



Department
for Education

Area guidelines for mainstream schools

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Introduction

The purpose of this document is to set out simple, non-statutory area guidelines for mainstream school buildings (part A) and sites (part B) for all age ranges from 3 to 19. It supersedes the area guidelines in Building Bulletins (BB) 98 and 99, recommending reduced minimum internal and external areas.

The document aims to assist architects, sponsors and those involved in creating a design brief for new school buildings, or for school refurbishment or conversion projects. It may also be of interest to head teachers, governors and others who need advice on the appropriate amount of space for teaching and learning activities.

However, in line with policies which seek to increase choice and opportunity in state funded education, these guidelines will not necessarily have to be met in every case and should always be applied flexibly in light of the particular circumstances.

This document is in two parts:

- part A sets out building area recommendations for both overall categories of space and individual types of spaces and includes graphs and formulae to show the recommended area ranges of these spaces;
- part B sets out the types and categories of external areas and includes site area recommendations for the various categories of outdoor spaces needed within the playing field area and net site area. As in part A, graphs allow users to determine the sizes of external areas.

The guide supports the *Schedule of Accommodation (SoA) tool* (see references) which can be accessed separately. The tool can be used to calculate the number and types of spaces recommended for a specific school based on its proposed pupil numbers, age range and curriculum. For secondary schools a curriculum analysis, like the template attached to the *SoA tool*, should be used to check the number and type of rooms that suit the curriculum of the individual school.

This guidance can be used to estimate the area needed for new schools, as well as the extra building area that may be needed for schools increasing in size. When considering how existing buildings will be used, it is important to recognise that the proportion of net to gross area will vary depending on the design, and to identify any 'supplementary area' needed for non-school or support functions, as described on [page 6](#).

Text in italics refers to documents with hyperlinks in the online version and/ or a listing in the 'references' section on [page 42](#) where the website address is given.

Applying the principles

This guidance is generally written to apply to new buildings in primary and secondary schools. However, the principles apply to all types of mainstream schools (i.e. all those except special schools or alternative provision) and most of the details can be used when considering schools with existing buildings, whether they are to be remodelled or unaltered.

The recommended area in square metres (m²) for various categories of space and individual types of spaces, or rooms, are shown on graphs and based on simple formulae. All formulae use a 'base' area and an area per pupil place: in most cases this means the number of places planned rather than the number on the school roll. However, in the case of the area of spaces (figures [6](#) and [15](#)), this is the maximum group size, or number of 'workplaces' in the room.

The graphs and formulae can be used to check the area needed for a given number of pupil places, either for the school as a whole or for individual categories of space. Rather than set specific areas for a particular number of pupils in a given category of space, the graphs show zones of area with the top of the zone being the recommended maximum area and the bottom being the recommended minimum area. Further explanation as it applies to net area is given on [page 7](#).

Existing buildings

When calculating the total area needed for any school that includes existing buildings:

- when adding places to existing schools, the 'base' area is often already provided, for instance in the form of the main hall, head's office, staff room and central stores, so only the area per pupil place for the additional places would be needed. This would cover not only additional classrooms but also the associated support spaces, listed in this guidance, needed to accommodate the extra pupils;
- the total net area of all buildings available to the school should be included: whether owned or maintained by the local authority, governing body or trustees; or owned and maintained by others but available for the school to use during at least 80% of any normal school week (such as indoor sports facilities with a 'joint use agreement');
- the different categories of space in the net area, discussed below, may need specific attributes that can only be provided by certain buildings: for example halls would need large volumes;
- existing rooms are likely to be below or above the recommended 'zone' for the type of space and so may either need to be a 'restrictive' version of the space recommended (see [page 12](#)) or be above the area recommended. Similarly, non-

net area such as circulation may be above the minimum that could be achieved in a new building. Therefore the total net and gross area may either be constrained or need to allow a 'fit factor' of 10% to 15% to accommodate the extra area, so that the maximum recommended net and gross area are likely to be appropriate;

- where the fit is more than this, remodelling may be more economical, for instance to divide large rooms and create a better suite of spaces;
- the issue is exacerbated in listed buildings, where remodelling may be restricted, such that the total area could be well in excess of the recommended range for the required spaces, and the 'fit factor' may be as high as 25%, or perhaps more.

When considering existing spaces, the graphs in figure [6](#) and [15](#) can be used to calculate the group size that can be accommodated in a space of a given size, depending on the type of space and activities (see [page 12](#)).

Similarly, reviewing the site area against the relevant graph ([figures 20 and 21](#)) is also useful when considering alterations to an existing school.

Less common situations

Middle schools will often include a range of basic teaching spaces with extra specialist facilities that can be used as classrooms and also timetabled as practical spaces. These are not covered in this guidance but the recommendations for spaces in other categories of space, such as halls or staff areas, will apply. The recommended areas for the various categories of space, and net and gross area, can be established by using the base area defined in [annex A](#) along with the area per pupil for primary and secondary places.

All-age schools of up to around 750 places (2FE or forms of entry) are likely to find a similar economy of scale, so could use the formulae recommended for an 11 to 16 school, or 11 to 18 school where there is a sixth form. All-age schools above 750 places, or with more than about 300 11 to 16 places, should use the total of the primary and secondary base areas (as defined in [annex A](#)).

Split sites (where a significant part of the school is provided in buildings on more than one site) may need extra area in some cases, to allow for the replication of key resources. This is unlikely to be more than 75m² gross, for administrative and kitchen facilities, depending on the distance between sites and the facilities on each site.

Unusual curriculum requirements, in schools such as university technical colleges and studio schools, may require very different spaces so the guidelines for basic teaching, halls, teaching storage and site area may not be applicable. Recommendations for other areas may still apply and the principles for each category of space can still be useful with appropriate advice.

Part A: The buildings

This part sets out how to establish the floor area requirements for spaces within primary and secondary school buildings. For middle schools and all age schools the sizes of spaces can be established by referring to the relevant areas for primary and secondary schools, as explained in [annex A](#).

Part A is in three sections, as shown in figure 1 below:

- **Net area**, which is the usable area and comprises basic teaching area; halls, dining and PE spaces; learning resource areas; staff and administration; and storage;
- **Non-net area**, which supports the functioning of the building, and includes toilets and personal care, kitchen facilities, circulation, plant and internal walls;
- **Supplementary area** (including net and non-net), which is used for non-school or support functions such as specially resourced special needs facilities.

