



Department
for Education

Technical Annex 2C: External Fabric

Output Specification

May 2020

Contents

Summary	3
Review date	3
Who is this publication for?	3
Document Updates	3
1. Introduction	4
2. General Requirements	5
2.1. Overview	5
2.2. Protection of Elements and the Control of Moisture	5
2.3. Refurbishment	6
3. Roofs	7
3.1. Roofs – General Requirements	7
3.2. Surface Spread of Flame	7
3.3. External Fire Exposure	7
3.4. Access	7
3.5. Special School Canopy	9
3.6. Rooflights, Smoke Vents and Access Hatches	10
3.7. Drainage and Rainwater Disposal Installations	10
4. External Walls	12
4.1. External Walls – General Requirements	12
4.2. Fire Resistance	13
5. External Doors and Windows	14
5.1. External Doors and Windows – General Requirements	14
5.2. Sill Heights	16
6. Suspended Flooring	18
7. References	20
8. Demonstrating Compliance	21

Summary

This document is one of a number of Technical Annexes which form part of the Generic Design Brief (GDB).

Review date

The next planned review date for this document is November 2020.

Who is this publication for?

This document is for technical professionals involved in the design and construction of school premises, to use as part of the Employer's Requirements of the DfE Construction Framework. It may also be used as the basis of similar documentation for other procurement routes using the Output Specification.

Document Updates

- **Version 9:** May 2020 – Additions/ amendments on ground level suspended floors, roof edge protection and glazing standards.
- **Version 8:** May 2019 – Revised to incorporate end user feedback, evidence collected and updates to applicable standards.
- **Version 7:** November 2017 - Issued as OS 2017.
- **Versions 1-6:** July 2016 – November 2017 - Includes initial working towards OS 2017.

1. Introduction

- 1.1. This document is one of a number of Technical Annexes, which form part of the Generic Design Brief (GDB). It sets out the required technical standards and performance criteria for external fabric in schools and should be read in conjunction with section 2.5 of the GDB, as well as the School-Specific Brief (SSB), including the School-Specific Schedule of Accommodation (SoA), Area Data Sheets (ADS) and, where relevant, the Refurbishment Scope of Works (RSoW). The definitions in paragraph 1.3 of the GDB apply to this Technical Annex and all other parts of the OS.
- 1.2. The information exchange required at each stage of the procurement process is detailed in the Employer's Requirements Deliverables.
- 1.3. The requirements in this Technical Annex are in respect of Buildings, FF&E and ICT infrastructure and shall apply to all parts of the Works in any New Buildings constructed by the Contractor, as well as to any Building Elements or Building Services, in any Refurbished Building(s) which are designated Renewed or Replaced in the RSoW.
- 1.4. Where the requirements refers to an area, space or Suite of Spaces, this shall apply to all spaces in any New Building(s) or Remodelled Area. Any area or space within New Buildings or Remodelled Area shall conform to all relevant requirements in this Technical Annex. This publication provides non-statutory guidance from the Department for Education. It has been produced to help [user] to [purpose of guidance].

2. General Requirements

2.1. Overview

- 2.1.1. The Contractor shall ensure that all materials are detailed to shed water away from vulnerable junctions and avoid uneven weathering, including pattern staining, streaking, or shading due to rainwater, airborne pollutants, and wind.
- 2.1.2. Materials and finishes shall prevent the ingress of ground and surface water and maintain acceptable appearance in line with prescribed Minimum Life Expectancy requirements as set out in the GDB, 2.5, Table 4, Minimum Life Expectancy tables. Exposure to sunlight during the lifetime of the Works shall not reduce the performance or visual appearance of any element / component, taking into account expected solar performance under varying conditions of solar radiation and external air velocity.
- 2.1.3. The building fabric shall meet the requirements set out in GDB 2.5, Table 4 Minimum Life Expectancy tables, without failure resulting from defects in design, materials, or workmanship. Failure shall be defined as breakage, disengagement of components, deflection beyond acceptable values, or reduction in performance.
- 2.1.4. The Contractor shall refer to the SSB to identify any specific requirements for pupils with SEND. The Contractor shall present to the Employer a design response for approval.

