Department of Finance
An Roinn Airgeadais
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Building (Amendment) Regulations (Northern Ireland) 2022

Final Regulatory Impact Assessment for proposals on fire safety - 'Ban on combustible materials' in external walls and specified attachments of certain buildings

Part B (Materials and workmanship)

January 2022

Title: Ban on combustible materials in external walls and specified attachments of certain buildings.	**Regulatory Impact Assessment (RIA)**
	Date: January 2022 (Final)
	Type of measure: Subordinate legislation
Lead department or agency: Properties Division, Department of Finance	**Stage: Final**
	Source of intervention: Fire
Other departments or agencies:	**Contact details:** Building Standards Branch, Properties Division, 6th Floor, Goodwood House, 44-58 May Street, Belfast, BT1 4NN.

Summary Intervention and Options

What is the problem under consideration? Why is government intervention necessary?
The tragedy of the Grenfell fire on 14 June 2017 provides the driver for Government intervention. Since the Grenfell fire there has been much debate about compliance and interpretation of provisions in the Building Regulations' guidance relating to the requirement for external walls on buildings to adequately resist the spread of fire. The Government's building safety programme in England identified high-rise residential buildings to have combustible aluminium composite material cladding panels, which did not follow the provisions of Building Regulations guidance. The purpose of the ban will be to make clear exactly what materials can and cannot be used.

What are the policy objectives and the intended effects?
The objective of this policy option change is to provide certainty about materials to be used in external wall systems of buildings within scope of the ban. By explicitly banning most non-A rated materials, there will be greater clarity about what is permitted to be used on site and in the construction process. This will make compliance easier to identify for designers, installers and district councils who enforce the building regulations. It will improve the overall level of fire safety in buildings here in relation to external fire spread on certain types of buildings with a storey more than 18m above ground level. The intended effect is to reduce the consequences of fire, hence saving lives and preventing injuries.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)
The options are: **Option 1** – Do nothing. Under this option there would be no change to Building Regulations and there would be no prescriptive ban on the use of combustible materials in external walls. Option 1 would produce little additional benefits as only a percentage of developers would voluntarily move to using non-combustible materials for the buildings in scope. It would leave this jurisdiction out of step with related regulations, standards and guidance operational in other jurisdictions which could cause confusion within the industry. **Option 2** - In this option, changes would be made to Building Regulations which would ban the use of combustible materials in external walls and specified attachments such as balconies. This ban would cover buildings including blocks of flats, student accommodation, care premises, hospitals and dormitories in boarding schools (all with a floor level 18m above ground level). This option would require that materials in external walls and balconies have a minimum performance of class A2-s1, d0 under the relevant European classification system set out in BS EN 13501-1. It would also mean some key materials which are unable to meet the requirement are exempted.

Will the policy be reviewed? Yes	**If applicable, set review date: April 2025**

Cost of Preferred (or more likely) Option		
Total outlay cost for business £1.27m over 10years	**Total net cost to business per year** £127K	**Annual cost for implementation by Regulator** £13k (1st year only)

Does Implementation go beyond minimum EU requirements?			~~**NO**~~	**YES**
Are any of these organisations in scope?	**Micro** Yes	**Small** Yes	**Medium** Yes	**Large** Yes

The Final RIA supporting legislation must be attached to the Explanatory Memorandum and published with it.

Approved by: Desmond McDonnell Date: 26 February 2022

Summary: Analysis and Evidence Policy Option1

Description:

ECONOMIC ASSESSMENT (Option 1)

Costs (£m)	Total Transitional (Policy) £0		Average Annual (recurring) £0	Total Cost £0
Low	**£0**	**N/A**	**£0**	**£0**
High	**£0**		**£0**	**£0**
Best Estimate	**£0**		**£0**	**£0**

Description and scale of key monetised costs by 'main affected groups'

Option 1 imposes no direct costs for the main affected groups (developers, builders, manufacturers, clients requiring building work to be carried out). A certain percentage would voluntarily move to using A2 and above classification materials in external walls. There would be no direct cost to District Council Building Control Departments or the Fire and Rescue Service who would have to bear the cost of training and familiarisation with the new changes under Option 2.

Other key non-monetised costs by 'main affected groups'

Choosing Option 1 would mean the social cost of the lives saved and injuries prevented through option 2 would not be realised. Also the economic and environmental cost savings through option 2 would not be realised.

Benefits (£0m)	Total Transitional (Policy) £0		Average Annual (recurring) £0	Total Benefit £0
Low	**£0**		**£0**	**£0**
High	**£0**		**£0**	**£0**
Best Estimate	**£0**		**£0**	**£0**

Description and scale of key monetised benefits by 'main affected groups'

The theory of Option 1 would be based on the construction industry continuing to use a mixture of A rated materials and non-A classified materials in construction projects relating to cladding and balconies. England's equivalent impact assessment assumed 15-30% would continue to use non A-rated materials and 70-85% would voluntarily use A rated materials. For the established costs in this RIA, it is assumed the same percentage of developers in here will voluntarily move to using A rated materials also.

Other key non-monetised benefits by 'main affected groups'

The purpose of the ban will be to make clear exactly what materials can and cannot be used. This will make compliance easier to identify for designers, installers and district councils who enforce the building regulations. Better compliance will ensure that fire safety risks are better identified and managed by developers, so reducing risks.

Key Assumptions, Sensitivities, Risks

Choosing Option 1 would not keep pace with changes in risk and developments in other regions. It would leave here out of step with related regulations, standards and guidance in other UK regions which could cause confusion within the industry.

BUSINESS ASSESSMENT (Option 1)

Direct Impact on business (Equivalent Annual) £0m				
Costs: £0	**Benefits: £0**	**Net: £0**		

Cross Border Issues (Option 1)

How does this option compare to other UK regions and to other EU Member States (particularly Republic of Ireland)

Choosing option 1 would leave here out of step with other regions of the UK (particularly England and Scotland) that have introduced the same requirement or similar requirement recently. ROI have not issued any such ban so option 1 would keep here in line with the standards in ROI which could assist firms who operate across the island.

Summary: Analysis and Evidence Policy Option2

Description:

ECONOMIC ASSESSMENT (Option 2)

Costs (£m)	Total Transitional (Policy) (constant price)	Years	Average Annual (recurring) (excl. transitional) (constant price)	Total Cost (Present Value)
Low	**Optional**	1st year only	**Optional**	**£117k**
High	**Optional**		**Optional**	**£137k**
Best Estimate	**£261k**			**£127k**

Description and scale of key monetised costs by 'main affected groups'

Two methods were used to calculate cost estimates for this policy change. A central scenario is used to provide a best estimate (£127k). Further details are contained within this document on how these costs were arrived at. Additionally, there are costs of approximately £13k familiarisation for District Council building control enforcement bodies (1st year only) and approximately £121k familiarisation for industry (1st year only), Annex B provides further details. Total cost for 1st year - £261k. Yearly cost after that - £127k (best estimate central scenario).

