

# Department for Education

# Output Specification

## SPACES Study Day

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Department  
for Education

## DfE Capital Vision:

*“To provide **quality** places and spaces to help schools deliver an excellent education for all children and young people”*

The Output Specification (OS) is a key driver for delivering this vision....

The full OS suite can be accessed from:

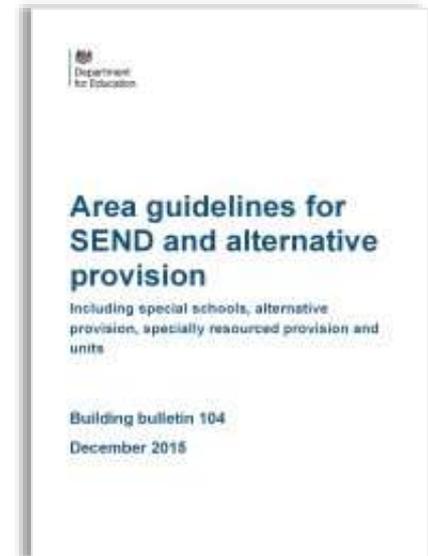
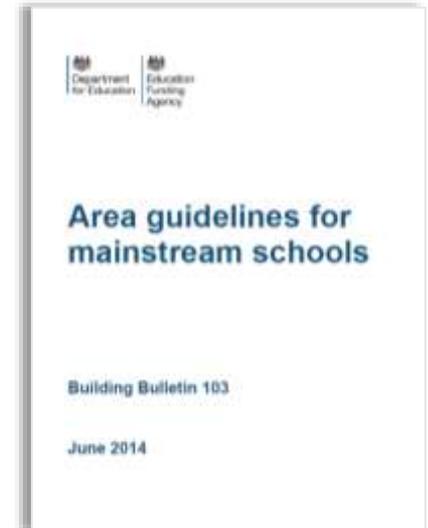
[www.gov.uk/guidance/school-design-and-construction](http://www.gov.uk/guidance/school-design-and-construction)

# How we achieve design quality standards

Quality standards continues to be based on a combination of:

- **Area guidelines**
  - BB103: Area Guidelines for mainstream schools (2014)
  - BB104: Area Guidelines for SEND and alternative provision (2015)
- **Specification**
  - DfE Output Specification (2017)
  - Recently undergone an update (May 2019)

Note: Sets the parameters, but not the design solution



# Output Specification – what is it...

## DfE Construction Framework Employers Requirements (ERs)

### Part A: General Conditions

including all deliverables, from contract award and beyond

### Part B: Generic Design Brief (GDB) and Technical Annexes

Incorporating tech information and BPE

### Part C: School-specific Brief (SSB) and Annexes

Main body + tools and templates provided including Schedule of Accommodation (SoA), Refurb Scope of Works (RSoW), ICT & FF&E

## Output Specification

The suite of documents are structured as:

### Generic Design Brief (GDB)

containing overarching design standards for school premises

*including a series of*

### Technical Annexes

containing more detailed performance specifications in specific areas

+

### School specific Brief (SSB)

*including main body, plus a series of*

### Annexes

School-specific, with SoA and other Annexes as required **for inclusion in a feasibility study**, and eventually the contract

# Generic Design Brief & Technical Annexes (GDB)

Generic Design Brief		Technical Annexes	
<b>Contents</b>		1A	Definitions of Spaces: Mainstream Schools
1	Context and Key Principles	1B	Definitions of Spaces: SEND and AP
2	Buildings and Grounds	2A	Sanitary ware
		2B	External Space and Grounds
		2C	External Fabric
		2D	Internal Elements and Finishes
		2E	Daylight and Electric Lighting
		2F	Mechanical Services and Public Health Engineering
		2G	Electrical Services, Communications, Fire & Security Systems
		2H	Energy
		2I	Controls
3	FF&E	3	Fittings, Furniture and Equipment (FF&E)

# School-specific Brief (SSB) and Annexes

## Mainstream and SEND/AP main body template

School-specific Brief		School specific Annexes (tools and templates where required)	
contents		SS 1	School-specific Schedule of Accommodation and School-specific Area Data
1	Introduction	SS 2	School-specific Refurbishment Scope of Works (RSoW)
2	Strategic Brief	SS 3	School-specific Legacy Equipment Schedule
3	Project Brief	SS 4	School-specific Legacy furniture Schedule
		SS 5	School-specific ICT Equipment Summary