2.2. Protection of Elements and the Control of Moisture

- 2.2.1. Where elements of buildings are constructed off-site, including volumetric modules and other prefabricated units and any large elements which cannot be stored undercover on site, these shall be adequately protected such that they can reasonably resist weather conditions and the penetration of dust and moisture to prevent their deterioration before construction work is completed.
- 2.2.2. The protection should be able to respond to changing environmental conditions. Deterioration in fabricated elements, including detrimental increase in water content, frost damage, decorative change, rusting and mould, is not acceptable.
- 2.2.3. Where prefabricated elements are wrapped or otherwise protected with sheet material, this material can be incorporated into the final construction only where this is appropriate and where the sheet material can suitably accommodate the integration of other building elements.

2.2.4. For further detailed requirements on modular and off-site constructed buildings see the School-Specific Brief of the relevant contract.

2.3. Refurbishment

2.3.1. As described in the GDB, any work required to Refurbished Buildings shall be as defined in the RSoW, under the headings of architectural elements (including FF&E) and M&E elements (including ICT Infrastructure). The work will be categorised as Renewed, Replaced, Repaired, Retained or have 'no works':

- a) any **Renewed** external fabric shall be designed to satisfy the relevant outputs of the GDB and this Technical Annex (and by the code in the ADS where relevant)
- b) any **Replaced** external fabric shall satisfy the relevant outputs of the GDB and this Technical Annex (and by the code in the ADS where relevant), as far as possible within the constraints of the location, the adjacent elements and the sub-structure
- c) any **Repaired** external fabric shall comply with the specifications in any project-specific drawing issued as part of the SSB, and the overall performance after repair shall be at least as good as that of the existing provision
- d) any **Retained** external fabric shall be left as existing, with minimal work required unless needed in order to complete other Works that form part of the Project, and the overall performance shall be no worse than the existing performance
- e) any element requiring **No work** shall be left as existing.

2.3.2. Subject to paragraphs 1.3, 1.4, and sub-section 1.5.2 in the GDB, in respect of work to Refurbished Buildings, the required level of compliance with this Technical Annex is set out in the RSoW.

2.3.3. Generally, the requirements in this Technical Annex refer to all parts of the Works except any building elements or services that are designated Repaired, Retained or 'no work' in the RSoW, or spaces designated 'Untouched' in the School-Specific SoA.

3. Roofs

3.1. Roofs – General Requirements

- 3.1.1. Roof covering shall be easily overlaid, over-coated, upgraded or replaced without affecting the roof structure below.
- 3.1.2. Where any green roofs are proposed, the Contractor shall assess the maintenance involved and shall make these requirements clear to the Employer in its proposals as part of the Employer's Requirements Deliverables. The Contractor shall clarify the performance the Employer requires from any green roof, whether it is in response to storm water mitigation, biodiversity, or planning constraints.
- 3.1.3. Roofing materials shall not be used below a height of 2.5m above adjacent external ground level in situations where they could be subject to malicious damage.
- 3.1.4. Thermal insulation in the roof void shall be free from damage and breaks in continuity and integrity.

3.2. Surface Spread of Flame

- 3.2.1. Internal surfaces of any roofs are to be Class 1 to BS 476 Part 7 or EU Class C-s3, d2 or better. The Contractor shall design the roof and the fire resistance of the inner surface taking into consideration any requirement for fire resistant cavity barriers, including junctions with fire compartments.

3.3. External Fire Exposure

- 3.3.1. External surfaces of any roofs are to be AA, AB or AC to BS 476 Part 3 or EU Class B roof (T4) to ENV 1187 Part 4: external fire exposure classification.