Other key non-monetised costs by 'main affected groups'

Some of the consultation responses in England raised the issue of unintended consequences of the ban, in particular a potential loss of space. The reason for this is that A1 rated materials like mineral wool insulation are likely to be bulkier. England worked with consultants to analyse the potential impact of this, which they concluded was minor for the majority of cases.

Benefits (£m)	Total Transitional (Policy) (constant price)	Years	Average Annual (recurring) (excl. transitional) (constant price)	Total Benefit (Present Value)
Low	**Optional**		**Optional**	**Optional**
High	**Optional**		**Optional**	**Optional**
Best Estimate	**N/A**			**N/A**

Description and scale of key monetised benefits by 'main affected groups'

The new requirement will reduce the potential for fire spread on facades and hence reduce potential cost to society of injury and death to occupants and firefighters. The cost of firefighting operations should be reduced, along with environmental costs such as firefighting water wash off and globally due to products of the combustion process, e.g. CO/CO2 entering the atmosphere. There will be minor cost savings for the design stage of building construction. The costs of undertaking large-scale whole system wall tests (BS 8414 tests) will also be avoided.

Other key non-monetised benefits by 'main affected groups'

By explicitly banning most non-A rated materials, there will be greater clarity about what can be used on site and in construction. This clarity makes it harder for the incorrect materials to be procured and used in the construction process without being noticed, reducing unintentional non-compliance. Another consequence of the ban will be to rule out the use of assessments in lieu of tests for external walls which may have led to inappropriate approaches to the design and installation of external wall systems incorporating combustible cladding.

Key Assumptions, Sensitivities, Risks

The key area where assumptions are made involves the forecast of stock and rate of new build of blocks of flats, student accommodation, care premises, hospitals and dormitories in boarding schools over 18m (based on last 3 years figures supplied by Planning Statistics).

BUSINESS ASSESSMENT (Option 2)

Direct Impact on business (Equivalent Annual) £127k				
Costs: 127k	**Benefits: N/A**	**Net: 127K**		

Cross Border Issues (Option 2)

How does this option compare to other UK regions and to other EU Member States (particularly Republic of Ireland)

No such a ban on the use of combustible materials on external walls of certain buildings exists in the ROI. Those parts of the industry that operate on an all island basis would have to adopt to the different standards in the two jurisdictions. The amendment will bring here into line with the same requirement in England and Wales and a similar requirement in Scotland.

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Contents

Introduction

The Department of Finance (the Department) has policy responsibility for maintaining the Building Regulations. The Building Regulations apply to new buildings and to buildings being altered, extended or subject to a material change of use and are made principally to secure the health, safety, welfare and convenience of people in or about buildings; further the conservation of fuel and power; further the protection and enhancement of the environment and promotion of sustainable development.

The regulations set mainly functional requirements and are supported by Technical Booklets giving guidance, including performance standards and design provisions, relating to compliance with specific aspects of the Building Regulations for the more common building situations.

Purpose and intended effect

Amendments to the building regulations that impact fire safety standards are done so with the intended effect to improve the level of fire safety in buildings here, where relevant building work is carried out by reducing the consequences of fires and thereby saving lives and preventing injuries. The objective of this policy option change (which involves a new regulation to Part B 'Materials and workmanship' of the building regulations) is to provide certainty about materials to be used in external wall systems and specified attachments for buildings within scope.

Scope

Through a new regulation in Part B, materials which become part of an external wall or specified attachment of a 'relevant building' will have to be a minimum classification of A2-s1,d0 in terms of reaction to fire, classified in accordance with BS EN 13501-1:2018. Combustible materials cannot achieve this classification and will thus be effectively banned from use on these buildings.

This effective 'ban on combustible materials' in external walls and specified attachments will apply to 'relevant buildings' only. A relevant building being a building with a storey at least 18 metres above ground level and which contains one or more dwellings, an institution or a room for residential purposes (excluding hostels, hotels or boarding houses). Blocks of flats, student accommodation, care premises, nursing homes, sheltered housing, hospitals and dormitories in boarding schools all with a floor over 18m above ground level will be covered by the 'ban'.

The 'ban' will apply to new buildings or when there is a material change of use, alterations or extensions (as defined in building regulations) to an existing building, which will result in a building within scope. All elements of the external wall will be covered by the 'ban'; including specified attachments such as balconies, solar panels and sun shadings. A list of exemptions for individual components that the new regulation does not apply to will also be given in regulation (see Annex A).

Rationale for Government Intervention

The tragedy of the Grenfell fire on 14 June 2017 provides the driver for Government intervention. Although a police investigation and phase 2 of a public inquiry have still to be concluded and their findings released, amongst matters being considered are if the cladding fitted in a refurbishment of the building did not comply with provisions set out in the guidance to English building regulations. Other issues may require to be considered in the future in respect of findings from these inquiries. Due to the severity of the external fire spread issue at Grenfell, it is felt intervention is required now to avoid any similar reoccurrence.

Since the Grenfell fire there has been much debate about compliance and interpretation of provisions in the Building Regulations' guidance relating to the requirement for external walls on buildings to adequately resist the spread of fire. Much debate has occurred about the robustness of the BS8414 test, which currently is not offered as a route to compliance in Technical Booklet E 'Fire safety' guidance. Generally, BS8414 test and BR135 compliance is accepted as an alternative solution outside the technical guidance and can be used as a method of demonstrating compliance with the existing requirement in relation to external fire spread (Regulation 36 of Part E in the Building Regulations).

Revelations from the Grenfell Public Inquiry have alleged abuse and manipulation of the BS8414 test by product manufacturers in order to maintain their product place on the market. Dame Judith Hackitt's independent report into building regulations and fire safety indicated that when choosing between products that are non-combustible or of limited combustibility and products undergoing full-scale system tests (i.e. to BS 8414), the lower risk option is to use products that are non-combustible or of limited combustibility.

The new prescriptive regulation will mean materials used in external walls and specified attachments (bar exemptions) on relevant buildings will have to be non-combustible or limited combustibility. Demonstrating compliance via a BS8414 test will not be acceptable for these higher risk relevant buildings.

The amendment will make compliance more straightforward and understandable for developers which should result in a more effective and efficient building process. It will make clear exactly what materials can and cannot be used. This will make compliance easier to identify for designers, installers and district councils who enforce the building regulations. Better compliance will ensure that fire safety risks are better identified and managed by developers, in turn reducing risks.

Other Jurisdictions

England introduced a new requirement in their building regulations in November 2018 requiring the use of non-combustible materials on external walls and specified attachments of certain buildings with a storey at least 18m above ground level.