# Design Brief priorities

Balance of  
architectural and  
environmental  
engineering

External fabric  
as the primary means  
of controlling the  
comfort of the inside

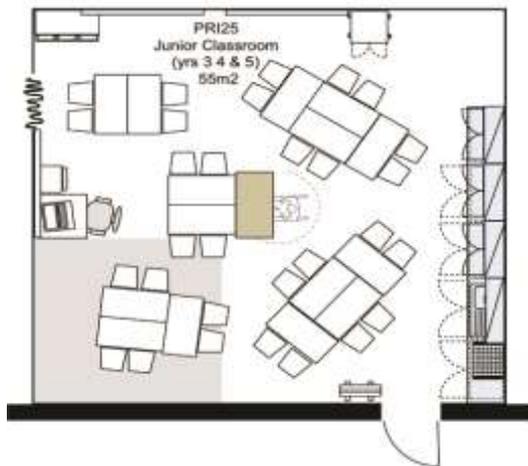
Efficient building form  
(rational & compact) =  
efficient £/m<sup>2</sup>



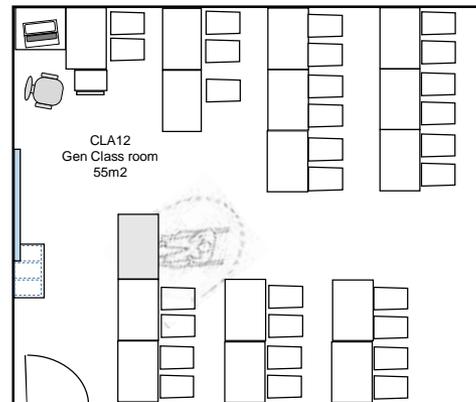
Hallmoor special school

# Design Brief priorities: Standard space sizes

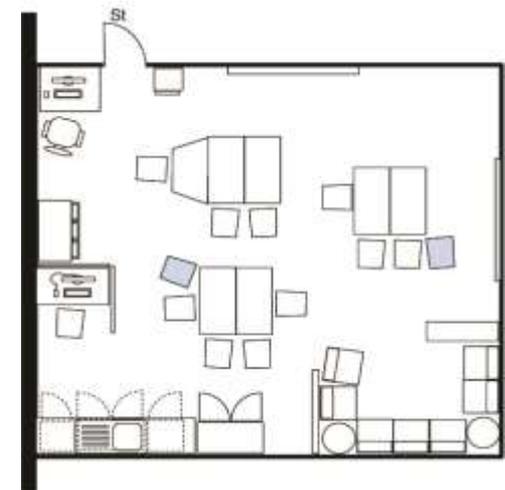
- **Minimum area** for each space needed to accommodate activities required
- **Standardised approach** used for space sizes, based on common dimensions
- For instance: 55m<sup>2</sup> general teaching space supports the functions for a range of settings



30 pupils for KS2 primary



30 pupils for secondary



12 pupils in ambulant SEN

# Design Brief priorities: Comfort of the internal environment

- Range of criteria to support educational need
- Functional space, Daylight, Acoustics, Ventilation and Thermal Comfort
- Local smaller scale measures rather than complex M&E systems and bolt-on technology – to align with school's operational business model
- (baseline designs still relevant – 2FE primary updated for test project)



# Design Brief priorities: Daylight design

- Balanced daylight to the back of the room for learning and health
- Research shows that:
  - daylight prevents the development of short sight in pupils & children need 3 hours daily in daylight
  - daylight is beneficial to mental health
- Energy saving
- GDB Technical Annex 2E  
Daylight and Electric  
Lighting
- Climate Based  
Daylight Modelling  
not Daylight Factors



