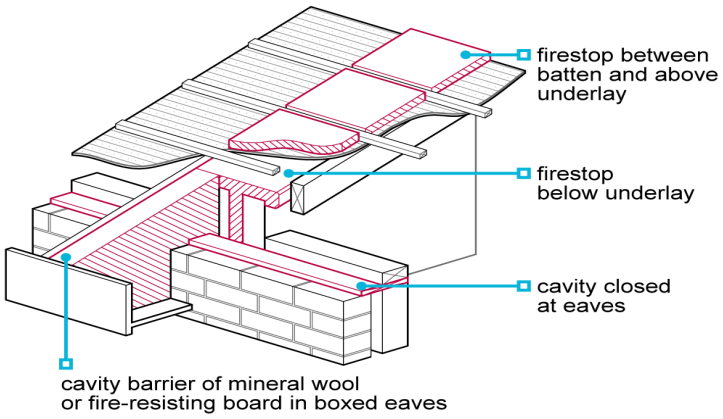
1.0 Introduction & Exclusions

1.1 Capital PCC were engaged by Barnet Homes to undertake a desktop analysis and follow-up surveys, in order to establish the nature and extent of combustible cladding to low-rise properties (up to three storeys) within the borough which are believed to be timber framed. The action was prompted following the fire which occurred on the 8th of June 2023 and resulted in severe damage to a terrace of four, two-storey houses, resulting in a recommendation for all four houses to be demolished and the subsequent investigation report into the causes of fire spread undertaken by Capital PCC. Although there were no fatalities or serious injuries one householder had to be rescued as they were unable to self-evacuate. As a result, Barnet Homes wished to make an assessment of properties which were at risk of a similar occurrence, with a review of potential preventative measures.

Front

Rear

1.2 The Capital report into the fire at Moss Hall Grove highlighted that the most likely causes of the rapid fire-spread were via the combustible external cladding material which bridged across the compartment lines between houses, via the boxing-in of the roof eves and potentially between the head of the compartment party wall and the underside of the roof covering. In modern construction these potential routes at roof level would be designed out as per guidance e.g. **NHBC detail 7.2.16**



1.3 Following the identification of all in-scope properties a number of intrusive investigations would be undertaken in order to confirm the wall build-up, any fire stopping arrangements which may exist within the eaves and within the roof-spaces at the compartment party wall.

1.4 This report does not relate to any other low-rise property archetypes or safety considerations e.g. Traditional Build, System Build, Large Panel Systems or RAAC concrete.

Common examples of timber and UPVC clad low-rise properties:-

1. 

Timber clad, timber framed

2. 

UPVC clad, timber framed

2.0 Relevant Legislation & Guidance

2.1 The legislation in relation to the fire safety of two-storey single dwellings in the UK mainly derives from the Building Regulations for new and refurbished houses, they fall outside of the scope of The Fire Safety Order 2005, which includes provisions of risk assessment provided within PAS9980, The Fire Safety Regulations 2022 or the Building Safety Act 2022. However, all dwellings, including privately owner occupied, are subject to compliance with the Housing Health and Safety Rating System (HHSRS) under the Housing Act 2004, which gives Local Authorities powers to reduce any fire risks identified in an inspection under Part 1 of the Act. Local authorities cannot enforce against themselves.

2.2 Building Regulations

2.2.1 The buildings in question were not built to current building regulation standards and it is recognised that the Type 1 archetype would have pre-existed any modern building regulations.

2.3 Housing Health & Safety Rating System (HHSRS)

2.3.1 The Housing Health and Safety Rating System (HHSRS) is a risk-based evaluation tool to help local authorities identify and protect against potential risks and hazards to health and safety from any deficiencies identified in residential dwellings. It was introduced under the Housing Act 2004 and applies to residential properties in England and Wales.