The gross area, or gross internal floor area, of the building(s) is the total of the net and non-net area. It is important to note that the gross area will usually be proportional to the net area. Generally, the gross area of new buildings will vary between 142% and 145% of the net area in primary schools and 140% and 145% in secondary schools, depending on the provision of areas such as circulation or the kitchen. In existing buildings this proportion may rise to as much as 150%. In single-storey primary schools where a full-service kitchen is not required (for instance where catering is cook-chill), 140% may be achieved.

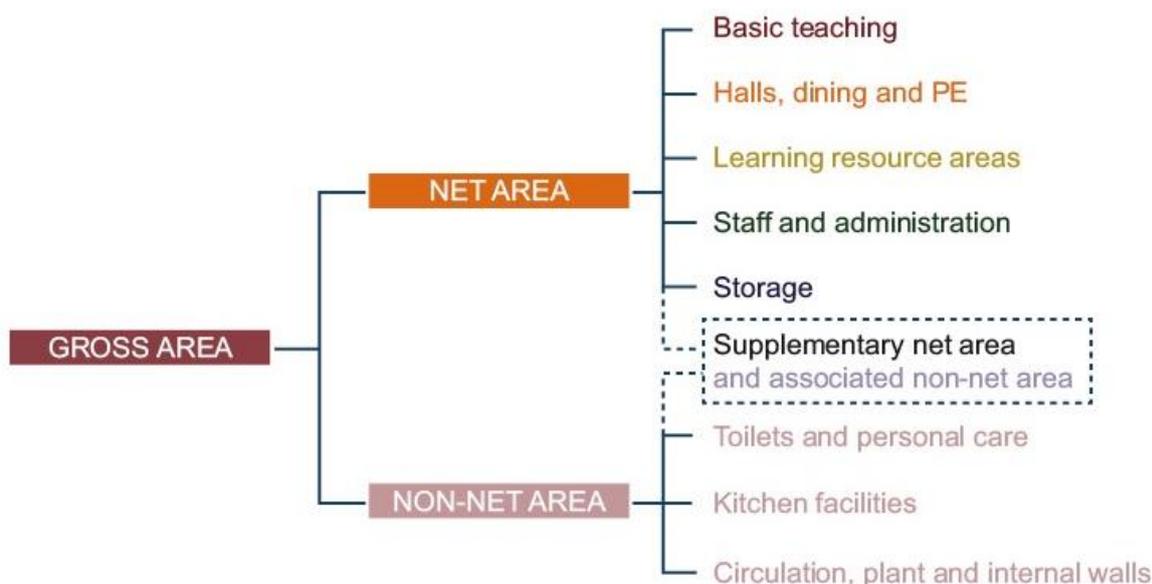


Figure 1: Categories of space that make up gross and net area

Net area

The net area is the total area of all usable spaces, both teaching and non-teaching. It includes everything except corridors, toilets and showers, boiler and plant rooms, school kitchens, and the area occupied by internal walls. A precise definition of what is included in net area can be found in the guidance document [Assessing the Net Capacity of Schools](#).

Net area is made up of spaces, (usually enclosed rooms) within the five categories of space in figure 2 below.

| Categories of space | For primary | For 11-16 | For post-16 |
|-----------------------------|-------------|------------|-------------|
| 1. Basic teaching | Zone m | Zone M | Zone MM |
| 2. Halls, dining and PE | Zone p | Zone P | Zone PP |
| 3. Learning resources | Zone t - s | Zone T - S | Zone RR |
| 4. Staff and administration | Zone r - q | Zone S - R | Zone TT |
| 5. Storage | Zone s - r | Zone R - Q | Zone SS |

Figure 2: Table showing relevant zones for each category of space when calculating the net area for primary, 11-16 and post-16 pupil places

The graphs in figures 3, 4 and 5 below show the zones for each category of space. The top of each zone is the recommended maximum area for the category, and the bottom is the recommended minimum area. Each is calculated for the number of pupil places by using the formulae shown in the graphs and [annex A](#).

The graphs also show the recommended minimum and maximum overall net area, and the likely range of gross area needed based on the proportion of net to gross area described on [page 6](#).

To achieve the recommended minimum overall net area, which is greater than the sum of the individual minimum areas (see below), the area of each category of space should average around the middle of the recommended range. Where more space is required for some categories, such that the area falls in the upper half of the range, less space must be allocated to other categories to stay within the recommended overall net area. Even if the maximum recommended net area can be provided, it is unlikely that all categories of space will be able to be at the top of each zone, so schools will always need to decide their priorities.

The recommended maximum net area may be needed where there are a very high proportion of pupils with SEN or disabilities, or where there are existing buildings with several rooms larger than the minimum size (see [page 4](#)).

It is important to note that:

- the total area for each category should be at least the minimum recommended to allow for the core functions needed to suit the school capacity. An area greater than the minimum but within the zone will usually be preferred for each category;
- anything lower than the recommended minimum area for a category will compromise the space provided in it;
- when added together, the recommended minimum for each category of space (the 'sum of minima' shown in the graphs) will be less than the overall recommended minimum net area. This difference is the 'float' that can be used to enhance some areas, depending on the priorities of the school, for example providing different variations of teaching spaces.

The next few pages give some guidance on the spaces recommended for both primary and secondary sectors within each of the five categories of space which make up the overall net area. For each space, the broad activities to be accommodated are noted and the space, with appropriate fittings, furniture and equipment (FF&E), should be designed to suit these. Examples of how this can be achieved are in the generic *Area Data Sheets (ADS)* and related FF&E layouts linked to *baseline designs* (see references).