3.4. Access

- 3.4.1. For any roof provided, the Contractor shall design roof access to minimise the possibility of damage to the roof, to meet the safety requirements of any relevant HSE guidance and to be in accordance with the CDM Regulations.
- 3.4.2. Any access systems provided shall ensure safety on roofs during the life of the Building by:

- a) ensuring that the Maintenance Access Strategy, wherever practicable, locates plant and equipment eliminating the need for access via roof areas
- b) ensuring that the location and siting of roof plant, rainwater outlets and rooflights are positioned on the roof where safe access is provided
- c) providing a protected walkway to access the area of roof where safe access is required as part of the Maintenance Access Strategy. Access walkways should have an anti-slip surface finish to reduce the risk of falling in wet and icy conditions and to protect the roof surface
- d) ensuring maintenance staff have easy visibility of the roof condition
- e) mitigating the risk of persons and objects falling from height, by the provision of edge protection by means of a guard rail or a parapet to the roof perimeter, to the area of the roof as defined in the Maintenance Access Strategy; the minimum parapet height shall be 1100mm
- f) providing permanent edge protection, where required, by means of a parapet, or a galvanised mild steel balustrade. Non-permanent or collapsible type barriers are not acceptable (the provision of free-standing systems which rely on their dead weight only, and not physical fixings to the building structure for stability and strength, are acceptable where there are limitations forming connections through the roof deck to the structure, i.e. MMC schools). The provision of external perimeter gutters with no parapets is only acceptable for pitched roofs where plant and PVs on the roof are enclosed with safety barriers and the external gutters can be cleaned safely as part of the Maintenance Access Strategy and as described in the Planned Maintenance Plan
- g) providing glazing that can be cleaned from inside the Building, where this is a practical solution as part of the Maintenance Access Strategy and as described in the Planned Maintenance Plan.

3.4.3. All rooflights, plant equipment, and outlets provided shall be readily and safely accessible for inspection, maintenance, and cleaning.

3.4.4. Safe access to roofs is required, by means of permanent non-retractable staircase access from within the Building, complying with the Building Regulations, to carry out planned preventative maintenance (PPM), as described in the Planned Maintenance Plan, without the use of elevated platforms or other mobile access equipment (MEWP's) for the purposes of:

- a) inspection and maintenance of roof plant and equipment
- b) cleaning, inspection and maintenance of rooflights; and

- c) cleaning, inspection and maintenance of rainwater goods, water collection and drainage outlets
- 3.4.5. Where there are small canopy roofs, the design shall allow for safe access for maintenance.
- 3.4.6. Access must be secure to ensure that only maintenance personnel can gain access on to the roof.
- 3.4.7. Access to the roof from a hatch with a drop-down ladder arrangement or via a fixed vertical ladder is not deemed to be an acceptable means of access.
- 3.4.8. Roofs shall be designed with appropriate means of passive protection i.e. parapets, guardings or balustrades, to mitigate the risk of falling from height, at roof edges and any changes in level. Fall arrest systems are not permitted as a solution.
- 3.4.9. The Contractor shall design the roofs with fixings that provide safe access and allow for future maintenance, e.g. repair or re-covering of roofs without the removal of MEP plant, ductwork and service runs. This includes the location and method of fixing of MEP plant, and zero or low carbon technologies, e.g. photovoltaic cells, where requirements have been identified in the SSB, e.g. to meet planning requirements or Local Authority initiatives, or environmental standards.

3.5. Special School Canopy

- 3.5.1. The Contractor shall ensure that in a Whole School Project for a non-ambulant Special School there shall be an external canopy to shelter pupils from the transport drop-off to the main pupil entrance, which shall:
- a) be at least 2.4m wide and of a length to meet the School's drop-off arrangements identified in the SSB
 - b) have a structure that is robust and corrosion resistant, and able to resist dead, live, wind and snow loads relevant to its location
 - c) have a roof that is robust, and resistant to UV degradation, thermal creep and sun bleaching
 - d) collect rainwater and connect into a surface water drainage system

- e) include lightning protection, if required following an assessment by the Contractor.