2.3.2 When Local Authority officers inspect a dwelling, they will look for any risk of harm to an actual or potential occupier of a dwelling, which results from any deficiency that can give rise to a hazard. They will judge the severity of the risk by thinking about the likelihood of an occurrence that could cause harm over the next twelve months, and the range of harms that could result. The local authority officer will

make these judgements by reference to those who, mostly based on age, would be most vulnerable to the hazard, even if people in these age groups may not actually be living in the property at the time. The HHSRS score is calculated following an inspection by a suitably qualified officer. The score does not dictate what action will be taken by the local authority to remedy the hazard. The government has issued statutory Enforcement Guidance to local authorities on the actions that they can take and the factors they should consider to decide which action is the most appropriate.

2.3.3 Barnet Council has an Enforcement and Prosecution policy which sets out the general principles that the London Borough of Barnet will follow in relation to the investigation, enforcement and prosecution of its regulatory functions. Local authorities are under a mandatory duty to take action in the case of category 1 hazards (highest risks). They also have powers to take action in the case of category 2 hazards (lower risks).

3.0 Desktop Study / Data check

Following a desktop study to identify the location and number of in-scope properties an interim report of early indications was provided to Barnet Homes.

4.0 Site Surveys

4.1 Photographic surveys of all in-scope properties identified from the desktop study were undertaken by Capital PCC in order to capture the following data:-

- Property address
- Cladding material
- Soffit / fascia material
- Roof type & material

These detail types were captured as they were found to have been factors in the spread of fire at Moss Hall Grove in addition to confirm the continuity of cladding from one compartment unit to another.

4.2 The survey team also identified similar properties in close proximity to those in-scope which were not identified in data provided, this added another 26 properties to the total.

4.2.1 A summary of the site survey results:-

Total No. in scope units		
587		
Total Timber Cladding	**Total UPVC cladding**	**Total Other Finish**
454	105	14
Total Pitched Roofs	**Total Flat Roofs**	**Total Omitted as Brick / Traditional / Not Adjoined by Cladding / Incorrectly included**
528	59	14

All properties surveyed had either “open” eaves, timber or UPVC soffit and / or fascia boards at the eaves detail.

After omitting the 14 properties which are traditional construction, or do not have continuous cladding, or were incorrectly included, the residual in-scope number is **573.**

4.3 The site surveys established 4 archetypes amongst the in-scope properties:-

Type 1 - 1930's Timber clad terrace

454 units

Type 2 - 1970's UPVC/ timber clad & brickwork

50 units

Type 3 –1970's UPVC/timber sheet cladding

10 units

Type 4 - 1970's UPVC / sheet cladding with flat roof

59 units

5.0 Intrusive Investigations

5.1 Investigations were undertaken into selected locations, specifically chosen to provide the required maximum information regarding the material and design configuration of the walls, eaves and junction of party wall and roof, whilst also minimising disruption to residents. The investigations were focussed on elements of risk of fire spread and the buildings underlying structure which may be affected by an occurrence of fire. Type 1 properties were selected as the primary target for investigations, as they are both the oldest & most numerous archetype.

5.2 Intrusive investigation surveys were undertaken at the following Type 1, Type 2 & Type 4 properties. Type 3 is the Moss Hall Grove archetype & therefore requires no further investigation.

5.3 Type 1 Risk of Fire Spread Findings

Archetype	Photo 1	Photo 2	Photo 3
Type 1 – 1930's	 Party wall (102mm) & timber framed wall build-up	 Timber roof battens crossing party wall	 Top of party wall gap viewed from the eaves
Type 1 – 1930's	 Timber frame wall build-up to flank wall	 Soffit indicating no fire-stopping in the eaves	 Opening into floor cavity direct from the outer wall
Type 1 – 1930's	 Party wall (225mm) & timber framed wall build-up	 Opening into floor cavity direct from the outer wall	 Timber frame wall build-up to flank wall

5.3.1 Investigations revealed that that the properties are of timber framed construction with brickwork party walls only.

5.3.2 The compartment party walls are bridged by the combustible timber cladding and bitumen based membrane. The main walls of the properties consist of a lightweight timber frame which would burn readily in the event of a serious fire, similar in nature to the occurrence at Moss Hall Grove.

