



Department
for Education

Output Specification

Technical Annex 2D: Internal Elements and Finishes

May 2020 Update

Contents

Table of figures	4
Summary	5
Review date	5
Who is this publication for?	5
Document Updates	5
1. Introduction	6
2. General Requirements	7
2.1. Overview	7
2.2. Refurbishment	8
3. Internal Partitions	9
3.1. Internal Partition Performance	9
3.2. Moveable Partitions	10
4. Internal Doorsets	11
4.1. Internal Doorset Performance	11
4.2. Vision Panels	20
4.3. Glazing Standards	20
4.4. Internal Glazed Screens	21
5. Internal Ironmongery	23
5.1. Internal Doorset Hardware	23
5.2. Hinges and Locks	24
5.3. Internal Door Closers	25
5.4. Electro-magnetic Hold-open Devices	25
5.5. Lever Handles	25
5.6. Pull Handles	26
5.7. Push Plates	26
5.8. Finger Guards	26
6. Internal Stairs, Barriers and Guarding	28
7. Floors	30
7.1. Floor Structure	30
7.2. Floor Finishes	30
7.3. Barrier Matting	36

8. Ceilings and Soffits	37
8.1 Ceilings and Soffits Performance	37
9. Decorations and Finishes	39
9.1 Decorations and Finishes Performance	39
9.2. Splashbacks	41
9.3. Workmanship	45
10. Signage	46
11. References	47
12. Demonstrating Compliance	48

Table of figures

Table 1 - Minimum Hygrothermal Performance Requirements	7
Table 2 - Minimum Performance Requirements - Doorsets	19
Table 3 - Internal Glazed Screen and Internal Blinds Requirements	22
Table 4 – Minimum Specification Requirements for Ironmongery.....	27
Table 5 - Minimum Performance Requirements - Floor Finishes.....	35
Table 6 - Minimum Performance Requirements - Ceiling Finishes	37
Table 7- Minimum Performance Requirements - Wall Finishes	44

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 - Amendments to finger guards, roof level MUGAs 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 internal elements and finishes in schools and should be read in conjunction with Sections 2.6 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 Refurbished Building(s) which are designated Renewed or Replaced in the RSoW.
- 1.4. Where the requirements refer 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. Exposure to sunlight during its lifetime shall not affect the properties of any element or component provided to the extent that its associated minimum performance requirements cannot be achieved. Visual appearance of any element or component should also not be detrimentally affected during this period, taking into account expected solar performance under varying conditions of solar radiation.
- 2.1.2. Any materials and finishes shall perform without failure resulting from defects in design, materials, or workmanship. Failure shall be defined as breakage, disengagement of components, deflection beyond acceptable values, reduction in performance or breakage.
- 2.1.3. All internal finishes and fittings provided shall be such that levels of Volatile Organic Compounds in the air do not exceed 300µg/m³ averaged over eight hours.
- 2.1.4. The Contractor shall refer to the SSB in order to identify specific requirements for internal finishes and elements for pupils with Special Educational Needs or Disabilities (SEND).
- 2.1.5. Any hygrothermal performance required in doorsets, ceilings and wall finishes shall be met through the achievement of a satisfactory performance when subject to the environmental conditions in Table 1, as measured in accordance with DD171:1987 'Guide to specifying performance requirements for hinged or pivoted doors (including test methods)', test 10 and 11.

ADS code	Rating	Environmental conditions to be accommodated
0.1	normal	One Side - 25% RH at 10°C Opposite Side - 65% RH at 25°C
0.2	humid	One Side - 25% RH at 10°C Opposite Side - 85% RH at 25°C
0.3	wet	One Side - 25% RH at 10°C Opposite Side - 98% RH at 25°C

Table 1 - Minimum Hygrothermal Performance Requirements

2.2. Refurbishment

2.2.1. 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 work':

- a) any **Renewed** internal elements or finishes shall be designed to satisfy the relevant outputs of the GDB as well as this Technical Annex (and by the code in the ADS where relevant)
- b) any **Replaced** internal elements or finishes shall satisfy the relevant outputs of the GDB as well as 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** internal elements or finishes 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** internal elements or finishes 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.

2.2.2. Subject to paragraphs 1.3 and 1.4 of this Technical Annex and Section 1.5 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.

2.2.3. Generally, the requirements in this Technical Annex apply 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.

2.2.4. Where refurbishment is being carried out, the Contractor shall assess the existing internal elements and finishes, and report to the Employer any areas that do not meet current regulations or the requirements of the GDB, this Technical Annex, or the SSB.

3. Internal Partitions

3.1. Internal Partition Performance

3.1.1. The Contractor shall ensure that the design and construction of all internal partition walls comply with the following requirements.

- a) Partition fire ratings shall not be taken in isolation. If the adjoining room has a fire resistance or is a protected stair/fire escape route, or the partition forms a fire compartment, then the partition shall be appropriately fire rated. In all cases, the most onerous fire rating must be applied to the partition.
- b) Partitions to exam stores shall meet the requirements of the relevant qualification provider's criteria, including the Joint Council for Qualifications (JCQ) Regulations, or equivalent.
- c) In any studwork partitions, pattressing shall be provided for all wall-fixed fixtures, pipework, fittings, furniture or equipment provided by the Contractor, or listed on the relevant ADS, requiring a secure fixing to the wall (such as wash hand basins and shelving).
- d) All teaching walls to have a three-meter section centred on the room space, or agreed alternative placement, from floor to ceiling, to be designed to take A/V equipment (whether for legacy or new equipment or for future fixings outside of the Works) to allow a total loading of up to 125kg. The ceiling above the teaching wall is to allow for legacy A/V equipment to be fixed, so that the projected image is clear and is not disturbed by vibration from impact above.
- e) The robustness duty rating for circulation areas is to be 'severe duty' (SD) as defined by BS 5234-2:1992 – 'Partitions (including matching linings). Specification for performance requirements for strength and robustness including methods of test: Table 1', to withstand impact damage from equipment and Mobility Equipment. For all other spaces, it should be 'heavy duty'.
- f) Surface spread of flame ratings and fire resistance are to be as specified in AD B.
- g) Reference shall be made to the SSB for any additional requirements for pupils with SEND, for example robustness.

3.2. Moveable Partitions

3.2.1. For any moveable partition, the Contractor shall comply with the following requirements.

- a) The wall shall not be a fire compartment, nor need any fire rating.
- b) If the wall forms part of an escape route, the surface spread of flame ratings and fire resistance are to be as specified in AD B.
- c) The partition shall meet the sound insulation requirements specified in BB 93.
- d) Where there is a moveable partition between a drama studio and a hall, the minimum $D_{nT,w}$ between the spaces is to be 45dB.
- e) Moveable wall locking mechanisms shall not be of a spring-loaded type, which can cause injury when released.
- f) The partition shall have removable key locks to prevent unauthorised people from casually dismantling or tampering with it.