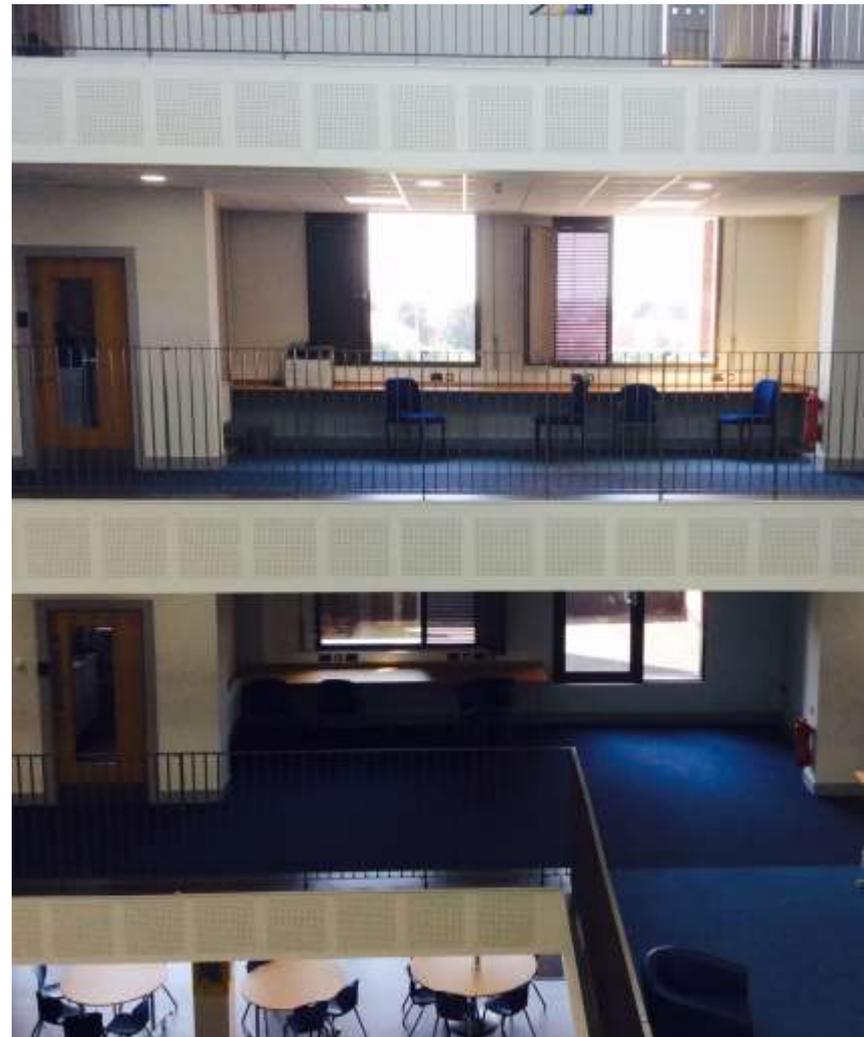
# Design Brief priorities: Sense of space

- Transparency through the building
- Connect with other day lit spaces and to the outside
- Offers a quality of place to support behaviour management through passive supervision



# Design Brief priorities: Acoustics design

- Suitable indoor ambient noise levels
- Clear communication of speech between pupils and teacher and peers
- To support learning activities
- Acoustic standards BB93 (2015)
- Acoustic testing of a representative sample of rooms required before handover



# Design Brief priorities: Ventilation design

- Fresh air critical for health and hygiene
- Poorly ventilated classrooms sees concentration levels fade within 10mins
- Ineffectiveness of single-sided natural ventilation
- BB 101: Ventilation, thermal comfort and indoor air quality 2018



# Design Brief priorities: Robustness of materials

School's priorities:

- Pride and care
- Operation cost

Fit for purpose  
finishes:

- Ironmongery
- Wall and floor finishes in circulation



# Design Brief priorities: External spaces

Priorities:

- Safe
- Secure

Fit for purpose:

- Pedestrian v. vehicles
- Pupil, staff & visitor access
- Play & sports areas
  - age appropriate
- Plants & trees



# Building Performance Evaluation Methodology

## Methodology scope

- To provide an objective understanding in order to fine tune the operation of the school building performance
- To establish across the range of schools the benchmark of quality

## Who's involved?

- The range of those with the responsibility to follow up action, including:
- Contractor, school rep, school operations/FM, teaching staff and DfE delivery team(s)

## What's involved?

- Two stages – site walk around, teaching staff questionnaire, operations FM lead questionnaire, Energy monitoring
- Review, Action, Adjust, Review again.