5.3.3 It was noted that there was no fire stopping at roof level where the party wall meets the underside of the roof covering, or at the line of compartmentation within the eaves.

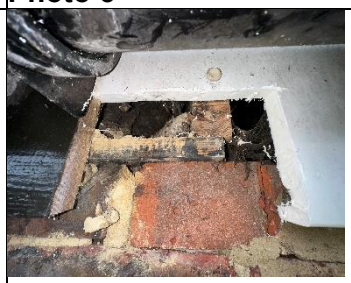
5.3.4 The void within the timber first floor construction is continuously open into the wall void, offering an unobstructed route for the spread of smoke and fire laterally across the property within the structure.

5.3.5 The investigations reveal that in many aspects, the properties have similar design & material characteristics as the houses at Moss Hall Grove which suffered rapid and severe damage during a fire in June 2023.

5.4 Type 1 Potential Insulation Upgrade Findings

5.4.1 None of the properties so far investigated had any insulation within the walls and limited amounts within roof spaces. This gives an opportunity to upgrade the thermal performance of the houses by installing insulation of up to 125mm depth in the walls, loft spaces could also be considered for upgrades. Separately or combined, it is anticipated the insulation upgrades will have a significant impact on both the thermal performance and associated EPC scores.

5.5 Type 2 Risk of Fire Spread Findings

Archetype	Photo 1	Photo 2	Photo 3
Type 2 1970's	 Party wall line, UPVC cladding fixed to blockwork via timber framing bridges compartment line.	 Timber truss roof with masonry which appears to meet the underside of the roof covering	 Junction of party wall behind the fascia, there is a continuity gap which should be fire stopped

Archetype	Photo 1	Photo 2	Photo 3
Type 2 1970's	 Wall build-up of UPVC cladding on timber frame over blockwork (assumed cavity)	 Timber truss roof with masonry which appears to meet the underside of the roof covering, section of blockwork missing	 Junction of party wall behind the fascia, there is a continuity gap which should be fire stopped

5.5.1 Of the two, Type 2 properties investigated, investigations revealed that that the properties are of masonry construction with UPVC or timber cladding fixed over a blockwork backing wall.

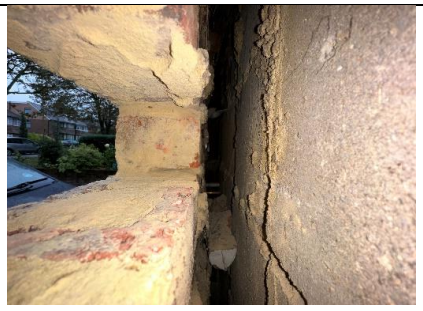
5.5.2 The compartment party walls are bridged by the combustible UPVC or timber cladding in some locations but not all, where adjoining properties have an existing fire-break arrangement they have been omitted from the in-scope properties. In the locations where the combustible UPVC cladding bridges the compartment line from one property to another there is the risk of secondary fire spread. However, the effect of this on the risk to life and property is diminished by the non-combustible masonry backing structure.

5.5.3 It was noted that the dividing party walls in the roof-spaces appeared to meet the underside of the roof covering without any significant gaps noted. However, at eaves level behind the fascia boards, gaps in the fire stopping continuity were noted.

5.5.4 The investigations reveal that in many aspects, the Type 2 properties have a much lesser extent of combined design and material flaws as the houses at Moss Hall Grove which suffered rapid and severe damage during a fire in June 2023.

5.6 Type 2 Potential Insulation Upgrade Findings

5.6.1 None of the properties so far investigated had any insulation within the walls. The masonry cavity wall was opened and this revealed no cavity wall insulation present and limited amounts within roof spaces.

Archetype	Photo 1	Photo 2
Type 2 1970's	 Masonry wall with empty cavity 70mm	 Loft insulation 100mm

This gives an opportunity to upgrade the thermal performance of the houses by installing cavity wall insulation of up to 70mm depth in the walls; loft spaces could also be considered for upgrades. Separately or combined, the insulation upgrades will have an impact on both the thermal performance and associated EPC scores. However, with this archetype Building Regulations would not require an insulation upgrade to the walls as part of any cladding remediation due to the limited area of wall covering affected.