Wales introduced the same requirement as England in their building regulations in January 2020.

Scotland introduced similar amendments through guidance as opposed to prescriptive regulation, in their Technical Handbooks to their building regulations. In Scotland the guidance requires external wall cladding systems (including insulation exposed in the

cavity) to achieve a minimum A2 classification. Scotland chose to apply the guidance to all buildings with a storey height over 11m above ground and to hospitals, residential care buildings and entertainment and assembly buildings of any height. It came into operation from October 2019.

The Republic of Ireland have made no amendment to their external fire spread requirements in building regulations post Grenfell Tower fire. Their existing requirements in regulations and guidance are the same as that currently required here prior to this change.

The Department of Finance is introducing the same requirement for here that England and Wales introduced. This will effectively ban the use of combustible materials on the same certain buildings with a storey at least 18m above ground. This will be achieved through an amendment to Part B (Materials and workmanship) of the building regulations.

Consultation

There is a statutory duty here to consult the Northern Ireland Building Regulations Advisory Committee (NIBRAC) and such other bodies as appear to the Department to be representative of the interests concerned on building regulations matters. A Part E 'Fire safety' technical sub-committee was established which included members of NIBRAC and seconded experts and personnel from industry, housing and enforcement bodies of District Councils and Fire and Rescue Service. The changes discussed in this RIA were developed in consultation with the technical sub-committee and main NIBRAC committee prior to issue for a targeted public consultation.

The Department carried out an eight week consultation exercise from 14th August to 9th October 2020 on the proposed changes. The Department has an extensive database of names of individuals and organisations that have expressed a specific interest in building regulations and technical guidance. 396 consultation notifications were issued to various stakeholders from industry and wider interested parties and the consultation documents were published on the Department's website. The consultation was also advertised via twitter and facebook. An awareness session to clarify the proposals was held with the Construction Industry Forum (CIFNI) which was attended by various professional bodies of the construction industry.

The consultation received a total of 43 responses, 42 of which were technical and one not technical. 40 of the 42 technical responses completed the consultation questionnaire and 2 separate written submissions were received.

The breakdown of the 42 technical responses was as follows:

- 24 of the responses came from industry: – 14 Insulation/cladding/other affected product manufacturers and their associations; 2 from construction organisations which were the Construction Employers Federation (CEF) and the National House Building Council (NHBC); 3 from Financial/Insurance Associations; 2 from Architectural organisations; 1 from an individual; 1 from a fire consultancy and 1 from UKAS;

- 11 from District Councils who have responsibility for the enforcement of the building regulations through their Building Control services – 9 directly from Councils, 1 from Building Control Northern Ireland (BCNI) and 1 from NI Local Government Association (NILGA);

- 5 from Professional bodies which were: Royal Society for Ulster Architects (RSUA); Royal Institute of Chartered Surveyors (RICS); Chartered Association of Building Engineers (CABE); Chartered Institute of Architectural Technologists (CIAT) and Royal Institute of Town Planners (RITP);

- 1 from Northern Ireland Fire and Rescue Service (NIFRS) and 1 from the Fire Brigade Union (FBU).

In broad terms, the vast majority of the proposed amendments were welcomed including the introduction of the new regulation for a 'ban on combustible materials'. A number of respondents to the consultation, primarily product manufacturers and their associations did not agree with the new regulation banning the use of combustible materials in external walls and specified attachments for in scope buildings. Responses from manufacturers broke down into two camps: those who manufacture non-combustible products were in support of the 'ban' and those who manufacture combustible products were against the 'ban'. Those against the 'ban' highlighted that there is no indigenous manufacturer of non-combustible insulation products on the island of Ireland, which would mean these products would need to be imported, leading to a negative impact on local economies. Based on the scope of buildings and height threshold to be covered by the new regulation, the consequence of these changes is estimated to effect 3 buildings per year. The Department feels the impact to industry, including local manufacturers will be minimal.

Consultees responses have been reviewed by the Department in conjunction with the Part E technical sub-committee and main NIBRAC committee. A summary of the responses to the consultation is available on the Department's website at: https://www.finance-ni.gov.uk/publications/departmental-summary-consultation-proposals-amendments-building-regulations-northern-ireland-2012

Sectors and groups affected

a. Building users – people living in or using the building should benefit from a safer building environment arising from these changes and not be subject to loss of amenity and facilities as a consequence of the take up of the new regulation and guidance.

b. Building designers/constructors – All those involved with building design and construction will have to familiarise themselves with the new regulation and guidance.

c. Building procurement – Persons or companies procuring new buildings or building work will experience modest increased costs, particularly those involved in the procurement of high-rise domestic buildings for rent or sale.

d. Enforcement – District Councils will have to train staff in the relevant areas where the new regulation and guidance applies. Fire and Rescue Service will also have to familiarise themselves with the changes.

e. Product manufacturers – Companies manufacturing or supplying materials will have to ensure their products comply with the new requirement for use on buildings within scope.

With only an estimated 3 buildings per annum to be affected by the new requirement, the impact on industry here will be low and the benefits in terms of clarity for everyone involved in the construction process about the materials that can and cannot be used on higher risk 'relevant buildings' outweighs the low impact to industry.

Overall, the proposed change is unlikely to have a significant adverse effect on the industry, nor would it place an unfair burden on small businesses. However, firms spend a significant amount of time keeping up to date with revised and new regulations and the cost of this is likely to be proportionately higher for small firms than large ones.

Screening in/Screening out

The intervention of introducing a new regulation will have an impact on the local business community. Therefore, the proposals are subject to a Regulatory impact assessment and thus screened in.

Viable options

The options are –

1. Do nothing.
2. Implement changes to Building Regulations (Part B 'Materials and workmanship') and guidance in Technical Booklet E – 'Fire safety'.

Option 1 – Do nothing

Under this option, there would be no change to Building Regulations and no prescriptive regulation to effectively ban the use of combustible materials in external walls and specified attachments. No improvements would occur for buildings that will undergo building work in the future in order to ensure the safety of the occupants in the event of fire. This option does not address any of the issues of concern identified. It would not improve safety in affected buildings and may lead to criticism of government policy on fire safety for residents in the "post-Grenfell tragedy era". Doing nothing and expecting a voluntary take-up of the use of non-combustible or limited combustibility materials would at best lead to an inconsistent approach by designers.

For this option, the undertaking of BS8414 tests and assessments in lieu of tests would still be acceptable routes to demonstrate compliance with the Regulations for an external wall cladding system.

Option 2 – Ban combustible material in external walls and specified attachments of the buildings in scope. (Require A2 s1, d0 classification or above) - Chosen option.