3.6. Rooflights, Smoke Vents and Access Hatches

- 3.6.1. Any rooflights, smoke vents or access hatches provided shall meet the Minimum Life Expectancy requirements in Table 2, paragraph 2.5.5 in the GDB.
- 3.6.2. Measures shall be taken to minimise the impact of solar gain and glare from rooflights as set out in Annex 2E: 'Daylight and Electrical Lighting', paragraph 3.2, Shading devices.
- 3.6.3. Openable vents and their control systems shall be designed to provide ease of use, inspection and maintenance considering both manual and/or automated mechanisms. The design shall be considered as part of the Maintenance Access Strategy with the risks assessed and described within the Health and Safety File.
- 3.6.4. Any openable rooflights provided shall be designed to provide ease of use by the School staff. Where these are electrically operated, they shall be provided with rain sensors, and with wall mounted key controlled override controls for use by School staff that cannot be operated by students.
- 3.6.5. The positioning of any access hatches, inspection points, control gear, etc. shall be such that when in use disruption to the everyday running of the Building is minimised.

3.7. Drainage and Rainwater Disposal Installations

- 3.7.1. Any rainwater disposal installations shall meet the Minimum Life Expectancy requirements in Table 2, paragraph 2.5.5 in the GDB.
- 3.7.2. Any roof drainage shall be designed in accordance with Annex 2F: 'Mechanical Services and Public Health Engineering' and shall have a simple layout, with free flowing, short and direct routes to be fully accessible for maintenance. The layout shall be co-ordinated with the layout of all parts of the external walls.
- 3.7.3. Rainwater may be discharged externally or internally subject to available access for maintenance and cleaning of system components.
- 3.7.4. The discharge of rainwater through any discharge systems shall not be audible inside the Building. See Annex 2F section 12.2.2.1g. Where internal rainwater pipes are proposed these shall be able to be safely maintained from the roof and from an external manhole / inspection chamber. All internal rainwater pipes shall be maintainable with cleaning rods. Where it is appropriate to provide internal

access this shall be made from easily accessible rooms and spaces that will not affect teaching and learning.

- 3.7.5. In designing a flat roof drainage solution consideration should be given to the material vulnerability of the external wall construction and the long term risks of passing rainwater pipes through these external walls, including where secondary means of drainage are necessary i.e. via weirs and overflows; then in all situations, a fully sealed proprietary system shall be used to transfer rain water through external walls.
- 3.7.6. Rainwater and other drainage pipes shall not be built into external walls.
- 3.7.7. Gutters of all types shall be provided with overflow pipes which discharge away from the Building and designed to prevent staining of external fabric.
- 3.7.8. Downspouts, hoppers and gutters shall be fitted with mechanically fixed leaf guards. These will act as a guard against blockages from balls, vegetation, birds' nests and other objects.
- 3.7.9. A robust solution for prevent ponding of water on roofs shall be provided, typically by means of suitable falls, outlets, flashing and parapet details.

4. External Walls

4.1. External Walls – General Requirements

- 4.1.1. The Contractor shall ensure that any external walls, and the materials and fixings chosen for them, are designed and constructed to:
- a) allow for the removal of graffiti without damaging the surface of the material
 - b) resist abrasion from cleaning methods and maintenance systems without any noticeable change in surface appearance
 - c) utilise a fixing method for cladding which adheres to the same robust performance of the material itself (where face fixing methods are used, they must match the visual appearance of the cladding material used and be tamper-proof)
 - d) include a damp-proof course in the outer face at a minimum of 150mm above adjacent external ground level, to prevent the penetration of ground moisture.
- 4.1.2. Generally, any surfaces shall be sufficiently hard to resist applied or transferred impacts that occur during normal use:
- a) without sustaining damage or noticeable change to the surface appearance, and without deterioration of performance; and
 - b) minimising the risk of hazard to occupants or people outside of the Building due to impact.
- 4.1.3. The adjacent external function, during normal use, shall inform the choice of external walling materials. Materials, which are vulnerable to impact damage e.g. by people or balls, shall not be used where pupils come into normal contact with them e.g. on main access routes, games areas, and social spaces.
- 4.1.4. Materials and systems up to 2.5m above ground level shall achieve at least Classification B rating when tested for hard and soft body impact in accordance with the requirements of Category I when tested in accordance with the requirements of ETAG 004:2011 – ‘External Thermal Insulation Composite Systems with Rendering’, or a similar equal and approved performance standard.
- 4.1.5. Materials and systems at heights over 2.5m above ground level must achieve at least Classification E rating when tested for hard and soft body impact in accordance with the requirements of Category II when tested in accordance with