5.7 Type 4 Risk of Fire Spread Findings

Archetype	Photo 1	Photo 2	Photo 3
Type 4 1970'a	 Wall build-up, upper floor front	 UPVC fascia with continuous cavity behind	 Wall build-up, lower floor front

5.7.1 Investigations into selected limited locations, revealed that the properties are of timber framed construction with external continuous UPVC cladding fixed to the upper floors and a mixture of gravel dashed fibre reinforced resin / plastic sheet cladding to the lower floor at the front and a cement particle cladding sheet board to lower floor at the rear. There is also a mix of insulation types within the walls comprising of EPS sheets, thermoset foam sheets and loose fill mineral wool, the insulation types only partially fill the void within the timber framed walls.

5.7.2 At the vertical compartment party wall line, the outer wall consists of a continuation of the timber framed, external wall arrangement so there is effectively no fire break arrangement within the external wall between separate units.

5.7.3 As the Type 4 archetype have flat roofs there is no traditional eaves detail but instead a continuous UPVC fascia board which covers the junction between the head of the external walls and the roof. Directly behind the UPVC fascia board there is a continuous cavity which offers an unrestricted route for the spread of fire from one unit to another.

5.7.4 The investigations reveal that in many aspects, the properties have similar combined design & material characteristic as the houses at Moss Hall Grove which suffered rapid and severe damage during a fire in June 2023.

5.8 Type 4 Potential Insulation Upgrade Findings

5.8.1 The walls to the type 4 properties are generally made up of 90x45mm timber studwork, the upper walls have additional timber battens fixed to the outer faces of the studwork to which the shiplap cladding is fixed. The upper section of the walls contain two layers of insulation, one each of EPS and a thermoset foam, each at 20mm giving a 40mm layer overall with a 50mm cavity, behind this is a vapour check membrane and the inner plasterboard linings.

5.8.2 The lower section walls contain 50mm loose fill mineral wool fibre insulation.

5.8.3 This gives an opportunity to upgrade the thermal performance of the houses by installing wall insulation of up to 90mm depth. These upgrades will have an impact on both the thermal performance and associated EPC scores. Roof configuration & insulation were not investigated.

6.0 HHSRS Survey Findings

6.1 HHSRS surveys were undertaken of a sample of some of the same properties used for the intrusive investigations, the purpose of the inspections was to assess for the hazard of fire under HHSRS guidance e.g.:-

- Non fire-resistant fabric – allowing fire to spread
- Smoke permeable fabric – allowing smoke to spread
- Fire stops to cavities - lack of, allowing fire to spread
- Smoke/heat detectors – lack of or defective
- Means of escape – inadequate safe means of escape

The surveys provide an overall risk category to the property based on a number of factors.

6.2 Survey findings to archetypes were as follows:-

HHSRS Type 1 findings: Category 1

HHSRS Type 2 findings: Category 2

HHSRS Type 3 findings Category 1

HHSRS Type 4 findings: Category 1

6.4 It should be noted that the local authority enforcement obligations under HHSRS apply to private owner occupier properties as well the rented sector.

6.5 Where category 2 hazards are identified under the Housing Act 2004 on inspection it is unlikely that the Council will be requiring work to be completed, although the properties requiring checking to make this assessment.

7.0 Comparison of Archetypes External Walls Materials & Design

7.1 In order to analyse the design and material elements which were found to be contributory factors to the Moss Hall Grove fire, we can compare the archetypes by assigning the contributory factors a positive, neutral or negative risk factor, similarly to that used in PAS9980 to assess external walls.

Matrix omitted for distribution

7.2 In the materials and design matrix for each archetype we have included Type 3 (Moss Hall Grove archetype) by way of comparison. Analysis indicates types 1 & 4 produce a similar result to type 3, with 6 negative aspects out of 7, whilst Type 2 indicating more neutral results.