In this option, changes will be made to Building Regulations and supporting technical guidance which will ban the use of combustible materials in external walls and specified attachments such as balconies. This ban will cover buildings including blocks of flats, student accommodation, care premises, hospitals and dormitories in boarding schools (all with a floor 18m above ground level). This option will require that materials in external walls and balconies have a minimum performance of class A2-s1, d0 under the relevant European classification system set out in BS EN 13501-1. It will also mean some key materials which are unable to meet the requirement are exempted (see Annex A).

For this option, the undertaking of BS 8414 tests and assessments in lieu of tests will not be acceptable as routes to demonstrate compliance for the buildings within scope of the new requirement.

Costs and Benefits of each option

England introduced a 'ban on combustible materials' in external wall systems in November 2018 and worked with consultants 'Adroit Economics Consortium' to estimate the costs to developers or building owners of choosing option 2 (the ban) over option 1 (do nothing) in their regulatory impact assessment (RIA)[1]. They concluded that there would be a one-off transition cost for the industry to familiarise itself with the changes to be £0.5m. They also thought the annual direct cost to developers and owners would be £24.9m - £33.7m (central £29.3m).

Costs of Option 1 for here (Do Nothing)

Option 1 imposes no direct costs. The current costs to society from fires in domestic premises, including deaths and serious injuries would remain unchanged (See item b under Risks and Assumptions).

Benefits of Option 1 (Do nothing)

Option 1 would produce some benefits as a percentage of developers would voluntarily move to using non-combustible materials for the buildings in scope. It would leave this region out of step with related regulations, standards and guidance operational in other jurisdictions which could cause confusion within the industry. It would also forego the potential benefits through implementing option 2 not to be realised.

Costs of Option 2 for here – Ban combustible materials in external walls and specified attachments of relevant buildings

A potential increase in costs for projects where combustible material products were previously acceptable is hard to quantify. However, it is possible to follow the England RIA and apply population comparative percentage calculations. Simply applying a 3.4% calculation (population adjustment to that of England[2] and hence industry approximately 3.4% that of England) to their figures would mean an annual direct cost to developers and owners here of approximately £847k - £1.15m. This simple crude calculation methodology is one way of deriving costs for here based on equivalent changes cost figures for England.

These figures would probably be the worst case scenario for here as the proportion of buildings affected by the regulatory change are likely to be a lot less than a direct 3.4%

read across from England figures where proportionally, substantially more high rise buildings are built than there are here. This is supported by statistics supplied on request to a Planning Statistician in Analysis, Statistics and Research Branch (ASRB) of Corporate Policy and Planning Division of the Department for Infrastructure. The data supplied indicated approximately 3 buildings per annum (see Annex C) would be affected by the new requirement which in comparison to the 675-1025 buildings highlighted in the English RIA is approximately 0.4% rather than 3.4%.

Applying 0.4% to the English RIA cost figures would result in a cost to developers/owners here of approximately £99k - £136k (central 117k).

Wales in their consultation in 'Banning the use of combustible materials in the external walls of high-rise residential buildings'[3] used the costs from the English RIA and applied them to Wales' estimated 13 to 50 blocks per year affected by the new requirement over 18m. They suggested an overall annual cost on the broad estimates would be of the order of £0.33m - £3.30m.

An alternative calculation method for here is to follow the equivalent Scottish impact assessment analysis for their external fire spread changes in 2019. From the Scottish 'Final Business and Regulatory Impact Assessment'[4] of 7 June 2019, to calculate the additional costs of switching from using combustible materials to non-combustible materials, they made a number of assumptions:

1. With regard to dwellings, they assumed 6 flats per storey, each with a floor area of 80m^2 and with additional costs divided equally across all flats, the approximate costs would be:

   £500 per flat for non-combustible cladding systems in buildings with a storey height over 11m above ground level (11m was the threshold height chosen in Scotland for applying A2 rated minimum materials for cladding and insulation). £500 was derived as the difference between using non-combustible cladding as opposed to combustible cladding, however they indicated costs would vary considerably depending on what cladding was desired and there may be a zero cost impact in a more prestigious building. Based on a current build rate of 5 to 6 high-rise domestic buildings in Scotland per annum, the cost to industry was then estimated to be in the region of £180,000 per year based on 60 flats per building.

2. For non-domestic buildings, increased costs was not seen as straight forward to determine as the size, height, floor area and footprint all vary significantly. However, they did indicate that installing non-combustible cladding systems as opposed to combustible cladding would add in the region of £10 - £15 per m^2 to the build costs. They added there may be no cost impact if the desired cladding material achieves A1 or A2 European classification.

Applying a similar type of analysis with similar material and build costs for here as that of Scotland would lead to the following analysis –

a. For dwellings assuming £500 per flat extra for using non-combustible cladding to combustible cladding, based on an average of 3 buildings (from planning statistics interrogated over the period Apr 2016 – March 2019, see Annex C) with a floor over 18m above ground level, the cost to industry would be in the region of £90k per year based on 60 flats per building.

b. For non-domestic buildings, the same additional cost of £10 - £15 per m^2 would apply for using non-combustible cladding as opposed to combustible cladding. For 1 building of 9 storeys (8 storeys of cladding), storey height of 3.7m, cladding height of 30m, width of building 31.5m, then for an outside façade surface area of 3788m^2 at £12.50 average extra per m^2 would result in an extra yearly cost of approximately £47k.

The other costs are the familiarisation costs for the industry and enforcement bodies to come to terms with the changes which is approximately £134k (1st year only) (See Annex B).

Benefits of Option 2

The main benefits derived from option 2 relative to option 1 are that it will make routes to compliance clearer. The Government's building safety programme in England identified high-rise residential buildings to have combustible aluminium composite material cladding panels which did not follow the provisions of Building Regulations guidance. The purpose of the prescriptive regulation ('ban') will be to make clear exactly what materials can and cannot be used. This will make compliance easier to identify for designers, installers and district councils who enforce the building regulations. Better compliance will ensure that fire safety risks are better identified and managed by developers, so reducing risks. This impact assessment does not monetise these benefits.

The new requirement should reduce the potential for fire spread on facades and therefore reduce potential cost to society of injury and death to occupants and firefighters. The cost of firefighting operations should be reduced, along with environmental costs both locally due to firefighting water wash off and globally due to products of the combustion process, e.g. carbon monoxide entering the atmosphere. It will also ensure by containing the spread of fire on the façade, reduce the number of occupants requiring decanting and therefore limit the costs due to fire damage remedial work.

Another consequence of the new regulation approach will be to rule out the opportunity to use large-scale BS 8414 tests or assessments in lieu of tests for external walls, which may have led to inappropriate approaches to the design and installation of external wall systems incorporating combustible cladding. A clear 'ban' will rule these routes to compliance out for buildings within the scope.