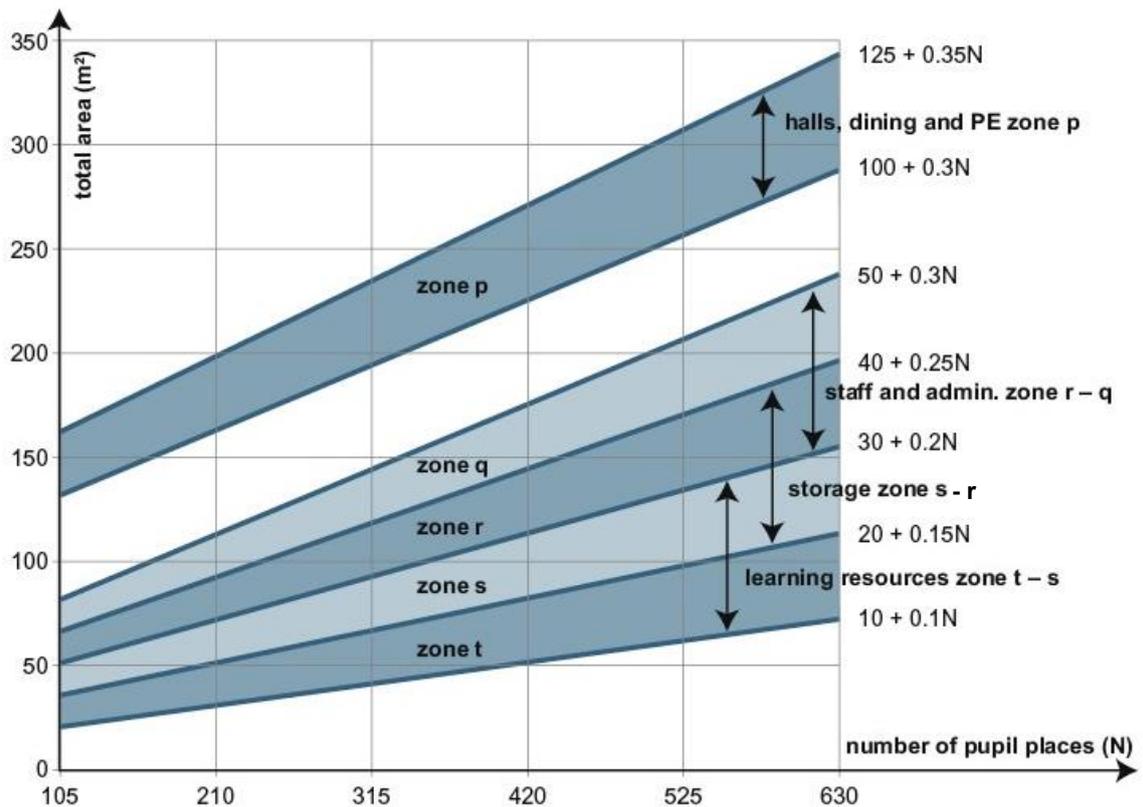
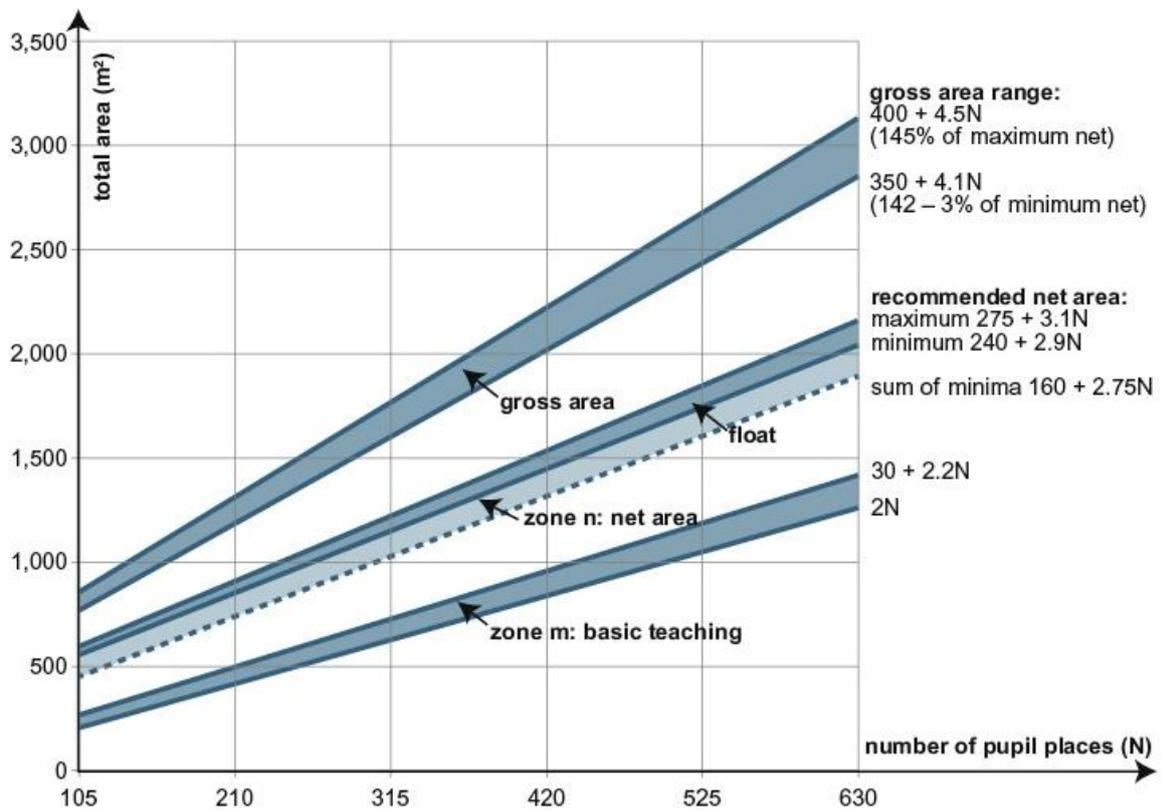


Figure 3: Gross and net areas for primary schools

The **top** graph shows 'zones' recommending the overall net area and basic teaching area, with the related formulae, as well as the recommended range of gross. The bottom and top of each zone denote the recommended minimum and maximum area. The **bottom** graph shows zones recommending the area and related formulae for the remaining four of the five categories of space. Note that the scale of the 'total area' axis is different in the two graphs.