8.0 Remediation Options

8.1 As a method of hazard risk control there are 4 main options to consider, in order of preference:-

a) Eliminate

b) Substitute

c) Isolate

d) Mitigate

The main risk presented by the 4 housing unit archetypes which have been identified as having similar characteristics to the Moss Hall Grove houses, is the continuous combustible cladding to the external envelope, combined with a timber frame structure. Both timber & UPVC cladding are categorised as being Euroclass D or E, meaning they are combustible. The combustion of the external cladding at Moss Hall Grove quickly spread to the lightweight timber frame which then burned readily, creating rapid fire growth, spreading to adjacent properties.

8.1.2 Eliminating both the timber / UPVC cladding and the timber frame to the archetypes 1, 2 & 4 is not a feasible solution, as it would essentially mean demolition and re-build.

8.2 Cladding Replacement & Firestopping (Substitute & Isolate)

8.2.1 The risk from the external cladding can be eliminated by the replacement of the wall cladding, eaves soffits and facsia's with a non-combustible alternative. This would also act to encapsulate & isolate the timber frame, providing protection from direct contact with an external source of combustion.

8.2.2 This option would require Building Control approval as under the rules governing the renovation of a thermal element there would be a requirement to upgrade the thermal performance to meet current building regulation U-value target of 0.18 for walls or 0.3 if it can be demonstrated that the cost of achieving 0.18 would not be paid back from energy savings within a 15-year period, therefore making it not financially viable. This additional enhancement would have a significant impact on EPC scores and Net Zero targets.

8.2.3 With cladding replacement it would also entail introducing cavity barriers at the line of compartmentation between dwellings, around any openings or penetrations through the timer frame & firestopping within the eaves and junction of party wall and roof covering, in order to provide robust protection to the timber frame and a complete and continuous vertical line of compartmentation between units.

8.2.4 In the event that a re-cladding option was selected but was unable to be applied to all the units in a continuous terrace containing combustible cladding, its effectiveness may be reduced and some robust detailing would be necessary at the junctions of new and existing materials.

8.2.5 Remediation of Type 2 could be limited to the replacement of the cladding, soffits and fascia's only, due to the limited areas this would not fall under the rule for the requirement of a thermal upgrade, however other works to ensure the continuation of the vertical line of compartmentation would be required e.g. cavity barrier at the party wall line and fire stopping within the eaves.

8.2.6 The majority of the work can be undertaken externally with minimal disruption to occupants.

8.3 Timber treatment (Substitute & Mitigate)

8.3.1 For properties which have timber cladding (all of Type 1 and a proportion of Type 2), there is an alternative option of timber treatment with flame retardant products. Flame retardants generally work by reducing the surface spread of flame, heat and smoke release, providing extra time for safe evacuation. There are 2 types of application for flame retardant products:-

a) Pre-treatment in a factory under controlled conditions with a quality assured product and process where the retardant is applied by an approved processor, normally impregnated into the timber.
b) On site, applied by brush or spray, surface coating only, whilst not prohibited this method would not be considered best practice, as quality control and coverage are almost impossible to assure.

8.3.2 There are advantages and disadvantages to both methods, however method (a) would require the complete replacement of the existing timber cladding and would therefore have no real advantage over replacement with a non-combustible product.

8.3.3 With option (b) the surface requires correct preparation and application of the product to be successful; however product certification schemes will not cover the application. Also being a surface treatment, the protection can be negated by removal during redecoration, resulting in a requirement for complete re-treatment of the surface. If external redecoration is undertaken by individual occupants, the effectiveness of site applied treatments cannot ever be guaranteed in the future.

8.3.4 Option (b) being a surface treatment only would still require the removal and replacement at specified location in order to introduce cavity barriers and fire stopping within the wall at the compartment lines and at any openings or penetrations through the wall system, in order to prevent the timber frame being exposed to other potential routes for fire attack.