4. Internal Doorsets

4.1. Internal Doorset Performance

4.1.1. For any internal doorsets, the Contractor shall comply with the following requirements.

- a) Internal doorsets shall be suitably robust and perform their necessary protective and decorative functions. Surface finishes shall be resistant to marking and capable of withstanding cleaning with hot water containing mild non-abrasive detergents and disinfectants as part of a regular cleaning programme. All doorsets have good perimeter sealing in order to provide the desired airborne sound insulation. See GDB Section 2.6. Internal Elements and Finishes, Table 5.
- b) Any gaps between door frames and the walls in which they are fixed shall be minimised and are filled and sealed in a manner to satisfy the requirements for fire safety, security and acoustic performance specified in the GDB.
- c) Doorsets shall not be located in partitions between rooms requiring sound insulation values above 35 Rw dB, for example between music rooms.
- d) The interface between doorsets and the surrounding substrate shall not reduce the fire performance of the partition. Doorsets that achieve a suitable fire and smoke classification shall be used if they are needed in areas of higher fire risk or to provide greater protection to emergency escape routes.
- e) Visual clutter shall be avoided, and elements shall contrast visually with one another by the minimum differences in light reflectance value (LRV) specified in BS 8300 'Design of buildings and their approaches to meet the needs of disabled people'.

4.1.2. The Contractor shall provide fire-rated doorsets where required. Information shall be provided to enable each fire-rated doorset to be individually identified. This must confirm the manufacturer, the date of manufacture, and the designated fire rating and smoke seal requirement of the doorset. Fire rated doors shall be identified on the Fire and Access Strategy drawings.

4.1.3. Performance test certificates shall be provided for all fire-rated doorsets -including their ironmongery and any fingerguards - in accordance with British or European Standards, including BS 8214 'Code of practice for fire door assemblies'. Information shall be provided to enable each fire-rated doorset to be individually identified. This must confirm the manufacturer, the date of manufacture, and the

designated fire-rating and smoke seal requirement of the doorset. Fire-rated doors shall be identified on the Fire and Access Strategy drawings.

- 4.1.4. Performance test certificates for doorsets shall also be provided for doors on main circulation routes to prove that the doors and their ironmongery including any fingerguards have the performance ratings for mechanical durability and mechanical strength as set out in Table 2.
- 4.1.5. Acoustically rated doorsets shall conform to BB93.
- 4.1.6. Where the need is identified within the SSB, a stable type door may be used to provide access to administration offices or a technicians' area, where the fire strategy allows. This may be where space for a second internal reception desk to the main office is constrained, or where pupil access to a technician's space is preferred. Any stable door shall be based on doorset type D1.1.a in Table 2.
- 4.1.7. All doors to have:
 - a) a clear opening width of 825 through one leaf
 - b) fire and smoke resistance dependent on fire strategy
 - c) acoustic properties are dependent on the acoustic strategy.

Door Types In door type code: First digit: dimensions, durability and strength Second digit: refer to table 1 Letters: a-o: ironmongery, table 4; Letter v = vision panel	Description	Required locations	Minimum clear opening width - opening angle greater than 90 degrees is permitted	Minimum clear opening height	Mechanical durability (Class defined in BS EN12400:2002)	Mechanical strength (BS EN1192:2000)	Hygrothermal performance required, as specified in Table 1	Bolts & push plates required to slave leaf	Ironmongery (see Table 4)	Vision panels to Part M required (No = not required unless for fire strategy)	Notes
D1.1a	private	Head and senior staff offices	825	2000	5	3	Normal	No	a	No	N/A
D1.1av	general	In mainstream schools: general teaching, light practical, libraries, small group rooms for 8-18- year olds, most staff and admin spaces	825	2000	5	3	Normal	No	a	Yes	N/A
D1.1ev	early years	In mainstream primary: teaching, libraries and small group rooms used by nursery, reception and infant pupils	825	2000	5	3	Normal	No	e	Yes	N/A
D2.1av	strong	Resistant materials and engineering and adjacent spaces of similar humidity	825	2000	5	4	Normal	No	a	Yes	N/A

Door Types In door type code: First digit: dimensions, durability and strength Second digit: refer to table 1 Letters: a-o: ironmongery, table 4; Letter v = vision panel	Description	Required locations	Minimum clear opening width - opening angle greater than 90 degrees is permitted	Minimum clear opening height	Mechanical durability (Class defined in BS EN12400:2002)	Mechanical strength (BS EN1192:2000)	Hygrothermal performance required, as specified in Table 1	Bolts & push plates required to slave leaf	Ironmongery (see Table 4)	Vision panels to Part M required (No = not required unless for fire strategy)	Notes
D2.2av	strong	In mainstream schools: food or catering rooms, food store, and kitchen preparation areas	825	2000	5	4	Humid	No	a	Yes	N/A
D2.2d	strong	Accessible toilets, accessible changing, and hygiene rooms in mainstream schools	825	2000	5	4	Humid	No	d	No	Ergonomic handle and Access control system to be agreed with school. If door leaf opens inwards, it shall be openable outwards in an emergency
D3.2cv	toilets	Entrance to toilet suites and changing rooms in mainstream and predominantly ambulant Special Schools	825	2000	8	3	Humid	No	c	Yes	This excludes supervisable toilet suites in Early Years or where open plan suites are required in the SSB
D3.2ov	toilets	Entrance to toilet suites and changing rooms in predominantly non- ambulant Special Schools	825	2000	8	3	Humid	No	o	Yes	Ergonomic handle and access control system to be agreed with school

Door Types In door type code: First digit: dimensions, durability and strength Second digit: refer to table 1 Letters: a-o: ironmongery, table 4; Letter v = vision panel	Description	Required locations	Minimum clear opening width - opening angle greater than 90 degrees is permitted	Minimum clear opening height	Mechanical durability (Class defined in BS EN12400:2002)	Mechanical strength (BS EN1192:2000)	Hygrothermal performance required, as specified in Table 1	Bolts & push plates required to slave leaf	Ironmongery (see Table 4)	Vision panels to Part M required (No = not required unless for fire strategy)	Notes
D3.2b	toilets	Individual pupil toilets for non-disabled (not including cubicle doors)	825	2000	8	3	Humid	No	b	No	Door leaf shall open inwards but be openable outwards in an emergency
D3.2a	toilets	Individual staff toilets for non-disabled (not including cubicle doors)	825	2000	8	3	Humid	No	a	No	Additional indicator bolt required
D4.1a	store room	Store rooms and cupboards containing materials for lightweight activities	825	2000	3	3	Normal	No	a	No	N/A
D4.2a	food store	Store rooms or cupboards or stores off food, kitchen preparation or toilet areas	825	2000	3	3	Humid	No	a	No	N/A

Door Types In door type code: First digit: dimensions, durability and strength Second digit: refer to table 1 Letters: a-o: ironmongery, table 4; Letter v = vision panel	Description	Required locations	Minimum clear opening width - opening angle greater than 90 degrees is permitted	Minimum clear opening height	Mechanical durability (Class defined in BS EN12400:2002)	Mechanical strength (BS EN1192:2000)	Hygrothermal performance required, as specified in Table 1	Bolts & push plates required to slave leaf	Ironmongery (see Table 4)	Vision panels to Part M required (No = not required unless for fire strategy)	Notes
D5.1av	strong, with vision panel	Materials storage and preparation areas for heavy practical activities.	825	2000	3	4	Normal	No	a	Yes	N/A
D5.2av	strong, with vision panel	Food technology food store from circulation and kitchen walk-in store rooms off kitchen preparation area	825	2000	3	4	Humid	No	a	Yes	N/A
D5.1h	strong, no vision panel	Chemical and other hazardous material stores, service ducts and plant rooms	825	2000	3	4	Normal	No	h	No	Door should open outwards and be unlockable from inside the room.
D5.2h	strong, no vision panel	Chemical and other hazardous material stores, service ducts and plant rooms accessed from humid areas such as kitchens	825	2000	3	4	Humid	No	h	No	Door should open outwards and be unlockable from inside the room.