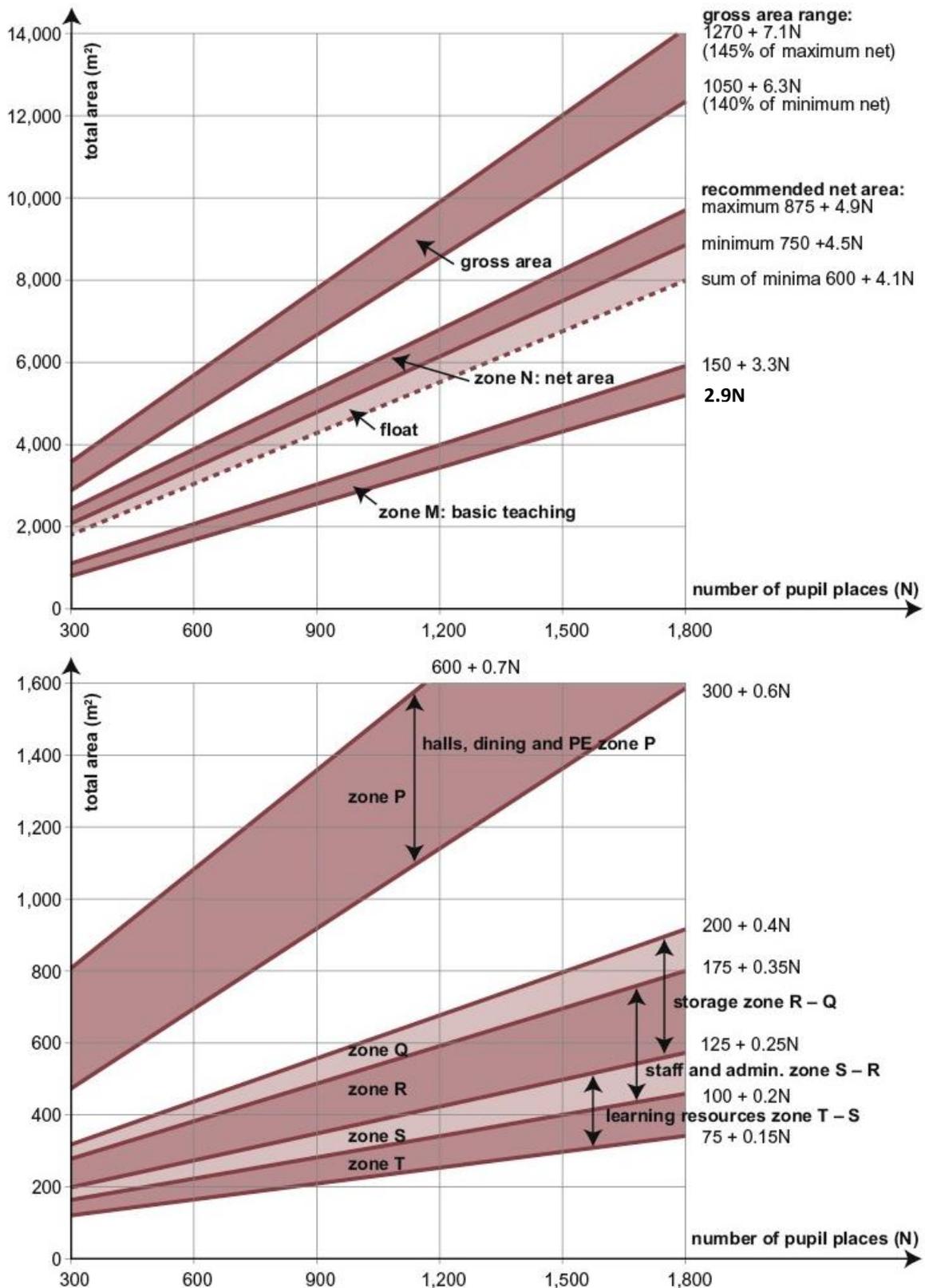


Figure 4: Gross and net areas for 11 to 16 schools

The **top** graph shows 'zones' recommending the overall net area and basic teaching area, with the related formulae, as well as the recommended range of gross. The bottom and top of each zone denote the recommended minimum and maximum area. The **bottom** graph shows zones recommending the area and related formulae for the remaining four of the five categories of space. Note that the scale of the 'total area' axis is different in the two graphs.