8.3.5 With either (a) or (b) options there would still be a requirement to undertake fire-stopping within the eaves and under the roof coverings

8.3.6 The majority of the work can be undertaken externally with minimal disruption to occupants.

8.4 Extend the Party Wall (Isolate)

8.4.1 Consideration was given to whether the existing 225mm party walls could be extended through the face of the existing cladding materials to create an effective fire break in the cladding continuity, which would involve removing a vertical section of cladding at the party wall, inserting a mechanical brick tie fixing and then installing a 225x225mm brick column. This would provide a non-combustible break in the cladding.

8.4.2 However from a technical & buildability perspective, this potential option is unlikely to be feasible as a universal solution as many of the houses have porches to the front and / or rear extensions which are built right up to the party wall line and such arrangements will prevent any extension of the party wall being brought forward as a fire break.



8.4.3 Works could be carried out externally, however likely to be technically unviable.

8.5 Active Fire Safety Systems (Mitigation)

8.5.1 With the houses falling outside of any fire safety legislation or guidance for existing residential housing, with the exception of the HHSRS, due to the fact they are two storey self-contained dwellings, it could be argued that there is no need to undertake remediation works and that mitigation measures via alarm systems or sprinklers should provide adequate early warning and / or protection within this type of property.

8.5.2 All the Type 1s inspected had existing combined heat and smoke detectors / alarms already installed, meaning alarms are not considered an effective mitigation for the purposes of HHSRS.

8.5.3 Cost savings normally associated with these types of mitigations in blocks of flats versus remediation, relies on the fact that one system will be servicing many housing units, whereas where each dwelling needs an individual system, cost savings will be dramatically reduced. Many householders are likely to object to unsightly pipework and discharge heads associated with sprinkler systems in their dwellings and the disruption required to install them, which could result in a high rate of no access for installation work.

8.5.4 Active fire safety systems rely on a regime of regular and frequent servicing and maintenance in order to ensure they perform adequately when called upon. The Fire Protection Association recommends maintenance checks on a weekly, monthly, quarterly cycle and with a 3rd party annual inspection for sprinkler systems (https://www.thefpa.co.uk/advice-and-guidance/advice-and-guidance-articles/sprinkler-system-maintenance-and-testing-guidance) .

This may be less onerous in multi-storey, multi-occupancy dwellings where many of the system components will be within the Landlords demise, which provides access for the purposes of servicing and maintenance. In a scenario where individual single dwellings have to be accessed for the purposes and servicing and maintenance (including owner occupied), the access rate may well be a significant factor in the performance of the required fire safety measures when needed; also there would be an ongoing cost-burden for the provision of servicing & maintenance services.

9.0 Insulation Improvement Works

9.1 Any source of government funding (and possibly others) would result in a requirement to be PAS2035 compliant. This would result in a need to be assessed by a PAS2035

assessor & Retrofit Co-ordinator prior to any improvements being undertaken. As a result it is possible that other unknown improvements may be recommended in tandem with improved insulation e.g. window improvements or mechanical ventilation upgrades.

9.2 If no external funding source is utilised for fabric insulation improvements, it will mean there is no compulsion to meet PAS2035 standards, with the only regulatory compliance being Building Control. However, it would be prudent to undertake condensation risk analysis to a sample of properties before proceeding in order to ensure insulation improvements do not result in problems elsewhere as a bi-product.

10.0 Recommendations

Considering the many factors reviewed in this report, the following recommendations are made for consideration:-

a) To follow the more robust principles of Substitution and Isolation of risk, with the remediation of the cladding using a replacement non-combustible product of a similar appearance as a universal solution, this will also contribute towards improved EPC ratings & Net Zero targets as a bi-product.
b) The remediation is undertaken to all properties within a terrace to ensure elimination and isolation of the risk is achieved.
c) The local planning department is consulted for approval of the proposed scheme before proceeding
d) A sample of properties are subject to condensation risk analysis
e) Pilots of the proposed works be undertaken, three of Type 1 (due to the volume and age), one Type 3 & one Type 4 archetypes, in order to establish any unknown factors and resolve any issues with regard to technical detailing and specification, before proceeding to a full contract award.
f) The London Borough of Barnet inform freeholders of the potential consequences of action and enforcement for an HHSRS category 1 hazard.