Door Types In door type code: First digit: dimensions, durability and strength Second digit: refer to table 1 Letters: a-o: ironmongery, table 4; Letter v = vision panel	Description	Required locations	Minimum clear opening width - opening angle greater than 90 degrees is permitted	Minimum clear opening height	Mechanical durability (Class defined in BS EN12400:2002)	Mechanical strength (BS EN1192:2000)	Hygrothermal performance required, as specified in Table 1	Bolts & push plates required to slave leaf	Ironmongery (see Table 4)	Vision panels to Part M required (No = not required unless for fire strategy)	Notes
D6.1mv	special, wide	In Special Schools for predominantly non- ambulant pupils: basic teaching, libraries, small group rooms	925	2000	5	4	Normal	No	m	Yes	Ergonomic handle and access control system to be agreed with school
D6.2mv	special, wide	In Special Schools for predominantly non- ambulant pupils: food or catering rooms, food store	925	2000	5	4	Humid	No	m	Yes	Ergonomic handle and access control system to be agreed with school
D6.2n	special, wide	In Special Schools for predominantly non- ambulant pupils: toilets, hygiene rooms and changing rooms	925	2000	5	4	Humid	No	n	No	Ergonomic handle and access control system to be agreed with school. Pull handles to both faces.
DD1.1av	general double	In mainstream schools, dining or social areas (double doors - not lobbied doors)	1650	2000	5	3	Normal	Yes	a	Yes	Plain meeting stiles,

Door Types In door type code: First digit: dimensions, durability and strength Second digit: refer to table 1 Letters: a-o: ironmongery, table 4; Letter v = vision panel	Description	Required locations	Minimum clear opening width - opening angle greater than 90 degrees is permitted	Minimum clear opening height	Mechanical durability (Class defined in BS EN12400:2002)	Mechanical strength (BS EN1192:2000)	Hygrothermal performance required, as specified in Table 1	Bolts & push plates required to slave leaf	Ironmongery (see Table 4)	Vision panels to Part M required (No = not required unless for fire strategy)	Notes
DD1.1hv	general double	In mainstream schools: multi-use and assembly halls, performance spaces (double doors - not lobbied doors)	1650	2000	5	3	Normal	Yes	h	Yes	Plain meeting stiles,
DD1.1kv	general double	Sports halls, activity studios, gymnasias	1650	2000	5	3	Normal	Yes	k	Yes	Plain meeting stiles. Must open out from hall space. All surfaces must be flush with no projecting frames or ironmongery.
DD1.1fv	general double	In mainstream schools: general purpose for circulation routes and zoning	1650	2000	5	3	Normal	Yes	f	Yes	Override to hold open device to be provided in an access restricted location
DD1.1gv	general double	In mainstream schools: draught lobbies and staircases	1650	2000	5	3	Normal	No	g	Yes	N/A

Door Types	Description	Required locations	Minimum clear opening width - opening angle greater than 90 degrees is permitted	Minimum clear opening height	Mechanical durability (Class defined in BS EN12400:2002)	Mechanical strength (BS EN1192:2000)	Hygrothermal performance required, as specified in Table 1	Bolts & push plates required to slave leaf	Ironmongery (see Table 4)	Vision panels to Part M required (No = not required unless for fire strategy)	Notes
DD1.1pv	link	Door between paired general teaching, light practical, small group rooms, or staff and admin spaces	1650	2000	5	3	Normal	Yes	p	Yes	Doors to open 180 degrees and be restrained in open position
DD5.1h	hall store	hall, sports hall, activity studio and gymnasium stores	1650	2400	3	4	Normal	Yes	h	No	Dimensions to suit equipment to be stored, particularly trampolines. Pull handles to be flush-fitting non-projecting handles
DD6.1hv	special double	In Special Schools: multi-use and assembly halls, performance spaces (double doors - not lobbied doors)	1650	2000	5	4	Normal	Yes	h	Yes	Plain meeting stiles. Ergonomic handle and access control system to be agreed with school
DD6.1fv	special circulation	In Special Schools: general purpose for circulation routes and zoning	1650	2000	5	4	Normal	Yes	f	Yes	Ergonomic handle and access control system. Override to hold open device to be provided in an access restricted location

Table 2 - Minimum Performance Requirements - Doorsets

4.2. Vision Panels

- 4.2.1. Door vision panels shall be provided as indicated by a “v” in the doorset code in Annex 1A or 1B, in Table 2 of this Technical Annex or the School-Specific ADS. This will include all teaching spaces, but there shall be no door vision panels to toilets, hygiene rooms or store doors. If any space requiring privacy such as the MI room, head’s office, finance offices, meeting rooms etc. are required by AD B or AD M to have vision panels, then they shall be provided with blinds.
- 4.2.2. The Contractor shall ensure that any vision panels shall:
- a) provide effective zones of visibility, to comply with AD K and AD M
 - b) comply with BS 8300 ‘Design of buildings and their approaches to meet the needs of disabled people’ and incorporate glazing in accordance with ‘BS EN 12600- Glass in building. Pendulum test. Impact test method and classification for flat glass’
 - c) be covered by the evidence of conformity provided for the doorset in relation to the performance requirements contained in BS EN 12600- ‘Glass in building. Pendulum test. Impact test method and classification for flat glass’, such as those relating to fire, acoustic and security.
- 4.2.3. Any spaces that are required to have blackout or dim-out blinds on external glazing shall also have blackout or dim-out blinds to any internal glazed screens or vision panels. See Annex 3: Fittings, Furniture and Equipment for the specification for internal blinds.

4.3. Glazing Standards

- 4.3.1. All glazing shall meet the following requirements.
- a) All glazing should 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 Approved Document K4 Protection against 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) 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.

4.4. Internal Glazed Screens

- 4.4.1. The Contractor shall ensure that internal glazed screens are provided as required in Table 3 and where passive supervision is required (see GDB paragraph 2.3.23).
- 4.4.2. Internal glazed screens may be immediately adjacent to the main door, as part of the doorset, or designed as internal windows with separate frames, but shall be:
 - a) designed with a consistent approach, for instance in relation to doorset and screen configurations within corridors
 - b) designed to ensure that the bottom edge of the glass is set at no more than 1100mm above finished floor level
 - c) a minimum of 900mm high and 600mm wide.
- 4.4.3. Internal glazed screens adjacent to a door may be deemed to have the same minimum R_w requirement as the doorset, provided that the total area of vision is no greater than that of the opening leaf of the doorset.
- 4.4.4. Permanently occupied administrative offices and other spaces listed in Table 3 shall have an internal blind on any internal glazed panel and any vision panel in the door leaf, for privacy.
- 4.4.5. For glazing standards, see paragraph 4.3.

ADS codes	Space name	Internal glazed screen (at least 600mm wide)	Internal blind to any internal glazed screen or vision panel
OFF00 OFF10 OFF20	Office or office/ meeting room, office/ pastoral room (SENco, learning support)	Required	Required
OFF33 OFF35	Staff work room	Required	Not required
OFF41 ADM11	Conference/ meeting room, head's office (meeting room),	Not required, unless located for supervision	Required if vision panel provided
OFF15	Office/ workroom (technical staff, ICT staff or premises)	Not required, unless located for supervision	Not required
OFF32 ADM02 ADM04 ADM08	Staff room (social), interview room, sick room, reprographics room	Not required	Required if vision panel provided
ADM05 ADM06 ADM13	General office / finance / student services, admin office (PA to head)	Not required	Not required
CIR12	Staircase	Required	N/A

Table 3 - Internal Glazed Screen and Internal Blinds Requirements

5. Internal Ironmongery

5.1. Internal Doorset Hardware

5.1.1. The Contractor shall ensure that the design and installation of hardware to any doorsets comply with the following requirements.