By effectively banning most non-A rated materials (A rated being the highest classifications a material can achieve in performance to reaction to fire in accordance with BS EN 13501-1:2018 'Fire classification of construction products and building elements Classification using test data from reaction to fire tests'), there will be greater clarity about what is permitted to be used on site and in the construction process. This clarity makes it harder for the incorrect materials to be procured and then used in the construction process without being noticed, reducing unintentional non-compliance.

There will be minor cost savings for the design stage of building construction. This is because less time will be spent on considering and deciding between the different types of materials and external wall systems, now that there are fewer options to choose from. The

costs of undertaking large-scale whole system wall tests (BS 8414 tests) will also be avoided.

Risks and assumptions

The costs of the policy options are estimated using a number of assumptions. The key areas where assumptions are made include:

1. When calculating costs for here based on the equivalent calculated costs for the same regulatory change in England, the same assumptions are built into those calculations as those in the equivalent English Regulatory Impact Assessment i.e.

    a. The equivalent annual cost in England was calculated by finding the difference between option 1 and option 2. The cost of each option was calculated by using the number of building projects with cladding in a year, and multiplying that by the cost of materials for that type of project. The number of projects was a function of the rate of new build and the retrofit/refurbishment rate of the current stock. The cost of materials depended on the size of the building and type of façade;

    b. For option 1, England assumed a percentage of developers would voluntarily move to using A2 class or better materials. They assumed 15-30% would use non A-rated materials and 70-85% would voluntarily use A2 s1, d0 rated materials and above. The same assessment also assumed a high percentage of continued use of timber decking and joists which are non-A rated materials in balconies.

    c. England costs depended on whether the building was using spandrel panels or had balconies;

    d. England costs depended on the proportion of projects and balconies that already had A1 rating and above and A2-s1, d0 rating and above;

    e. England costs depended on differences in the costs per building for refurbishment/retrofit and new build for A1, A2-s1, d0 and non-A rated systems.

2. When calculating costs for here based on the equivalent calculated costs for the changes in Scotland, the same assumptions are built into those calculations as those in the Scottish RIA, i.e.

    i) for domestic buildings assuming £500 per flat to use non-combustible cladding systems in buildings as opposed to combustible cladding;

    ii) also for domestic buildings assuming 6 flats per storey, average of 60 flats per building;

    iii) for non-domestic buildings assuming an additional cost of £12.50 average extra for using non-combustible cladding rather than combustible cladding;

    iv) also for non-domestic buildings assuming a 9 storey building would be 30m in height of cladding, a width of building of 31.5m would result in a façade of area 945m^2. For 4 facades, an overall area of 3780m^2.

3. Under option 2 and utilising the English figures from their RIA, applying the 3.4% rule for here assumes the same rate of build of buildings within scope as that of England. This is unlikely as the density of high rise blocks of flats in England exceeds that here where the predominant form of dwelling type is that of dwelling houses. The more accurate 0.4% figure is established based on data supplied by Analysis, Statistics and

Research Branch in the Department for Infrastructure for Planning applications over a 3 year period.

4. Under option 2 and following the Scottish equivalent costs methodology, the forecast of new build blocks of flats, student accommodation, care premises, nursing homes, hospitals and dormitories in boarding schools with a storey 18m above ground level is based on a request to Analysis, Statistics and Research Branch (ASRB) in the Department for Infrastructure. The list supplied was based on SC codes and TC codes the Planners use for different types of proposed construction, whether that be new build, alteration work, extensions or change of use to a building. The list provided was then interrogated internally in Building Standards Branch to establish which planning applications would fall within scope of the new requirement.
5. There is a risk that additional space required to use non-combustible materials as opposed to combustible materials will add cost. The calculated figures for here based on the English RIA will also assume that outward adjustments to the external wall can be made in most instances. Significant costs are only likely to occur where space constrained buildings already have planning permission or have already started work on site. Overall the costs due to space considerations are assumed negligible.
6. The ban should not have a significant impact on housing supply. The extra costs involved will be small in proportion to the total build cost.

Non-Monetised Impacts

Some of the consultation responses in England raised the issue of unintended consequences of the 'ban', in particular a potential loss of space. The reason for this is that non-combustible (A1) rated materials like mineral wool insulation are likely to be bulkier. England worked with consultants to analyse the potential impact of this, which they concluded was minor for the majority of cases.

Engineered timber offers an alternative to traditional methods of construction in buildings. The new requirement will prohibit the use of timber materials in the external walls of buildings that are within scope. Anecdotal evidence would suggest the number of projects above 18m in height where load bearing structural timber elements are used remains relatively small. Therefore, the effect of the ban on the use of engineered timber remains limited in the short term. However where there is likely to be a growth in the number of buildings above 18m in height using engineered timber as part of their structure, the new requirement impact is likely to slow down the use of engineered timber in future development for the medium to long term.

Micro and Small Businesses Impact

England considered the impact on small businesses in their equivalent regulatory change and concluded that the costs would not disproportionately affect businesses with a low turnover. Although there is a higher proportion of small and micro businesses here than in England, the Department considers it reasonable to assume small or micro businesses here will also not be disproportionately affected.

Enforcement and Sanctions

Intended work that is subject to the provisions of the Building Regulations (Northern Ireland) 2012 must be notified to the District Council. The new regulation in Part B 'Materials and workmanship' will be enforced by building control departments in each District Council through the existing mechanisms and sanctions provided through the Building Regulations (Northern Ireland) Order 1979 (as amended).

Post Implementation Monitoring, Evaluation and Review

It is normal practice for the Department to investigate experiences a reasonable time (usually about 5 years) after implementation to monitor how the changes are working in practice. The Department has quarterly meetings (Building Control Liaison Meetings) with the 11 District Councils in Northern Ireland who are responsible for enforcing the requirements of the Building Regulations on a daily basis. Feedback from them on how the new requirement is working in practice will be ongoing.

England issued a further consultation entitled 'Review of the ban on the use of combustible materials in and on the external walls of buildings including attachments[5]'. This consultation which ran for 12 weeks from 20 January 2020 to 13 April 2020 sought views on the ban of the use of combustible materials in and on external walls of buildings, introduced in 2018. It sought views on changes to building types covered, trigger height threshold, list of exemptions, attachments such as blinds, shutters and awnings and a proposal to specifically ban the use of metal composite panels in and on the external walls of all buildings.

Scotland issued a further consultation package on external wall systems and specifically the fire safety of cladding on 16 July 2021[6]. That package considers amended wording for mandatory standard 2.7 which deals with external fire spread; a new definition and ban on the highest risk metal composite material (MCM) cladding panels; options to improve standards and guidance on cladding systems, including the future role if any of the large scale fire test BS8414; and a combustible exemption list.

The Department is still monitoring developments in England and Scotland in relation to their further consultations in 2020 and 2021, respectively, to see any lessons learned for future consideration and adjustment to what is proposed for here. It seems likely, however, that developments in these regions will necessitate a review of the changes implemented here sooner rather than later.