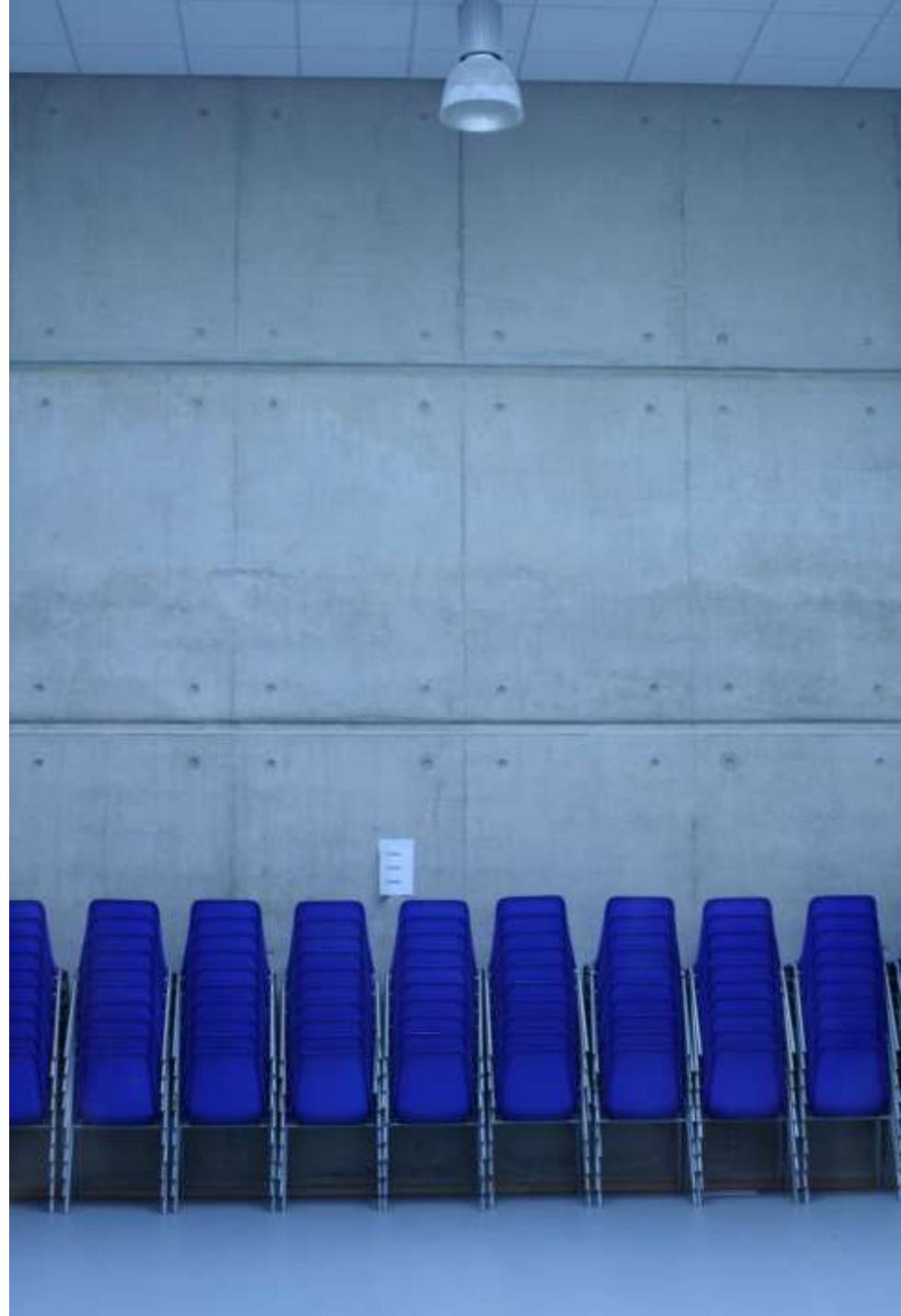
# Output Specification (OS) Governance

- Six monthly cyclical rolling process to review and address priorities:
  - Nov 2017 - launch (*aligned with DfE Construction Framework*)
  - May 2018 - minor amendments
  - May 2019 - latest priorities addressed
  - Beyond - next round of priorities, to be reviewed
- Completed the review and update for May 2019
- The May 2019 update is a result of evidence from clarifications, lessons learnt, H&S items, and updates to British Standards
- Cost neutral/negligible
- Launch for May 2019 updates on gov.uk was 11 June 2019



# Design quality summary

- Structured & robust brief
- Standards developed with academia and industry
- Balanced specification
- Comfortable environments
- Robust materials
- Easy to control & operate
- Appropriate familiarisation
- Refurbishment risk share
- Building Performance in Use



For full collection of the Output Specification, see

[www.gov.uk/guidance/school-design-and-construction](http://www.gov.uk/guidance/school-design-and-construction)

Please contact the DfE Capital Design Team  
for design and technical advice  
and with your design and technical queries  
on the design standards

[DesignStandards.ESFACAPITAL@education.gov.uk](mailto:DesignStandards.ESFACAPITAL@education.gov.uk)

Thank you  
DfE Design Team  
Technical Support



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