11.0 Synopsis of Remediation Proposals – Considerations for Undertaking Tenanted Properties & not Freeholder Properties

11.1 It was noted that out of **573** properties identified as having similar characteristics, only 153 are owned by LB Barnet. The configuration of the houses is that they are largely laid out in pairs, terraces of four, or terraces of six and due to the numerical ratios it is highly likely that the majority of houses within any terrace will be a majority of freeholders. This situation raises a number of practical issues:-

11.2 **Planning Permission –** Whilst planning permission may not be required in non-conservation area properties (if as intended we replace the existing cladding materials with a like for like Euroclass A1/2 replacement), a pre-application is recommended given the nature of the works and the association with fire risk (and not just aesthetic appearance). If as a result of the pre-application it is determined that planning permission is required then a number of challenges will be introduced to the delivery of the works in respect of matching existing and new materials, detailing between properties and the fire safety detailing, if only tenanted properties are undertaken within terraced rows.

11.3 **Party Wall Act –** The party wall implications in relation to undertaking the cladding replacement works to tenanted properties (only) is hugely significant in respect of timing (i.e. issuing of notices and appointment of adjoining owners surveyors for each adjoining property), fire safety detailing (i.e. creating suitable fire compartmentation details at party wall and roof junctions where there is only 50mm to work with on a 100mm wide party wall), planning permission (i.e. matching new materials with existing materials), aesthetics (i.e. appearance of new materials against existing materials), construction programme risk (i.e. works can't be programmed in until party wall notices are in place and if works to trim the party line between the existing and new materials result in damage to existing materials then freeholders' surveyors may want works stopped and full elevation replaced with new materials) and costs (i.e. costs associated with the above and especially costs associated with construction costs for delays and out of sequence works).

11.4 **Fire Safety –** As above, if only tenanted properties are replaced, then the formation of fire barrier details and finishing details over half of the existing 100mm party walls (i.e. between tenanted and freehold properties) will be challenging to ensure the details achieve the correct fire performance, are properly waterproofed and they achieve the right aesthetic appearance. There is also the risk that say if only one tenanted property is re-clad in A1/2 materials, and it adjoins 2-3 freeholder properties, then there could be a risk of fire flashover from windows or non-performing fire barrier over to the adjoining properties and fire spreading to all houses.

11.5 **Technical Challenges –** As above, replacing the cladding to tenanted properties only will introduce lots of technical challenges in achieving the right fire performance detail, waterproofing of the detail, reinstatement of adjacent cladding and the overall appearance of the finish. The risks around this are somewhat unknown until works start and these unknowns could lead to significant delays with changes to the scope of work scopes, party wall notices and agreement / updating of these notices.

11.6 **Cost –** Whilst there will be a significant cost increase in undertaking the freehold properties, from a fire safety perspective, appearance, programming and cost certainty point of view, replacing all cladding eliminates most of these risks. The likely saving on party wall notices / surveyors, issues during construction, delays, etc could be significant and therefore is also the reputational issue in respect of the known risk.

12.0 Competency Declaration & Quality Assurance

The author of this report has the requisite level of competence with both academic qualifications and over 25 year's experience of property management and construction, including fire safety, having achieved:-

- B.Sc. (hons) in Building Surveying
- Membership of The Chartered Institute of Building
- Membership of the Institute of Fire Engineers
- Associate of the Royal Institute of Chartered Surveyors
- RICS External Wall Assessment System programme
- NEBOSH National Certificate in Fire Safety and Risk Management
- Diploma of Domestic Energy Assessment

12.1 This document has been prepared in accordance with our BSI ISO 9001 Quality Assurance procedures and authorized for release.

REPORT AUTHOR & SIGN OFF	
Signed..... Capital PCC ..... **Sean Kelly B.Sc. (Hons) MCIOB MIFireE** Director at Capital PCC Ltd	Date: 28-11-23
CHECKED BY	
Signed..... Capital PCC ..... **Patrick Madigan BSc (Hons) MRICS** Director at Capital PCC Ltd	Date: 28-11-23