the requirements of ETAG 004:2011, or a similar equal and approved performance standard.

- 4.1.6. Any external walls and associated materials and elements shall not have small openings or sharp edges that could result in injury, e.g. pupil fingers being trapped.
- 4.1.7. Where sheet or panel cladding is provided, elements of the works shall be individually and independently removable ensuring access for maintenance and/or replacement of cladding units and other components in the event of breakage. The removal of any cladding units shall not affect the performance or safety of adjacent units or any other parts of the Works.
- 4.1.8. Where a brick slip cladding system is used, brick slips or tiles shall not be fixed with adhesive. The system shall be easy to repair and the supporting structure shall be of stainless steel below 1m above ground level.
- 4.1.9. The flow of rainwater over the surface of any cladding shall be controlled. All works shall be detailed and installed to ensure that performance is not impaired and that the visual appearance shall uniformly age.

4.2. Fire Resistance

- 4.2.1. Elements of structure such as structural frames, columns and loadbearing walls are required to achieve 60 minutes fire resistance.
- 4.2.2. The external envelope of a building shall not provide a medium for fire spread if it is likely to be a risk to health and safety. Combustible materials are generally not permitted in the external walls of school buildings with a storey at least 18m above ground level. Such buildings must comply with the requirements of 'The Building (Amendment) Regulations' 2018 (SI 2018 No.1230).
- 4.2.3. Where School Buildings may be prone to vandalism, consideration should be given to ensuring cladding for ground floor external walls is not combustible to reduce the risk of external fire damage to the structure.
- 4.2.4. Plastic fittings in ground floor external walls, particularly those in timber-framed buildings, can act as weak spots where an external fire occurs. Such fittings include airbricks, vent covers, ducts and waste pipes. Contractors shall use appropriate materials in these situations to prevent the ingress of fire due to the materials.

5. External Doors and Windows

5.1. External Doors and Windows – General Requirements

- 5.1.1. External doors and windows shall meet the Minimum Life Expectancy requirements in Table 2, paragraph 2.5.5 in the GDB.
- 5.1.2. External doors and associated hardware and mechanisms shall be designed in co-ordination with the Access and Security Strategy and the Fire Strategy, taking account of the School's existing safeguarding policy including the control of emergency exits. The Contractor shall ensure that the following requirements are met.
- a) All doors shall have flush door thresholds to comply with BS8300.
 - b) All doors shall allow an opening force to comply with BS8300.
 - c) All doors shall adhere to the principle of PAS 24 – Product Assessment Specification produced by BSI for enhanced security performance of doors or independently certified to the recognised security standard Loss Prevention Standard LPS1175 Security rating 2.
 - d) The principle entrance doors to the Building shall be power-operated, either manually activated by a push pad or automatically activated by means of movement sensors. These doors shall have a 'hold-open' facility, interlinked to the fire alarm system, and be fitted within an emergency manual override.
 - e) Inner doors to the entrance lobby of the principle entrance to the Building shall be designed to maintain security. Refer to Annex 2G 'Electrical Services, Communications, Fire and Security Systems', Section 5 for requirements of access control. Inner doors which form the secure line shall:
 - i. be operable by a remote control from the reception desk or general office
 - ii. include for out-of-hours operation
 - iii. have a proximity reader to both sides, including interlinking with the fire alarm system
 - iv. be fitted within an emergency manual override