Addendum

Impact Assessment to new guidance on 'Assessments in lieu of test' in Technical Booklet E (Fire safety)

Introduction

In relation to meeting external fire spread requirements, there have been concerns with the current approach to the use of Assessments in lieu of tests (AILOTs) for cladding systems. Some AILOTs for cladding systems have been criticised for their lack of supporting test data. An AILOT should be an extrapolation or interpolation of relevant, existing test data, not an estimate. Questions have also been raised about the competence of some of the assessment authors.

The purpose of providing new guidance in Technical Booklet E (TBE) is to tighten up on the use of AILOTs and ensure that they are only used where appropriate, with sufficient, relevant test evidence and that they are undertaken by competent staff within appropriately certified organisations.

Background

The building regulations (Northern Ireland) 2012 (as amended) require that external walls on all buildings adequately resist fire spread. There are generally 4 accepted routes to compliance in order to achieve the requirement of regulation 36 of those regulations in relation to external fire spread:

a. Ensuring that each individual component of the wall meets the required standard for combustibility. This linear route requires that all elements of the façade construction are of limited combustibility or better, which is defined by being a material that either is 'listed' or has met the required performance criteria after having been subjected to specific small-scale fire tests. The introduction of the 'ban' on combustible materials for 'relevant buildings' will ensure this route is the only one available for those type of buildings.

b. Ensuring that all the combined elements of a wall, when tested as installed, adequately resist the spread of fire to meet a set standard. This is done through a full BS8414 fire test, which comprises building a sample of the complete façade and exposing it to a standardised fire. Adequately resist is achieved if the test results successfully pass the acceptance criteria laid down in BR 135 (Fire performance of external thermal insulation for walls of multi-storey buildings). This approach has become more popular since the fire at Grenfell Tower as more systems have been tested. This approach will not be acceptable for 'relevant buildings' under the new regulation banning the use of combustible materials on those type of buildings.

c. (AILOTs) or desktop study by another name – this route is available if the proposed façade is largely the same as a previously BS8414 tested product, but which includes only a slight variation in design. An assessment may reference one or several existing BR 135 classification reports. In some cases, there are additional standards which provide rules for AILOTs. These are known as "standards for

extended application" and set out rules for extrapolation and use of data from actual tests such as those in a BR 135 report. BS 9414 is the standard for extended application for BS 8414 test results. Again, AILOTs will not be permissible for 'relevant buildings' under the new regulation banning the use of combustible materials on those type of buildings.

d. Fire safety engineering route – the whole building is assessed for spread of fire, undertaken by a fire engineer. The assessment is based upon scientific principles from an integrated or a 'whole building' perspective. Fire Safety Engineering considers the performance of structures, systems, products and materials when exposed to fire, it also includes human behavioural aspects, fire prevention and active and passive fire protection measures, e.g. effective means of egress and adequate measures for alarm, detection, control and extinguishment. Fire engineered solutions will also not be acceptable for 'relevant buildings' under the new regulation banning the use of combustible materials on those type of buildings.

The principle of carrying out AILOTs is well established and often a necessary tool employed by industry for classifying the fire performance of construction products and systems. Such assessments may be the only way of classifying in some circumstances and they also provide a practical and proportionate approach where minor changes are made to a construction product or system.

Rationale for guidance

Since the fire at Grenfell Tower, some assessments of cladding systems, often described as "desktop studies" have been criticised for their lack of reference to supporting BS8414 test data. One of the recommendations of Dame Judith Hackitt's Interim Report on the Independent Review of Building Regulations and Fire Safety was that:

"*The government should significantly restrict the use of desktop studies to approve changes to cladding and other systems to ensure that they are only used where appropriate and with sufficient, relevant test evidence. Those undertaking desktop studies must be able to demonstrate suitable competence. The industry should ensure that their use of desktop studies is responsible and in line with this aim.*"

Since Grenfell, industry is reported to be undertaking fewer AILOTs, however there is still a need to ensure that where assessments are taking place, they are carried out by a competent person and in a way that is compliant. This will provide reassurance to residents, building owners and industry that AILOTs, when undertaken properly, are an appropriate route to compliance.

The introduction of the new regulation effectively banning the use of combustible materials in the external walls and specified attachments of relevant buildings will mean that AILOTs for external wall systems for buildings in scope will not be permitted.

The proposed amendment will make compliance more straightforward and understandable for developers which should result in a more effective and efficient building process. Overall the proposed change is unlikely to have a significant adverse effect on the industry, nor would it place an unfair burden on small businesses.

Table 1 below shows how AILOTs (both cladding assessments and other assessments) for the different building types will be affected by both the introduction of the ban on

combustible materials for relevant buildings and the new restrictions on the use of AILOTs for non-relevant buildings.

Table 1

Building Type		**AILOT - cladding**	**AILOT - other**
Residential - dwellings	Flats	Ban applies above 18m – No AILOT allowed	Restricted by the new guidance
Residential - Institutional	Hospitals	Ban applies above 18m – No AILOT allowed	Restricted by the new guidance
	Care Homes	Ban applies above 18m – No AILOT allowed	Restricted by the new guidance
	Student halls of residence	Ban applies above 18m – No AILOT allowed	Restricted by the new guidance
	Dormitories in schools	Ban applies above 18m – No AILOT allowed	Restricted by the new guidance
	Hotels	Restricted	Restricted
Offices		Restricted	Restricted
Shop/commercial		Restricted	Restricted
Schools		Restricted	Restricted
Assembly & Recreation		Restricted	Restricted
Industrial		Restricted	Restricted
Storage (car parks/warehouses)		Restricted	Restricted

Costs and Benefits

Costs

England consulted on introducing the same guidance in relation to AILOTs in their equivalent Approved Document B (ADB) and from that consultation paper 'Amendments to statutory guidance on assessments in lieu of test in Approved Document B (Fire Safety)'[7] by the Department for Levelling UP, Housing and Communities (DLUHC), previously known as Ministry of Housing, Communities & Local Government (MHCLG) of April 2018, they considered two options. Option 1 - do nothing or option 2 - issue amendments to Approved Document B which creates new rules for assessments in lieu of fire tests. From that analysis, they viewed the main additional costs to business for option 2 as –

a. An increase in the cost of undertaking an AILOT to reflect the more stringent requirements of approximately a 25% increase;

b. More AILOTs being commissioned and a corresponding reduction in use of the BR 135 Classification Report based on a successful BS 8414 test. The cost of undertaking an assessment was estimated to be approximately three times that of obtaining a BR 135 Classification Report for an existing successful BS 8414 test; and

c. Transition costs from the current position to amended ADB guidance deriving from the time taken by industry to become familiar with the policy change and training cost time.