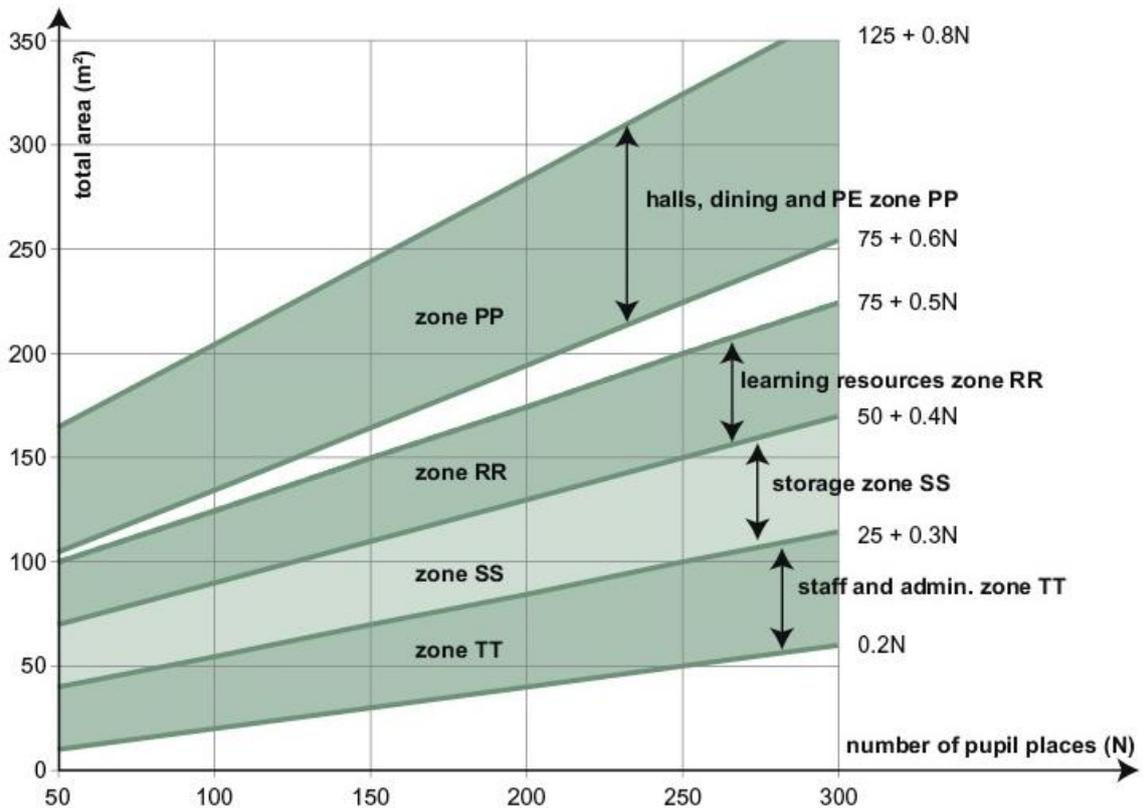
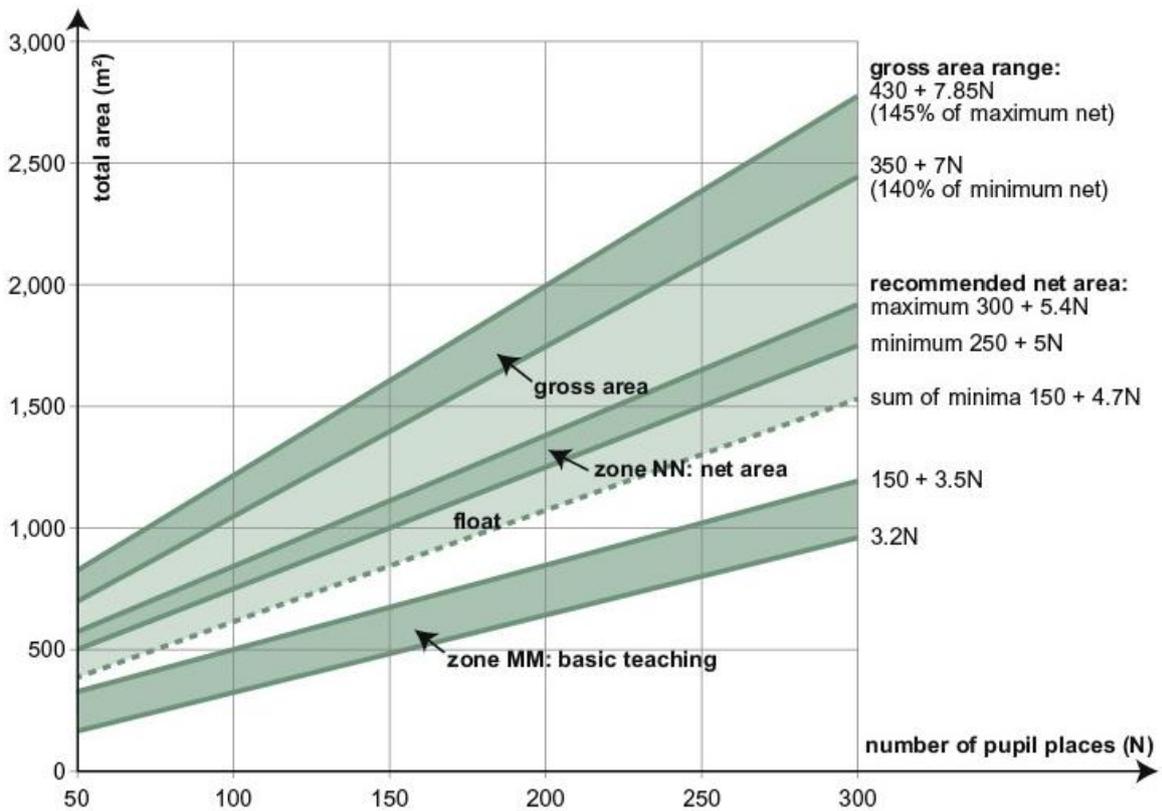


Figure 5: Gross and net areas for post-16 places

The **top** graph shows 'zones' recommending the overall net area and basic teaching area, with the related formulae, as well as the recommended range of gross. The bottom and top of each zone denote the recommended minimum and maximum area. The **bottom** graph shows zones recommending the area and related formulae for the remaining four of the five categories of space. Note that the scale of the 'total area' axis is different in the two graphs.

1. Basic teaching

The total area for basic teaching (zones m, M and MM) comprises all the teaching spaces (except halls and PE spaces) needed for the full range of curriculum subjects, whether in classroom bases for primary classes or in timetabled spaces. The area can be divided up in many different ways.

Figure 6 shows the zones of recommended area that suit various types of basic teaching space for primary and secondary schools. Figures 7 and 8 show the most common types of space and their respective sizes used in the *SoA tool*.

The top of each zone is the recommended maximum area for the category, and the bottom of each zone represents the minimum area recommended for a specific group size, and can be calculated using the formulae shown. An area in the upper part of the zone may be required where:

- there is more FF&E to allow a wider range of activities, for example for a specialist laboratory;
- there is likely to be more than one wheelchair user and assistants;
- the space cannot be used efficiently, for instance if the shape of an existing space is not a simple rectangle or it has a depth of less than 7m.

The *SoA tool* uses standard room sizes for all basic teaching spaces, and these are within the lower half of the recommended zone in figure 6, as shown in figures 7 and 8.

There is some flexibility in the sizing of spaces to allow for specific situations. In some cases, such as existing buildings, a space within the recommended zone may not be possible, so a 'restrictive' version of that space in the zone below that recommended may be used for a few spaces, as long as there are larger spaces in the same suite. However, since these smaller spaces will only accommodate a very limited number of activities and FF&E layout options and minimal disabled access, they are **not** recommended for new-build projects.

Similarly, in some cases the zone above that recommended can provide an 'extensive' version of the space, which can accommodate a wider range of relevant activities and FF&E layouts than would typically be required.

Figure 6 can also be used to show how one size of space will provide restrictive, standard and extensive provision for different group sizes. So for instance, an existing textiles room of 80m² with appropriate FF&E would be suitable for groups of 20 to 24, but could provide an extensive facility for groups of 15 to 20 or a restrictive space for groups of 24 to 28.