- a) Where ironmongery is provided, the Contractor shall conform to the specifications in Table 4, to match the relevant doorset code in Annex 1A: 'Definitions of Spaces – Mainstream Schools' or Annex 1B: 'Definitions of Spaces – SEND and Alternative Provision or the School-Specific ADS.
- b) The ironmongery shall be to the relevant specifications below and complement the strength and durability classification of the doors to which they are fitted.
- c) Door leaves that are neither steel nor timber with laminated finish shall be provided with protective kick plates that are sufficient to protect the doors from damage from Mobility Equipment and where relevant, trolleys. These shall be on both sides of all door leaves and a minimum of 200mm high, or 450mm in any non-ambulant Special School.
- d) Doorstops shall be fitted such that they prevent the door leaf damaging adjacent surfaces and prevent damage to the door leaf itself. They shall be fitted to adjacent skirting boards as close to the leading edge of the leaf as possible and not less than two thirds of the door width away from the hinge line. Stops must not be located in positions where they may constitute a trip hazard.
- e) All ironmongery inside sports halls, activity and dance studios and other spaces housing energetic physical activity shall be flush fitting.
- f) Accessible and staff WCs require a method of limiting access to staff and disabled users only and which meets the requirements of AD M for limited dexterity.
- g) Door handles shall satisfy the requirements of BS 8300 'Design of buildings and their approaches to meet the needs of disabled people' to ensure they are suitable for people with reduced manual dexterity or visual impairment.
- h) The server room shall be secured via a lock and key, of a type that cannot be duplicated without authority.

- i) Six keys shall be provided for the server room upon handover (1 x network manager, 1 x technician, 1 x site manager, 1 x Disaster Recovery plan to be kept within the safe, and 2 x spare to be kept in a safe).
- j) If there is more than one door to the server room, then both doors shall contain suited locks so that a single key can open both doors.
- k) Nameplates and numbers shall be fitted to all internal doors. See Section 10 Signage.
- l) Reference shall be made to the SSB for any additional requirements such as access control or finger guards.

5.2. Hinges and Locks

5.2.1. Hinges shall meet the requirements of BS EN 1935- 'Building hardware. Single-axis hinges. Requirements and test methods'. Account should be taken of any door closers that will affect the specification of the hinge.

5.2.2. Locks shall be as listed in Table 4 as one of the following types:

- a) lever lock – suitable for use with lever handles, operated by key from outside and thumb-turn inside, note: classroom locks are to be unlockable but not lockable from the classroom side
- b) dead lock – suitable for use without lever handles; in double doors the slave leaf will require flush bolts to top and bottom
- c) bathroom lock – lock that can be locked from the inside by turn or lever and can be released from outside by hexagon or star key (not coin-slot)
- d) ergonomic lock - as bathroom lock but operable by users with limited dexterity.

5.2.3. Locking arrangements for examination stores shall comply with relevant exam board criteria (Joint Council for Qualifications (JCQ) or equivalent) given in the SSB.

5.2.4. Emergency release locks shall be provided for toilet cubicle doors. The release function shall be designed to limit operation to members of staff only.

5.3. Internal Door Closers

- 5.3.1. Door closers shall only be provided when required in the doorset type specified in Annex 1A or 1B or the School-Specific ADS, or when required because of the fire design of the building. Door closers shall meet the requirements of BS EN 1154 – ‘Building hardware. Controlled door-closing devices. Requirements and test methods’, as well as the following additional requirements.
- a) The closer shall incorporate an adjustable tensioner which is set such that the door provides optimum fire resistance and acoustic performance when closed and the operating forces are within the limit permitted in BS 8300 ‘Design of buildings and their approaches to meet the needs of disabled people’.
 - b) Any delayed-action closers shall not delay the closing action more than that required for its use (for example, for the ease of disabled people); where the device is fitted to a fire door, this delay shall not exceed 25 seconds, as specified in BS EN 1154 – ‘Building hardware. Controlled door-closing devices. Requirements and test methods’.
 - c) Any door closers fitted on fire doorsets on circulation routes shall incorporate electro-magnetic hold-open devices linked to (and compatible with) the automatic fire detection and alarm system.

5.4. Electro-magnetic Hold-open Devices

- 5.4.1. The Contractor shall ensure that electro-magnetic hold-open devices are not fitted to doorsets required to be self-closing in order to provide privacy, such as doorsets to changing rooms. Electro-magnetic devices shall be provided on self-closing fire doors in halls and corridors, and only on those devices, which release automatically. The Contractor shall ensure appropriate measures are included to prevent accidental impact with the leading edge of the door leaf, when in the open position. Edges of all doors that stand open shall contrast visually with the surrounds, and protection of the leading edge of the door shall be provided to prevent the creation of a hazard.
- 5.4.2. Electro-magnetic hold-open devices must meet the requirements of BS EN 1155 – ‘Building hardware. Electrically powered hold-open devices for swing doors. Requirements and test methods’.

5.5. Lever Handles

- 5.5.1. The Contractor shall ensure that lever handles on any doors meet the requirements of BS EN 1906 – ‘Building hardware. Lever handles and knob

furniture. Requirements and test methods' and are compatible with the locks with which they are to be used. Lever handles shall have a diameter of between 19mm and 35mm, be offset from the door leaf by at least 45mm, be at least 95mm long, have a return end, and contrast with the door leaf by a minimum of 20 LRV points.

5.5.2. All lever handles shall have bolt-through fixings.

5.6. Pull Handles

5.6.1. The Contractor shall ensure that pull handles on doors meet the requirements of BS 8424 – 'Building hardware. Pull handles. Requirements and test methods'. Pull handles shall have a diameter of between 19mm and 35mm, be offset from the door leaf by at least 45mm, be at least 400mm long, and contrast with the door leaf by a minimum of 20 LRV points. Additionally, pull handles must be located so their lower end is 1000mm above FFL or 1100mm above FFL if clashing with other door hardware.

5.6.2. All pull handles shall have bolt-through fixings. Pull type handles shall not be fitted to the push side of doors.

5.7. Push Plates

5.7.1. Push plates shall be provided to each door leaf on the face used to push the door open. These shall be a minimum of 90mm x 1400mm in size, or if a single plate is not compatible with other hardware fitted to the door, two minimum 90mm width plates fitted above and below the lock position shall be provided to protect to an equivalent extent.

5.8. Finger Guards

5.8.1. Finger guards shall be fitted to all doors to all spaces used by Early Years, Key Stage 1 pupils, and throughout Special Schools, except where it is very unlikely for pupils to be present. The need for guards to doors in non-teaching spaces should be assessed with the school

5.8.2. Where new doors require finger guards, the guard mechanism should be built into the door and frame, with a rounded stile that creates a gap between door and frame that remains constant as the door closes. An applied cover finger guard is only acceptable in refurbishment and only where the door is not being replaced; the cover must not affect the integrity of the doorset in terms of fire or acoustics. The proposed solution shall require minimal maintenance. See GDB Section 2.6. Internal Elements and Finishes, Table 5 for Minimum Life Expectancy.