England's final impact assessment[8] estimated a total equivalent annual cost to business in relation to cladding assessments of £0.14m for implementing option 2 over option 1. In relation to non-cladding assessments (e.g. for fire doorsets, intumescent door seals; penetration sealing systems/linear gap seals; structural steel protection; glazed screens; ventilation ducts; walls and partitions and suspended ceilings), they estimated the equivalent annual cost to business to be £2.78m for implementing option 2 over option 1.

Wales introduced the same guidance through a consultation 'Amendments to statutory guidance on assessments in lieu of test in Approved Document B (Fire Safety)'[9] issued on 26 July 2019 and decided the proposed changes would not be subject to an independent impact assessment. They cited the MHCLG impact assessment for the same change in 2018 and suggested the impact on Wales would be proportionate to the cost identified in England. From that document –

"The proposed changes will not be the subject of an independent impact assessment. The Ministry of Housing, Communities and Local Government undertook these changes in 2018 including an impact assessment. We therefore propose not to undertake an independent assessment on the basis the impact on Wales is proportionate to the cost identified in England."

For this Impact Assessment, it is proposed to adopt the same approach as Wales. Given that the guidance being adopted is the same as England and Wales, we propose the impact for here will also be proportionate to the cost identified in England.

For here, applying a 3.4% population adjustment, the proportionate equivalent annual cost to business would translate to approximately £4.8k for cladding assessments and £94.5k for non-cladding assessments. This overall cost of £99.3k would be offset by the non-monetised benefits outlined below thus making the introduction of this guidance to be cost neutral.

Benefits

Benefits have not been monetised for this assessment. Health and Safety standards for occupants of buildings and firefighters alike will be enhanced as a result of tighter restrictions on assessments. It is expected that more tests will be undertaken due to the more rigorous guidance on assessments, ensuring that assessments are only used where appropriate. More tests will increase the evidence base for future assessments.

More rigorous requirements for AILOTs and enhanced standards will raise the quality of assessments. This will ensure that they are used appropriately and that there will be more

rigorous compliance with Building Regulations' requirements. Tighter rules will also provide more assurance to building control bodies checking for compliance.

Better compliance will ensure that fire safety risks are better identified and managed by developers, so reducing risks.

A clearer set of requirements for AILOTs and raised quality standards should result in reduced rejections of building plans by building control bodies and the consequential costs of correcting mistakes and abortive work for those undertaking the assessments.

The referencing of test data within AILOT reports will also mean that those checking assessments will benefit from more transparent information.

Summary and Recommendation

Ban on combustible materials

This RIA considers changes to Part B (Materials and workmanship) of the Building Regulations and the supporting guidance in Technical Booklet E 'Fire safety'. A new regulation in Part B will only allow materials which become part of an external wall or specified attachment in a 'relevant building' to be A2-s1, d0 rated and above under the European classification system set out in the standard BS EN 13501-1, subject to exemptions. Combustible materials cannot achieve this classification and hence will be 'banned' from use.

The analysis compares the 'do nothing' against a 'ban' option of no change to the Building Regulations. The change should make it easier to comply with the relevant Building Regulations' requirements by making the routes to compliance clearer.

Costs

Option 1 (do nothing) imposes no direct costs. The current costs to society from fires in domestic premises, including deaths and serious injuries would remain unchanged.

Option 2 will mean modest costs for industry as outlined below. There are two possible routes to estimating the costs involved:

(A) Following the English equivalent impact assessment costs and applying a conventional 3.4% calculation would mean an annual direct cost to developers and owners would be approximately £847k - £1.15m. Applying a more appropriate figure of 0.4% (established through interrogating planning applications for a 3 year period) to the English RIA figures would result in a cost to developers/owners here of approximately £99k - £136k, the central scenario £117k.

(B) Following the Scottish equivalent impact assessment and the assumption costs therein combined with the figures supplied by Analysis, Statistics and Research Branch (ASRB) in the Department for Infrastructure (3 buildings per annum), the additional cost to industry here in relation to dwellings would approximately be £90k per annum. For non-domestic buildings, there would be extra costs of approximately £47k per annum for one building of average 9 storeys. Combined domestic and non-domestic costs of approximately £137k.

(C) We are taking the best estimate for here to be the central point of these figures set out in (A) and (B) above of £127k.

From Annex B, familiarisation costs for the industry and enforcement bodies for here are approximately £134,152k in the first year only.

Benefits

Option 1 would produce some benefits as a percentage of developers would voluntarily move to using non-combustible materials for the buildings in scope. It would leave this

region out of step with related regulations, standards and guidance operational in other jurisdictions which could cause confusion within the industry. It would also forego the potential benefits through implementing option 2 not to be realised.

Option 2 benefits include:

- it will make the route to compliance clear on relevant buildings;
- the new prescriptive regulation ('ban') will make clear exactly what materials can and cannot be used;
- it will make compliance easier to identify for designers, installers and district councils who enforce the building regulations;
- better compliance will ensure that fire safety risks are better identified and managed by developers, so reducing risks;
- the new requirement should reduce the potential for fire spread on facades and therefore reduce potential cost to society of injury and death to occupants and firefighters;
- the cost of firefighting operations should be reduced, along with environmental costs both locally due to firefighting water wash off and globally due to products of the combustion process, e.g. carbon monoxide entering the atmosphere;
- it will ensure by containing the spread of fire on the façade, reduce the number of occupants requiring decanting and therefore limit the costs due to fire damage remedial work;
- it will rule out the opportunity to use large-scale BS 8414 tests or assessments in lieu of tests for external walls, which may have led to inappropriate approaches to the design and installation of external wall systems incorporating combustible cladding. A clear 'ban' rules these routes to compliance out for buildings within the scope.
- there will be greater clarity about what is permitted to be used on site and in the construction process. This clarity makes it harder for the incorrect materials to be procured and then used in the construction process without being noticed, reducing unintentional non-compliance;
- there will be minor cost savings for the design stage of building construction. This is because less time will be spent on considering and deciding between the different types of materials and external wall systems, now that there are fewer options to choose from; and
- the costs of undertaking large-scale whole system wall tests (BS 8414 tests) will also be avoided.

This impact assessment does not monetise these benefits.

As option 2 will bring a number of benefits as outlined above at a modest cost burden to industry, it is recommended that option 2 be adopted.

AILOTs

In relation to the new guidance in TBE regarding AILOTs, taking into account the action with regard to the proposed ban on the use of combustible materials in external wall systems of certain high-rise buildings, the number of AILOTs undertaken overall is expected to reduce.

The costs of undertaking an AILOT in the cases where they can continue to be used are estimated to be higher, given the tighter requirements which will apply. These extra costs will be countered by expected benefits of improved compliance arising from better quality, more rigorous and transparent assessments.