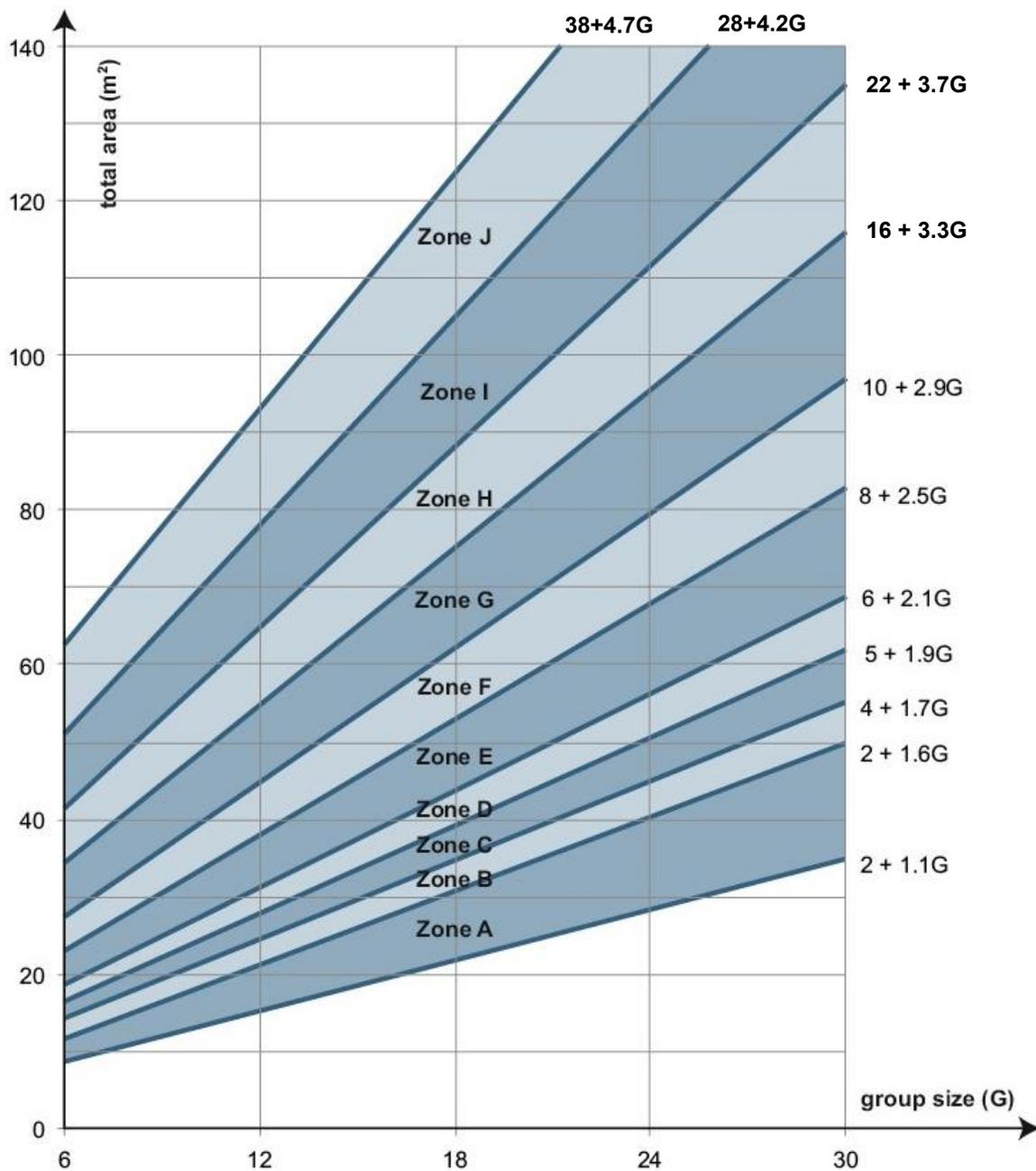


Figure 6: Zones for basic teaching space in primary and secondary schools

Graph showing zones of recommended area for various teaching spaces listed in figures 7 and 8. The top and bottom of each zone denote the recommended minimum and maximum area, and can be calculated using the formulae shown.

| ADS Code | Zone | Area Data Sheet (ADS) name and description | Size used in SoA tool |
|----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| PRI03 | D | Nursery playroom: For a range of FF&E layout options and activities for 3 to 4 year olds | 55m ² for 26 |
| PRI13 | D | Reception classroom: For a range of FF&E layout options and activities for reception pupils | 62m ² for 30 |
| PRI23 | D | Infant classroom (extensive): For a full range of FF&E layout options and activities for Key Stage 1 pupils | 62m ² for 30 |
| PRI33 | C | Junior classroom: For a range of FF&E layout options and activities for Key Stage 2 pupils | 55m ² for 30 |
| PRI22 | B | Classbase with sink: For limited primary activities including water-based, typically for infant (Key Stage 1), with easy access to a shared teaching area without sink | 50m ² for 30 |
| PRA26 | C | Shared teaching without sink: Open plan teaching area shared by adjacent classbases with sinks to enhance the range of activities, typically infant (Key Stage 1) | varies |
| PRI32 | B | Classbase without sink: For limited primary activities, typically for junior (Key Stage 2), with easy access to a shared teaching area with sink | 50m ² for 30 |
| PRI36 | C | Shared teaching with sink: Open plan teaching area shared by adjacent classbases without sinks to enhance the range of activities, typically junior (Key Stage 2) | varies |
| PRA01 | D | ICT rich practical room Classroom used for fixed ICT devices for all workplaces with limited layout options | 62m ² for 30 |
| PRA11 | D | Food bay/ practical resources: For primary food preparation with a small group and pupil access to practical resources | 13m ² for 4 |
| PRA12 | D | Food/ science/ DT area: Specialist space for primary food preparation, science, art and Design Technology activities | 34m ² for 15 62m ² for 30 |
| RES00 | B | Large group room: Room for assistance with individuals and groups | 27m ² for 15 |

Figure 7: Typical primary teaching spaces in basic teaching area and respective zones.

The ADS code refers to the *Area Data Sheets* (see references)

Basic teaching for primary

Basic teaching area for primary pupils should include:

- **classrooms** (enclosed spaces) or **classbases** (smaller semi-enclosed rooms opening onto shared teaching area): one for every class (usually 30 pupils); and,
- space for a cooker: in a food bay of at least 4m², as part of a shared teaching area, or in a specialist practical space.

It may also include the following types of spaces, as shown in figure 7:

- **shared teaching area:** shared by groups from two or three adjacent classbases, with appropriate acoustic properties (and usually able to be partially supervised by the teacher from each classbase) to allow some facilities, usually for practical work, to be shared rather than provided in every classroom;
- **specialist practical spaces:** enclosed rooms fitted with specialist equipment and shared by a number of classes. They will be specific rooms with services and appropriate finishes, ideally either for up to 15 or for up to 30 pupils, for art, design technology or science activities;
- **large group room:** usually for up to 15, if the school prefers a separate space to allow, for instance, a year group to break into more groups for a subject.