Ironmongery Sets	Type ¹	Hinges: S-standard P-parliament	Finger guards required ²	Through-fix lever handles	Through fix vertical pull handle & push plate	Locks (see 5.2.2): L-Lever locks, D-Dead lock, B-Bathroom, E-ergonomic	Staff-only access control system	Electromagnetic hold open device required with override in access restricted location	Closer required
a	general	S	No	Yes	No	L	No	No	No
b	mainstream toilet	S	No	Yes	No	B	No	No	No
c	mainstream changing	S	No	No	Yes	D	No	No	Yes
d	accessible toilet	S	No	No	Yes	E	Yes	No	No
e	early years	S	Yes	Yes	No	L	Yes	No	No
f	circulation	S	No	No	Yes	D	No	Yes	Yes
g	lobby & stairs	S	No	No	Yes	None	No	No	Yes
h	halls & plant	S	No	No	Yes	D	No	No	No
k	sports hall	S	No	No	Yes, flush	D	No	No	No
m	special	S	Yes	Yes	No	L	Yes	No	No
n	special toilet	S	Yes	Yes	Yes	B	Yes	No	No
o	special changing	S	Yes	No	Yes	D	Yes	No	Yes
p	parliament	P	No	Yes	No	L	No	No	No

Table 4 – Minimum Specification Requirements for Ironmongery

¹ 'Type' is a descriptor, it does not indicate all the areas to which the code applies.

² Finger guards are required to all spaces used by Early Years and Key Stage 1, and throughout Special Schools, see paragraph 5.8.1.

6. Internal Stairs, Barriers and Guarding

- 6.1. The Contractor shall ensure that the design and construction of all new stairs comply with the following requirements.
- a) All aspects of the design (including handrail height, colour and texture) shall meet the needs of a wide range of disabilities, including reduced mobility and visual impairment, through compliance with AD M and adoption of the relevant guidance provided in BS 8300².
 - b) Materials for handrails/balustrades shall be self-finished and chosen to contrast with the background against which they will be viewed and are not highly reflective.
 - c) The design of stairs and handrails shall be co-ordinated so that handrails are continuous without vertical steps in the handrails.
 - d) Offset treads shall be provided to accommodate continuous handrails.
 - e) The routing of Building services through stairway enclosures should be kept to a minimum. Where this is unavoidable, the Contractor is to agree this with the Employer, and ensure their presence does not lower the required performance of the stairway, particularly in terms of sound insulation and fire resistance.
 - f) Where the gap between stair strings exceeds 200mm, the gap shall be treated as a void and meet the requirements for voids given in paragraph 2.6.5.2b in the Generic Design Brief.
 - g) Where wall-mounted heat emitters or lights are fitted in stairwells, they shall be robust and located so as not to obstruct use of the stair, the landings, the refuge or the designated escape route. They shall also be easy to maintain, whilst preventing tampering by pupils.
 - h) Any additional requirements identified in the SSB shall be provided. Additional requirements for Special Schools may include a full height solid wall with applied handrail to the centre of stairwells or an additional handrail to both sides of all stairs at a height of 600mm to the top of the rail, above the nosing line of the stairs.

²BS 8300: 2009 + A1: 2010: 'Design of buildings and their approaches to meet the needs of disabled people

- i) The design and the materials (including any glass) used for all balustrades and guarding shall be as defined in BS 6180:2011 and AD K. Designs shall be certified by chartered structural engineers or a BSI kitemark registered manufacturer. Balustrade and barrier systems shall be installed by qualified, accredited and certified installers.

- j) Any glass to balustrades and barriers and guarding shall be in accordance with BS 6180: 2011. Glass shall be laminated and toughened and fixed with bolt-through fixings when using an infill panel system.

- k) All safety glass in critical locations 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. Laminated glass should meet the requirements of the relevant product standard, BS EN 14449. Laminated annealed glass shall have a continuous frame support system in accordance with BS 6180:2011 and shall not be bolt fixed or point fixed, e.g., using clips. Calculations shall be based on risk assessments for each project to determine the correct glass to use.

7. Floors

7.1. Floor Structure

7.1.1. The Contractor shall meet the following requirements in order to limit floor vibration and sound transmission.

- a) All floors must consist of a composite concrete construction.
- b) The dynamic deflection of all floors shall be limited to a minimum fundamental natural frequency of 5Hz, or the floor structure shall be justified by other means (e.g. response factors or analysis as described in the SCI publication P354 -Design of Floors for Vibration: A New Approach).
- c) Flanking paths shall be identified in the BB93 acoustic report and adequate structural isolation provided.
- d) Roofs housing rooftop playdecks and MUGAs shall be designed to minimise structure borne vibration and airborne sound transmission to occupied rooms. The same approach shall be applied where halls are positioned at first floor level. A specialist structural and acoustic report is required to prove there is adequate structural isolation and attenuation of sound and vibration.

7.2. Floor Finishes

7.2.1. The Contractor shall ensure that any floor finishes conform to the performance specifications in this Technical Annex and all British and European standards relevant to the material type, including:

1. BS 8203 – ‘Code of practice for installation of resilient floor coverings’
2. BS EN 14041 – ‘Resilient, textile and laminate floor coverings. Essential characteristics’

7.2.2. Where there is under-floor heating, floor finishes shall be able to withstand the effects of temperatures up to 27 °C.

7.2.3. Where vinyl, lino or other sheet material is to be used, the surface onto which the sheet is to be laid shall be free of surface irregularities to standard SR1 in BS 8203:2017. Trowel lines, adhesive comb lines, indentations, manufacturing and construction joints including volumetric module joints (excluding movement joints) or other irregularities shall not be visible or identifiable through the sheet covering.

7.2.4. The Contractor shall ensure that the floor finish is appropriate to the activities taking place in the space it serves, and any particular needs of the School, in terms of:

- a) cleanliness - all finishes must as a minimum achieve a basic level i.e. be non-porous, reasonably joint free (ceramic tile with epoxy based grout and carpet tiles are both acceptable), with smooth welds in sheet materials; those rated 'high' within Table 5 shall have no dirt traps and shall incorporate coved skirting
- b) smoothness - with minimal abrasion characteristics against the skin
- c) sound absorption and transmission - ensuring good acoustic properties and performance; floor finishes should be considered as a whole alongside other internal surfaces to achieve the performance criteria specified in BB93
- d) impact resistance
- e) suitability for Mobility Equipment users and others with a physical disability or sensory impairment
- f) colour and pattern – in terms of maintenance, wayfinding and in Special Schools, sensitivity
- g) having a low Volatile Organic Compounds (VOC) finish.

7.2.5. Floor finishes shall be provided for each space as indicated in Table 5 and as specified in the School-Specific ADS, unless (by exception) an alternative is required in the School-Specific Brief. Particular characteristics in Table 5 include:

- a) slip resistance, ensuring minimal tripping hazards
- b) chemical and heat resistance
- c) static resistance, for example in the server room
- d) area elastic performance of A3 or A4 in sports or activity spaces
- e) durability, to BS EN ISO 10874: 2012.

7.2.6. Where retractable bleacher seating is provided, the floor finish shall be capable of carrying the weight of this equipment, with special attention paid to sprung floor construction loading abilities, and the point loads imposed by rollers used. The

floor finish shall be homogenous, if vinyl, and shall be capable of resisting wear associated with this equipment.