The recommendation is to introduce the new guidance as England and Wales did. To do nothing and expect changes to occur in industry practice over time in relation to AILOTs is unrealistic. While there is anecdotal evidence that industry has become more risk averse since the Grenfell Tower fire, there is a risk that, over time, industry may revert to using AILOTs without the necessary safeguards.

The introduction of the new guidance in TBE for AILOTs is estimated to be cost neutral.

Contact Point

This Regulatory Impact Assessment and the Departments Response to Consultation may be downloaded from xxxxxxxxxxxxxxxxxxxxxxxxx or a hard copy may be obtained from Karen McKernon at:

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Departmental Signoff

For the changes to building regulations and associated technical guidance, the Department estimates an extra cost to industry of £127k per annum. Familiarisation costs for industry and District Council Building Control are estimated at £121k and £13k for the first year only respectively.

Signed: Desmond McDonnell Date: 26 February 2022

Annex A – Exemption list

Some materials will be exempted from the new regulation. A detailed list is compiled below:

(a) Cavity trays when used between two leaves of masonry;

(b) Any part of a roof (other than any part of a roof which falls within paragraph (d) of the definition of ‘External wall’ in regulation 22), if that part is connected to an external wall;

(c) Door frames and doors;

(d) Electrical installations;

(e) Insulation and water proofing materials used below ground level;

(f) Intumescent and fire stopping materials where the inclusion of the materials is necessary to meet the requirements of the regulations in Part E;

(g) Membranes;

(h) Seals, gaskets, fixings, sealants and backer rods;

(i) Thermal break materials where the inclusion of the materials is necessary to meet the thermal bridging requirements of the regulations in Part F; or

(j) Window frames and glass.

Annex B - Familiarisation costs

The amendment will impose some additional burdens on designers, consultants and building control bodies. The introduction of a ban on combustible materials in certain buildings in England since Nov 2018 was well publicised with the industry here being very aware of such an introduction. Although this is regarded as a general business expense rather than a burden, the costs have been included in this RIA as a one-off cost in Year 1. Familiarisation costs are detailed as below:

Familiarisation cost of new requirement				
	Familiarisation time	Blended hourly rate	Estimated number of professionals	Industry total
Architects	1 hours	£53	950	£50,350
Building Control Surveyors	1 hours	£47	180	£8,460
Building and Quantity Surveyors	1 hours	£47	668	£31,396
Project managers	1 hours	£47	21	£987
Building Service Engineers	1 hours	£47	165	£7,755
1 person per Building Control office updating internal building regulation procedures and disseminating information	4 Hours	£47	26	£4,888
1 person per Architect practice updating internal building regulation procedures and disseminating information	4 Hours	£53	143	£30,316
Total				£134,152

Therefore the costs to Building Control for familiarisation amount to £13,348 and the costs to industry for familiarisation amount to £120,804.

Source of hourly rates – DCLG Consultation and Impact Assessment on 'Broadband Cost Reduction Directive' from 2016 which referenced EC Harris Cost Report.

Annex C – Planning Statistics

List of buildings affected by the new requirement from planning statistics covering 1 April 2016 – 31 March 2019.

Proposal	Erection of New Build	Material Change of use	Extension to an existing building	Alteration to an existing building	7 Storeys or more.	Residential type
1. Two storey extension to an existing building to provide an additional 19 apartments.	□	□	□	□	11 Storeys	Flat 1(a)
2. Redevelopment of existing surface car park and erection of new purpose built, build to rent residential units (maximum 19 storeys and 277 units), with shared amenity spaces, ancillary/support accommodation, car parking and landscaping.	□	□	□	□	11 Storeys	Flat 1(a)
3. Residential development over 7 floors (49 social housing units in a mix of 1 and 2 beds) with associated site access, car parking and landscaping works.	□	□	□	□	7 Storeys	Flat 1(a)
4. Proposed apartment complex comprising 75 No. apartments with a 13 storey frontage	□	□	□	□	13 Storeys	Flat 1(a)
5. Residential development comprising 56 apartments with basement car parking.	□	□	□	□	8 Storeys	Flat 1(a)
6. Demolition of existing building and erection of 7 storey building containing 34 apartments.	□	□	□	□	7 Storeys	Flat 1(a)
7. Erection of a seven storey residential development comprising 38 apartments with car parking.	□	□	□	□	7 Storeys	Flat 1(a)
8. 9 storey apartment building.	□	□	□	□	9 Storeys	Flat 1(a)
9. Proposed residential development.	□	□	□	□	7 Storeys	Flat 1(a)
10. Erection of infill 7 storey residential building containing 42 no. apartments (20 no. one bedroom and 22 no. two bedroom).	□	□	□	□	7 Storeys	Flat 1(a)
	~ Average Number of Stories = 9					

Annex D – Supporting Documents

1. Final Impact Assessment: Ban on combustible materials in external wall systems. Building (Amendment) Regulations 2018 SI 2018/1230 by Ministry of Housing, Communities and Local Government. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/760536/Ban_on_combustible_materials_in_external_wall_systems_impact_assessment.pdf
2. Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland
3. Banning the use of combustible materials in the external walls of high-rise residential buildings by the Welsh Government. https://gov.wales/sites/default/files/consultations/2018-07/consultation-banning-the-use-of-combustible-materials-in-the-external-walls-of-high-rise-residential-buildings.pdf
4. Final Business and Regulatory Impact Assessment – Amendment to the Building Regulations and Building Standards Technical Handbook Guidance – Section 2: Fire by the Scottish Government. https://consult.gov.scot/building-standards/changing-places-toilets/results/changingplacestoilets-finalbusinessandregulatoryimpactassessment.pdf
5. Review of the ban on the use of combustible materials in and on the external walls of buildings including attachments – A technical consultation paper by Ministry of Housing, Communities & Local Government. https://www.gov.uk/government/consultations/review-of-the-ban-on-the-use-of-combustible-materials-in-and-on-the-external-walls-of-buildings
6. Scottish building standards (fire safety) – a consultation on external wall systems https://consult.gov.scot/building-standards/building-regulations-fire-ews-review/
7. Amendments to statutory guidance on assessments in lieu of test in Approved Document B (Fire Safety)' by the Ministry of Housing, Communities & Local Government (MHCLG) of April 2018 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/698899/Desktop_Studies_Consultation.pdf
8. Final Impact Assessment – Assessments in lieu of tests - England https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765619/Assessments_in_lieu_of_tests_-_Impact_Assessment.pdf
9. Amendments to statutory guidance on assessments in lieu of test in Approved Document B (Fire Safety)' issued on 26 July 2019 - Wales https://gov.wales/sites/default/files/consultations/2019-07/approved-document-b-fire-safety-changes-to-statutory-guidance-on-assessments-in-lieu-of-tests-consultation-document_0.pdf