Whatever arrangement is chosen, the basic teaching area should accommodate all the types of activities that need to take place in this area and the associated FF&E. Figure 8 shows the activities and associated FF&E that all year groups typically require and figure 9 illustrates the activities that may be required or optional depending on the age range.

| Activity | Fittings, furniture and equipment typically required |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Group discussion, whole class teaching | Whiteboard, interactive screen or similar |
| Table-based classwork | Adequate table space, generally arranged in groups |
| Individual, group or whole class ICT-based work | 'parking' area for laptop trolley, data points and wireless |
| Science and art using water, paint and glue | Sink, washable floor area and resources for simple 'wet' practical activities, using the furniture available |
| 2D and 3D Design Technology, working with a range materials such as card or wood, or construction kits | Further tables or fixed side benching and resources for wet and messy work, option of 'heavy duty' tables for hand tool work in specialist space |
| All activities above | Adjustable table and specialist appliances for wheelchair user, with space for assistant |

Figure 8: Activities to be accommodated in basic teaching area for all year groups

| Activities and facilities | Nursery, Reception | Year 1, Year 2 | Year 3, Year 4 | Year 5, Year 6 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------|------------------------|------------------------|
| Free floor space, usually on a carpeted area, for gathering the whole class together sitting on the floor, for teacher-led instruction, group discussion, literacy, numeracy, storytelling | typically required | one area used for both | one area used for both | generally not required |
| large scale construction kits, some ICT space-consuming work using robots or similar | optional | | | typically required |
| Book corner or quiet area with room to browse, and cushions (with the option to overlap with the free floor area if small class-base in zone B), for individual or group reading/ research | typically required | preferred | optional | not required |
| music or language audio-visual resources (overlapping with book corner) | preferred | preferred (if available) | optional | not required |
| Space for creative play and role play | typically required | preferred | not required | not required |

Figure 9: Optional activities to be accommodated in basic teaching area

Classrooms or classbases: Nursery playrooms and reception classrooms should be in zone D, but they could have classbases in zone C and shared teaching configured within the same overall area. They may also be linked together as a single space. The overall area of basic teaching and learning resources must be 2.3m² per pupil place for 3 to 4 year olds and 2.5m² per pupil place for 2 to 3 year olds to meet the standards in the [Statutory Framework for the Early Years Foundation Stage](#).

For Key Stage 1 and 2 there are three options recommended for classrooms or classbases (using the zones defined in figure 6) within the total basic teaching area:

- typically, standard classrooms in zone C (55m² to 62m² for 30 pupils), and one or two specialist spaces or a large group room; or,
- extensive classrooms in zone D (62m² to 69m² for 30 pupils) accommodating all activities, with a small food bay; or,
- semi-open classbases in zone B (50m² to 55m² for 30 pupils) which are restrictive so need to open onto shared teaching area to allow a full range of activities.

Classrooms or classbases should be in a suite, normally for each Key Stage, and usually include a small group room that is included in the learning resources area category.

Figure 10 shows how a basic teaching area equivalent to six classrooms of 62m², a specialist walk-in store, small group room, classroom stores, toilets and a circulation route can be configured in a variety of ways to suit individual schools' requirements.

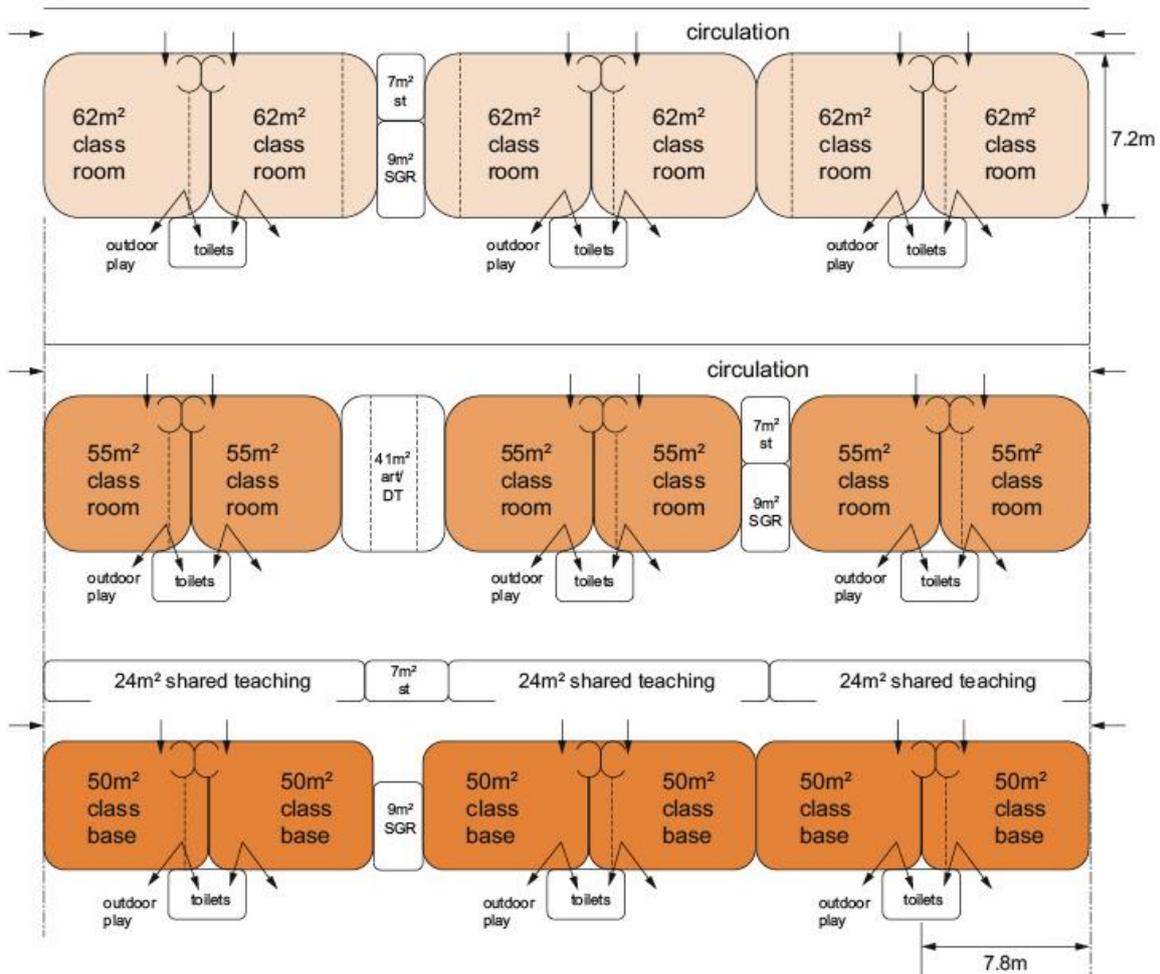


Figure 10: Options for arranging basic teaching area, and associated storage, toilets and group rooms, in primary schools.