- f) The door from an Early Years classroom to Early Years Outdoor Play shall be fully glazed such that the glazing line is no higher than 450mm AFFL
- g) outward opening doors to Early Years classrooms and dining areas shall have a robust means of securing them in an open position, taking into account the adjacent external function to avoid creating a hazard
- h) where louvre doors are provided, they shall be faced to suit the performance requirements of the external fabric and have integral insect mesh where necessary
- i) external doors in Early Years, Key Stage 1, Special Schools (and Designated Units if specified in the SSB), used by pupils shall be fitted with anti-finger trap protection.

5.1.3. The Contractor shall ensure that any external door hardware, ironmongery or control mechanism provided is robust and heavy duty and the following requirements are met.

- a) The automated principle entrance doors to the Building shall be fitted with pull type handles/push plates to facilitate the manual opening/closing at the beginning and end of the school day.
- b) Pull type handles shall not be fitted to the push side of doors.
- c) Suitable locking mechanisms shall be provided in accordance with Annex 2D: 'Internal Elements and Finishes', being part of the suited physical key system, unless specified otherwise within the SSB.
- d) Suitable locking mechanisms shall be provided for escape doors to prevent unauthorised egress/entrance. The design shall be fully coordinated with the Access and Security Strategy and Fire Strategy.
- e) Letterboxes, where provided, shall be of a style and type (anti-arson) to be agreed with the Employer.

5.1.4. Where door closers are provided, as required by the Contractor's Fire Strategy or the School-Specific ADS, the Contractor shall ensure that they are suitable for the age and the needs of the pupils operating the doors.

5.1.5. Where the SSB specifies security shutters, grilles or bars on external doors or windows, these must comply with BS 8220 3:2004 – 'Guide for security of buildings against crime. Storage, industrial and distribution premises', or have Loss Prevention Certification Board (LPCB) approval.

5.1.6. The Contractor shall ensure that any windows, vents and shading provided are designed and constructed to:

- a) prevent glare which disrupts teaching, on computer screens, electronic whiteboards etc.
- b) allow for blinds to be fitted where required, see Annex 3: 'Fittings, Furniture and Equipment
- c) prevent falling from height, upper floor windows are to be fitted with opening restrictors or similar devices to restrict the clear opening to no greater than 130 mm for windows below 1500mm above finished floor level (AFFL) in areas used by pupils (making allowance for furniture placed against external walls)
- d) allow for the safe and efficient cleaning of windows.

5.1.7. All glazing to windows and doors shall meet the following standards.

- a) The glazing shall comply with BS6262: Part 1:2017 General methodology for the selection of glazing.
- b) All safety glass in critical locations (defined in Section 5 of AD K4 Protection of Impact with glazing) should be third party certificated and marked in accordance with BS 6262-4. The standard requires that safety glass is indelibly marked with key information so that it is visible after installation. Toughened glass should meet the requirements of the relevant product standard, BS EN 12150.
- c) Toughened glass should be heat soak tested to minimise the extent of NiS (Nickel Sulphide Inclusions) and other impurities, which may lead to the failure of glazed components in-situ.
- d) Annealed (float glass) shall not to be specified in any instance.
- e) All windows and doors are to retain their structural and dimensional stability over the life cycle of the component including all working parts.

5.2. Sill Heights

5.2.1. In order to provide views out for as many pupils as possible, the Contractor shall ensure that sill heights to any windows in Basic Teaching spaces are as follows.

- a) For spaces used by secondary pupils: sill height should be no higher than 1050mm AFFL and glazing line (the lowest edge of the glass) no higher than 1100mm AFFL.
- b) For spaces used by Early Years pupils (nursery playrooms, nursery group rooms and reception classrooms), KS1 and KS2 pupils: sill height should be no higher than 750mm AFFL and glazing line no higher than 800mm AFFL.
- c) For spaces used only by Early Years pupils (nursery playrooms, nursery group rooms and reception classrooms), the fully glazed external door shall facilitate views out whilst carrying out floor-based activities.