7.2.7. Where timber floor finishes are provided, they shall be finished with a 2-pack polyurethane flexible lacquer/sealant (no acrylic mixes).

7.2.8. In Table 5, there are three levels of water resistance required, defined as follows:

- a) water Resistance 1 - to withstand a reasonable degree of spillage and dampness from footwear etc...
- b) water Resistance 2 - to allow frequent spillage or wetting without damage, staining or absorption. Requirements for resilience covered in BS EN 661 1995 and BS EN 662 1995
- c) water Resistance 3 - to allow regular wetting without damage, staining or absorption. Requirements for spreading of water covered in BS EN 661 1995 and BS EN 13553 for vinyl in wet areas.

7.2.9. When a mixed floor finish is required in Table 5 (using letter 'm' in the ADS code) the level of water resistance applies to the larger area of carpet, while the lino, rubber or vinyl finish around the sink and worktop would be Water Resistance 2 above.

7.2.10. In Table 5, there are two levels of hygiene performance required. Where a high level is specified it shall be readily cleanable and not hold smells. This requirement will apply equally to the 3m x 3m carpet mat required in all Early Years classrooms and mainstream Infant classrooms.

7.2.11. When a carpet mat is required in Table 5 (using letter 'i' in the ADS code) the Contractor shall supply for each classroom a 3 x 3m carpet square mat with a weighted and ramped edging in order to minimise trip hazards.

Floor Finishes	Description	Possible materials (to be proposed by Contractor and agreed by Employer) BS EN 14041:2004 Essential characteristics always apply for rubber or vinyl Fire and smoke resistance dependent on fire strategy Min reflectance value (LRV) for all floors = 5%	Slip Resistance (Ramp test rating, or R value)	Slip Resistance Value (SRV) and surface roughness	BS EN 14041:2004 Electrostatic Rating	Heat Resistance	Area elastic (A3) sports floor to BS EN 14904: 2006	BS EN ISO 10874:2012 European Flooring Use classification (for durability)
Type F1	general	carpet and/or lino, rubber or vinyl	No	No	Yes	No	N/A	Commercial 33
Type F2	stores	lino, rubber, resin or vinyl;	No	No	Yes	No	N/A	Commercial 33
Type F3	non-slip	non-slip lino, resin, rubber or vinyl	R10	SRV36 + 20 microns	Yes	No	N/A	Commercial 33
Type F4	dining	durable, waterproof lino, resin, rubber or vinyl	No	No	Yes	No	N/A	Commercial 34
Type F5	heavy practical	heat resistant non-slip concrete, resin, rubber or vinyl	R11	Minimum SRV 36	Yes	Yes	N/A	Commercial 34 for rubber and vinyl
Type F6	multi-purpose	durable elastic composition, lino, rubber, semi-sprung timber or vinyl	R9	N/A	No	No	A3 or A4	Commercial 34
Type F7	wet area	ceramic, resin, rubber or vinyl	Yes, see 'specific finishes' F7.3h	Minimum SRV 36	No	No	N/A	Commercial 34
Type F8	kitchen	heat resistant ceramic, resin, rubber or vinyl	R11	Minimum SRV 36	No	Yes	N/A	Commercial 34
Type F9	entrance	barrier matting	N/A	N/A	No	No	N/A	Commercial 34

Floor Finishes Key to codes: First digit: type, durability, slip resistance Second digit: water resistance 1-3 and chemical resistance Letters: m - mixed carpet/ vinyl; i - carpet mat; h - hygienic	Description	Area	Water Resistance 1	Water Resistance 2	Water Resistance 3	Chemical Resistance	Hygiene Performance	Specific finishes requirements Incl part-covering, colour or pattern
Type F1.1	general	in mainstream schools: general	Yes	No	No	No	Moderate	N/A
Type F1.1h	special general	in Special Schools: general	Yes	No	No	No	High	Suitable for wheelchairs, no transition strips
Type F1.1m	mixed general	mainstream junior primary classrooms, shared teaching areas, staff rooms with sinks	Yes	No	No	No	Moderate	Carpet to part of area as shown on FF&E layout; lino, rubber or vinyl around sinks etc.
Type F2.1	stores	stores, server room	Yes	No	No	No	Moderate	N/A
Type F3.2i	classroom non-slip	all early year's classrooms and mainstream infant, ambulant special primary, classrooms	Yes	Yes	No	No	High	3x3m carpet mat (with weighted edging) on top of finish to part of area, as shown on FF&E layout
Type F3.4	chemical resistant non-slip	light practical, chemical store, cleaners store, dark room, reprographics	Yes	Yes	No	Yes	Moderate	Suitable for heavy movable FF&E on castors

Floor Finishes Key to codes: First digit: type, durability, slip resistance Second digit: water resistance 1-3 and chemical resistance Letters: m - mixed carpet/ vinyl; i - carpet mat; h - hygienic	Description	Area	Water Resistance 1	Water Resistance 2	Water Resistance 3	Chemical Resistance	Hygiene Performance	Specific finishes requirements Incl part-covering, colour or pattern
Type F3.4h	hygienic non-slip	food room, MI, sick room; kitchen staff and stores, hygiene room	Yes	Yes	No	Yes	High	Suitable for heavy movable FF&E on castors
Type F4.2h	dining	dining, serveries	Yes	Yes	No	No	High	SRV36 slip resistance in separate servery areas
Type F5.4	heavy practical	resistant materials workshops and prep, kiln room, plant room	Yes	Yes	No	Yes	Moderate	Suitable for heavy movable FF&E on castors
Type F6.1	multi-purpose sport	sports hall, activity studio, dance studio, drama studio, fitness studio	Yes	Yes	No	No	Moderate	sports hall floor to accommodate suitable sports court markings
Type F6.2h	multi-purpose hall	multi-purpose hall	Yes	Yes	No	No	High	Suitable for movable bleacher seating where specified
Type F7.3h	wet area	changing rooms, showers, toilets, hygiene rooms	Yes	Yes	Yes	Yes	High	Barefoot areas shall be 'barefoot slip resistance category B'
Type F8.4h	kitchen	kitchen preparation	Yes	Yes	No	Yes	High	N/A
Type F9.2	entrance	entrance lobbies	Yes	Yes	No	No	Moderate	Barrier matting

Table 5 - Minimum Performance Requirements - Floor Finishes

7.3. Barrier Matting

- 7.3.1. Barrier matting shall be provided to all entrances to assist with cleanliness of internal floor coverings. The draft lobby to the main school entrance shall have as a minimum: a 2.1m length of barrier matting in the direction of travel, in compliance with BS 7953 – ‘Entrance flooring systems. Selection, installation and maintenance’.
- 7.3.2. In entrances where high levels of ingress are expected (e.g. main pupil entrance), the Contractor shall demonstrate that the extent of barrier matting provided is based on an analysis of use.
- 7.3.3. Barrier matting shall be provided to any external doors in Early Years and KS1 classrooms, except where there is a second door for summer use.
- 7.3.4. Barrier matting shall also:
- a) not present a hazard to the user in normal use and not become slippery when wet
 - b) remove and retain moisture and dirt, preventing it being transferred to internal floor coverings
 - c) be of a ‘heavy duty’ type, catering for high flow rates at key times within the school day
 - d) be of a recessed or floor fixed type, except at external doors to Early Years and KS1 classrooms where loose mats with a non-slip backing are permitted
 - e) not impede the movement of wheelchairs or non-ambulant building users.