6. Suspended Flooring

- 6.1. Timber suspended floors, or floors reliant on timber elements, shall not be used at, or below, ground level.
- 6.2. Where floors utilising steel are provided, and where these are built or permanently fitted within 250mm of the external ground level (or below the external ground level), the following shall apply.
 - a) A free air gap of at least 150mm shall be provided to the underside of the floor and to its supporting structures.
 - b) There shall be a clear ventilation gap of at least 50mm in the vertical plane between any walls below ground which are supported by the same structural system as the floor (or associated with the floor) and any structure retaining the surrounding ground.
 - c) The free air gap below the floor and the ventilation of any structures and walls in the vertical plane below the floor and within 150mm of the external ground level, shall be linked such that these connect to provide a continuous area of ventilation, which connects to atmosphere, to cross ventilate on all faces of the building. As a minimum, these should ventilate the floor of not less than 1,500mm²/m run of external wall or 500mm²/m² of floor area whichever is the greater.
 - d) Any voids formed to separate and ventilate the suspended floor, and associated elements of below ground structure and walls, shall be designed such that they are not affected by moisture from the surrounding ground or from ground gases.
 - e) Where adverse ground conditions exist including the level of ground water, flood risk and dangerous ground gases, then the Contractor shall provide a solution that elevates the buildings clear of the ground condition issues. The Contractor shall provide a means to access the elevated building and adjacent play space which is robust and specification-compliant.
 - f) Except where there is a threshold into the building, the ground shall be retained away from any floor, any associated below-ground supporting structure and from any below-ground walls. Any retaining structures shall extend to a minimum height of 150mm above ground level.
 - g) Any retaining structures shall be capable of supporting the surrounding ground and preventing this from collapse into the void below the floor and any other ventilation void, and shall not require support from the floor, associated

structural systems and any associated external wall of the building. The retaining structures shall also be capable of supporting the ground when this is loaded with a MEWP or similar maintenance vehicle and a fire engine and any delivery where these are identified in the Fire Plan and Design and Access strategy and associated drawings.

- h) Any retaining structure shall be treated or finished such that it prevents water ingress into the void below the building.
- i) Any ground exposed below the suspended floors and the structure supporting them shall be finished with a surface treatment of over-site concrete to a minimum depth of 100mm thickness and treated to prevent ingress of water.
- j) The design of the external works should prevent surface water collecting outside any retaining structure. Where the overall topography of the site slopes towards the building, irrespective of localised arrangements, then continuous surface drainage shall be fitted to the face of the building on the 'up-slope' and extending to a minimum of half the face of the building to the two connected sides.
- k) Any surface below ground shall be specified or treated such that in its installed arrangement it meets the Minimum Life Expectancy requirements for 'slab' in paragraph 2.5.5.1 in the GDB. Any floor, and structural below-ground system shall be designed such that it cannot deposit debris into the void during the life expectancy of the element.

7. References

- 7.1. The Contractor shall take account of the following reference standard (or updated document if relevant):
 - a) LPS 1175: Issue 7.2 – ‘Requirements and testing procedures for the LPCB approval and listing of intruder resistant building components, strongpoints, security enclosures and freestanding barriers’.

8. Demonstrating Compliance

- 8.1. The requirements for demonstrating compliance are set out in the Employer's Requirements Deliverables.



Department
for Education

© Crown copyright 2020

This publication (not including logos) is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

To view this licence:

visit www.nationalarchives.gov.uk/doc/open-government-licence/version/3

email psi@nationalarchives.gsi.gov.uk

write to Information Policy Team, The National Archives, Kew, London, TW9 4DU

About this publication:

enquiries www.education.gov.uk/contactus

download www.gov.uk/government/publications

Reference: DfE-00076-2020



Follow us on Twitter:
[@educationgovuk](https://twitter.com/educationgovuk)



Like us on Facebook:
facebook.com/educationgovuk