8. Ceilings and Soffits

8.1 Ceilings and Soffits Performance

8.1.1. The Contractor shall ensure that any ceilings and soffits are smooth and free from holes and that all service runs are neat and tidy.

8.1.2. Where ceilings or soffits are provided, the Contractor shall conform to the specifications indicated in Table 6 for each space, to match the relevant code in Annex 1A or 1B or the School-Specific ADS. These requirements include moisture resistant ceilings in areas such as kitchens, changing rooms, showers and toilets. Ceiling finishes must have:

- a) fire and smoke resistance dependent on Fire Strategy
- b) acoustic treatment dependent on Acoustic Strategy
- c) min reflectance value (LRV) for all ceilings = 70%.

Code First digit: type: grid, monolithic, exposed soffit Second digit: hygrothermal letters	Area	Description	Construction	Hygrothermal performance
Type C1.1	all areas not subject to humid/wet conditions or high hygiene requirements	general	clipped, grid ceiling or exposed soffit with exposed services	normal
Type C1.2	food room, kitchen preparation areas, kitchen staff and store rooms, staff toilets	humid areas	clipped, grid ceiling with no exposed services below, including M&E ductwork	humid
Type C2.2	pupil toilets, changing rooms and other areas where pupils are left unattended	humid areas	monolithic ceiling with no exposed services or clipped, grid ceiling	humid
Type C2.3	showers, hygiene rooms	wet areas	monolithic ceiling with no exposed services	wet
Type C3.2	plant rooms	humid areas	exposed soffit with exposed services	humid

Table 6 - Minimum Performance Requirements - Ceiling Finishes

- 8.1.3. Ceilings for unsupervised spaces such as WC and shower cubicles shall be continuous and monolithic or suspended with clips to keep tiles in place and to prevent unwanted access. Ceilings in areas that are supervised such as changing rooms and wash hand basin areas can be suspended in type, subject to moisture resistance criteria being satisfied.
- 8.1.4. All main school kitchen preparation areas shall be able to withstand pressure washing.
- 8.1.5. The Contractor shall ensure that where suspended ceilings are designed, specified and installed they will:
- a) be level and flush at joints, adequately secured and provide surface spread of flame performance in accordance with the relevant statutory codes
 - b) not be readily damaged by impact or be easily defaced
 - c) use insulation that is non-combustible, where provided
 - d) be easily levelled following access.
- 8.1.6. Where a ceiling-mounted hoist or physiotherapy equipment or ceiling mounted a/v equipment is provided, tracking or fixing shall be co-ordinated with other ceiling services and the ceiling structure shall be able to support the equipment and any person using the equipment.
- 8.1.7. In non-ambulant Special Schools, ceilings in medical treatment rooms shall be homogeneous with recessed light fittings, unless specified otherwise in the School-Specific Brief.
- 8.1.8. Ceilings in pool areas shall be designed to avoid mould growth.

9. Decorations and Finishes

9.1 Decorations and Finishes Performance

- 9.1.1. Where wall finishes are provided, the Contractor shall conform to the specifications listed in Table 7, to match the relevant code in Annex 1A or 1B or the School-Specific ADS.
- 9.1.2. The Contractor shall ensure that minimum surface reflectance levels are to be as follows.
- a) Walls: 50%.
 - b) Painted exposed soffits and ceilings in new or existing areas: 70%.
 - c) Floors: 5%, and not higher than 40% to avoid scuff marks.
- 9.1.3. Daylight and visual amenity calculations, as required in the Employer's Requirements Deliverables, shall include light reflectance values for the actual floor finish chosen and for horizontal reflective surfaces, which can be of higher reflectance than the floor.
- 9.1.4. Where analysis is undertaken in relation to daylight (see Annex 2E 'Daylight and Electric Lighting'), the 70%/ 50%/ 5% reflectance's shall be used, unless alternative reflectance's are confirmed by the Contractor at the time of the design. Floor reflectance and desk reflectance can be combined for daylight calculations; however, the combined reflectance for a carpeted room shall not exceed 20%.
- 9.1.5. The Contractor shall ensure that the 60° gloss factor of window sills, furniture and flooring is less than 15%. This information shall be sourced from the manufacturers of the window sills, furniture or floor coverings.
- 9.1.6. The Contractor shall ensure that the levels of brightness on ceiling and walls provide adequate visual comfort as specified in Annex 2E: 'Daylight and Electric Lighting'. Light Reflectance Values shall comply with the requirement for 30 percentage points of difference in contrast between foreground and background for visual orientation of pupils with visual impairments, in accordance with AD M.
- 9.1.7. The Contractor shall ensure that appropriate risk assessments and method statements are prepared and submitted to the Employer for all paints and coatings, to ensure the safety of pupils, staff, visitors and operatives who may be exposed to solvents and to water-borne and solvent-borne materials.
- 9.1.8. The Contractor shall ensure that decorations and finishes in circulation spaces:

- a) are robust enough to withstand the normal daily impact of pupils' bags and shoes
- b) are robust enough to withstand regular cleaning
- c) are water-borne unless the use of solvent-borne finishes for particular uses is agreed with the Employer
- d) allow for redecoration to an acceptable finish without the need to carry out works to the full wall (for example by splitting up corridor lengths into manageable bays with dado rails, movement joints, expressed joints etc.) or by providing a type of finish which allows for small areas to be repainted without spoiling the overall appearance of the wall.

9.1.9. Where Table 7 requires a 'heavy duty' finish this will apply to surfaces within reach of pupils (i.e. up to at least a height of 1.2m above FFL for Primary and 1.5m for Secondary Schools). 'Heavy duty' finishes shall be easy to clean and capable of achieving the minimum decoration cycle of 5 years before first repaint, as Table 5 in the Generic Design Brief. The minimum expected standard of performance of the wall finish in 'heavy duty' areas shall be one of the following:

- a) Dulux, Crown or Johnstone's: high performance, durable trade acrylic eggshell, single pack clear or coloured protective performance coating or single pack protective performance glaze over the manufacturer's approved base
- b) an approved trade performance coating
- c) an approved durable high-performance wall finish; or
- d) a trade high performance easily cleanable durable acrylic matt finish if agreed with the Employer.

9.1.10. Exposed corners or columns in heavy duty areas shall be protected with uPVC or stainless-steel corner guards glued to the substrate. Where there are graphics on the wall transparent corner pieces may be needed.

9.1.11. Where water-borne paints are used within reach of pupils there shall be a minimum requirement for the wall paints to be tested under BS EN 13300 and gain a class 1 classification using the BS EN ISO 11998 test method or a class C classification using the BS 7719 test method.

9.1.12. Normal duty finishes (i.e. those not classed as heavy duty) shall be finished in a minimum of a trade high performance matt acrylic paint.

9.1.13. All colours shall be agreed with the School. Brilliant white should be avoided in circulation areas including stairs and replaced with either an off-white, or a colour agreed with the School.

9.1.14. Kitchens and food rooms shall be finished in high performance eggshell anti-bacterial paint. Areas requiring frequent cleaning in kitchen food preparation areas shall be finished in smooth white uPVC, stainless steel or similar approved easy clean robust finish.

9.1.15. Where Table 7 identifies the hygrothermal performance as humid or wet, mould-resistant finishes shall be used.

9.1.16. No products shall be used that require excess paint or solvent used in cleaning to be disposed of at a hazardous waste site. All empty cans shall be recycled using the appropriate recycling scheme through the applicable paint merchant.

9.1.17. In Table 7, there are three levels of finish specified, which are defined as follows:

- a) finish 1 - impervious - able to resist the penetration of water, solutions containing detergents, disinfectants and other liquids likely to be encountered in school buildings
- b) finish 2 - jointless / flush impervious joints - without joints, or having joints that are sealed by methods which make the whole surface impervious and prevent the collection of dirt and bacteria
- c) finish 3 - smooth - no coarser than brush-applied matt emulsion paint on a flat plastered surface without projections, indents or holes part-way through the material.

9.1.18. The Contractor shall refer to the SSB for any additional requirements for pupils with SEND, such as colour or texture (and may seek paint manufacturer assistance for colour schemes).

9.2. Splashbacks

9.2.1. A splashback or an upstand shall be provided to a minimum height of 300mm above all basins, wash troughs and sinks and shall be formed from water resistant, cleanable, and durable materials.

9.2.2. Splashbacks (ceramic tiles or uPVC sheet cladding) shall be provided around electric hand driers to prevent water damage and staining to the wall surface. The splashback shall extend 300mm to each of 3 sides of the hand drier and down to the skirting level.

9.2.3. Wall finishes should have:

- a) fire and smoke resistance dependent on fire strategy
- b) acoustic treatment dependent on Acoustic Strategy
- c) min reflectance value (LRV) for all walls = 50%.

Type First digit: impervious, jointless, smooth second digit: hygrothermal 1-3 letters: h = heavy duty	Area	Description	Finish 1 - Impervious	Finish 2 - Jointless / flush impervious joints	Finish 3 - Smooth	Hygrothermal performance	Heavy duty
Type W1.1	all areas not subject to humid/wet conditions, high hygiene requirements or heavy-duty finish, including classrooms	general	N/A	N/A	yes	normal	N/A
Type W1.1h	art, textiles and graphics rooms, small halls, studios, drama studios, social areas, entrance/reception areas	heavy duty	N/A	N/A	yes	normal	yes
Type W2.1h	science laboratories, science prep rooms, main halls, dining and sandwich areas	science	yes	N/A	yes	normal	yes
Type W2.2h	cleaners' stores, kitchen staff and store rooms, toilets, changing rooms, chemical stores	humid areas and toilets	yes	N/A	yes	humid	yes
Type W3.2	food room, kitchen preparation, MI room, sick bay, kitchenettes	humid	yes	yes	yes	humid	N/A
Type W3.3	showers	wet areas	yes	yes	yes	wet	N/A

Type First digit: impervious, jointless, smooth second digit: hygrothermal 1-3 letters: h = heavy duty	Area	Description	Finish 1 - Impervious	Finish 2 - Jointless / flush impervious joints	Finish 3 - Smooth	Hygrothermal performance	Heavy duty
Type W4.1	all areas not requiring a smooth wall finish, such as DT workshops and DT prep rooms, plant rooms	rough	N/A	N/A	no	normal	N/A
Type W5.1h	circulation, corridors	circulation	N/A	average-flush jointed fair-faced dust sealed or painted blockwork acceptable	average-flush jointed fair-faced dust sealed or painted blockwork acceptable	normal	yes
Type W6.1h	sports hall (up to 3.2m above FFL)	sports	N/A	average-flush jointed painted blockwork acceptable	average-flush jointed painted blockwork acceptable	normal	N/A

Table 7- Minimum Performance Requirements - Wall Finishes

9.3. Workmanship

- 9.3.1. High performance primers shall be used on corner edge beading of plastered walls.
- 9.3.2. The dry wall sealing primer coat to all plasterboard walls shall be applied by the painting sub-contractor, not the plastering contractor.
- 9.3.3. NBS M60 paint finish specifications shall be certified as suitable by the paint manufacturer and shall be accompanied by full manufacturers' paint specifications. Manufacturers' specifications for day to day cleaning and the removal of graffiti and more stubborn marks shall be included in the Building Users Guide. This shall include the types of sponges, cloths or wipes and solvents that can be used.
- 9.3.4. Manufacturers' specifications shall include instructions for the repair of damage (such as gouges and scratches) and loss of sheen due to cleaning stubborn marks. The finishing schedules shall include mist-out and bring forward filled areas. The mist or primer coat shall be a suitable product to compliment the topcoats in-line with manufacturers' guidelines for standard plasterboard substrates or a fully dry board and skimmed surface. PVA shall not be used to seal plasterboard surfaces for painting.
- 9.3.5. In refurbishment projects, where surface spread of flame needs to be controlled, for example by providing a Class O fire rating, a flake test shall be carried out by the paint manufacturer to determine if the fire resistance of the paint finish requires a specialist flame retardant coating system to be applied.
- 9.3.6. Paint shall not be applied when the ambient or substrate temperature is below 8oC. The temperature and humidity level of the substrate shall be tested before paint application and the results recorded. Painting shall not take place if the substrate temperature or humidity level is below the manufacturer's recommendations.
- 9.3.7. Sample rooms shall contain benchmark paint finishes and shall be approved by the manufacturer and the Employer. The manufacturer shall also be asked to carry out programme checks during paint application.

10. Signage

- 10.1. Any main site entrance sign provided shall detail the name of the School and other pertinent information. The sign shall be of a design that allows for the incorporation of changes when necessary and gives a positive first impression.
- 10.2. Any external directional signage provided shall be consistent and clearly visible, especially for visitors, giving clear directions. The signage shall be capable of alteration where appropriate, whilst preventing the opportunity for tampering.
- 10.3. Any external building signage to main entrances (either façade or canopy mounted) shall be clearly visible.
- 10.4. The Contractor shall provide signs for every room and space as detailed in the ADS, denoting its name or purpose and its agreed number. Signs shall also be used to denote suites of spaces, such as faculties or Departments. See Section 4.1 for requirements for the identification of fire rated doorsets.
- 10.5. Sign surfaces shall be sufficiently hard to resist impacts from hand-held objects without any noticeable change to the surface appearance. Surfaces shall also resist abrasion from cleaning methods and maintenance systems without any noticeable change in surface appearance. All fixings used shall be suitable for their intended purpose and shall be in accordance with the manufacturer's recommendations.

11. References

11.1. The Contractor shall take account of the following reference standards (or updated documents if relevant) or guidance.

1. DD171:1987 – ‘Guide to specifying performance requirements for hinged or pivoted doors (including test methods)’.
2. BS EN ISO 717 - 1:2013 – ‘Acoustics. Rating of sound insulation in buildings and of building elements’.
3. BS EN 12400:2002 – ‘Windows and pedestrian doors. Mechanical durability. Requirements and classification’.
4. BS EN 1192:2000 – ‘Doors. Classification of strength requirements’.
5. BS EN 1634-3:2004 – ‘Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware. Smoke control test for door and shutter assemblies’.
6. BS EN 1294:2000 – ‘Door leaves. Determination of the behaviour under humidity variations in successive uniform climates’.
7. BS EN 60839-11-1:2013 – ‘Alarm systems. Access control systems for use in security applications. System requirements’.
8. BS EN 10874:2012 – ‘Resilient, textile and laminate floor coverings. Classification’.
9. BS EN 14904:2006 – ‘Surfaces for sports areas. Indoor surfaces for multi-sports use. Specification’.
10. BS 6180: 2011: ‘Barriers in and about buildings’.

12. Demonstrating Compliance

12.1. 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-00077-2020



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



Like us on Facebook:
facebook.com/educationgovuk