The specialist space in the central option could also provide for food in lieu of a food bay, not shown in this diagram.

| ADS Code | Zone | Area Data Sheet (ADS) name and description | Size used in SoA tool |
|----------|------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| CLA02 | C | Seminar room: For smaller 14-19 groups with a range of FF&E layout options and activities | 41m ² for 22 |
| CLA12 | C | General classroom: For a range of FF&E layout options and activities | 55m ² for 30 |
| CLA13 | D | Extensive classroom: Suitable for all classroom FF&E layout options and activities | 62m ² for 30 |
| CLA32 | D | ICT-rich classroom: With fixed ICT devices for all workplaces and a range of FF&E layout options | 62m ² for 30 |
| CLA35 | D | ICT-rich learning area: Semi-open plan area with fixed ICT devices for all workplaces and range of FF&E layout options | 62m ² for 30 |
| CLA41 | D | ICT/ business studies room: Classroom with fixed ICT devices for half of the workplaces with business environment | 62m ² for 30 |
| DAT02 | F | General art room: For a range of FF&E layout options and activities suitable for general 2D art | 83m ² for 30 |
| DAT03 | G | 3D art room: for general and 3D art including clay work | 97m ² for 30 |
| DAT05 | G | 3D art room (textiles): For general artwork and printing techniques and 3D art | 104m ² for 32 |
| DAT12 | H | Hair and beauty salon: for hair styling and beauty therapy | 69m ² for 16 |
| DAT22 | G | Graphic products: For graphics and light, small scale product design | 83m ² for 25 |
| DAT25 | G | Constructional textiles: For working with textiles | 83m ² for 25 |
| DAT28 | G | Electronics and control systems: For electronics, pneumatics and light, small scale product design | 83m ² for 25 |
| DAT32 | F | Food studio: for demonstrations of food preparation | 69m ² for 24 |
| DAT35 | H | Food room: For non-vocational practical cookery activities by pupils in pairs | 104m ² for 24 if 1 space, 97m ² if 2 |
| DAT43 | H | Resistant materials workshop: for working with resistant materials and electronics | 104m ² for 24 if 1 space, 97m ² if 2 |
| DAT46 | I | RM workshop with heat bay: For working with a range of resistant materials, including wood, metal and plastics | 111m ² for 24 |
| DAT49 | J | Construction workshop: workshop for vocational construction courses | 97m ² for 16 |
| PER01 | D | Music classroom: for performance, composing and theory | 62m ² for 30 |
| PER02 | E | Extensive music classroom: for performance, composing and theory, with option of keyboards for all pupils | 69m ² for 30 |
| PER04 | F | Music recital/ drama studio: studio space for drama and large music recital room combined | 83m ² for 30 |
| PER05 | F | Drama studio: studio space for drama | 90m ² for 30 |
| SCI02 | E | Science studio: For demonstration and light experiments | 69m ² for 30 |
| SCI05 | F | General science laboratory: For demonstration and a wide range of 'hands on' experiments | 83m ² for 30 |
| SCI11 | F | Specialist science laboratory: For demonstration for all types of experiments, up to A-level | 90m ² for 30 |

Figure 11: Typical secondary teaching spaces in basic teaching area and respective zones.

The ADS code refers to the *Area Data Sheets* (see references)

Basic teaching for secondary

The number of timetabled spaces within the basic teaching area of a secondary school will depend on the curriculum and group sizes. This can be determined using a curriculum analysis, but the *SoA tool* will indicate a reasonable expected number of spaces based on typical requirements.

Ideally, these should be within suites of spaces to suit departments and/or year groups, allowing for future adaptability. All but heavy practical spaces may be used as registration bases for year or house groups, and can be useful if the number of spaces in five of the suites accommodates a full year or house for registration.

General teaching spaces: In new schools these spaces should be general classrooms or, for smaller sixth form groups, seminar rooms (both in zone C) to ensure each has sufficient room for wheelchair users and assistants. These will generally be subject-specific, for instance for mathematics, English, Humanities or Modern Foreign Languages, but may be predominantly for a year group learning a range of subjects.

In existing buildings, some of the general teaching spaces may be restrictive classrooms (zone B), but there should be at least one general classroom (zone C) for each curriculum department. An extensive classroom (zone D) can be useful to allow further activities such as map work or role play.

ICT-rich teaching spaces: With the increasing use of laptops and tablet computers, the need for untimetabled ICT-rooms as a bookable resource has diminished. However, there is still likely to be a need for a few ICT-rich classrooms (zone D), equipped with fixed desktop computers for each workstation, to teach computing as a discrete subject or to accommodate a language laboratory. ICT-rich classrooms with fixed desktop computers for half the workstations may also be appropriate for business studies or vocational learning.

Light practical teaching spaces will generally have water, drainage and occasionally gas services and chemical resistant finishes, and will often be ICT-rich. All but science laboratories, which should be serviced by a central preparation room, should have one, or preferably two, accessible 'walk-in' store(s) accessed from the room for resources and work in progress. They include:

- for **science**: general science laboratories (zone F) and, particularly where there are post-16 places, specialist science laboratories (in the upper half of zone F) for more advanced experiments. These may be paired with science studios (zone E) which can be used for light experiments but would mainly be used for classwork, discussion and demonstrations;
- for **art**: general art rooms (zone F) and 3D art rooms (zone G) for clay or wet textiles such as screen printing. Where specialist FF&E is needed, for example a pug mill for pottery, these spaces will need to be in the upper half of zone G.

There may also be a photography studio (zone F), and associated darkroom (listed under 'learning resources area');

- for **Design Technology**, light practical spaces (zone G) are likely to include graphics products and constructional textiles and may include, where there is demand, a room for electronics and control systems;
- for practical **vocational courses**, light practical spaces may include a health and beauty salon (zone H), which may incorporate a 'reception' area that can be accessed by visitors.

Heavy practical teaching spaces will have fixed equipment (such as lathes or cookers), very resistant finishes, heavy electrical loads and often for some specialist extraction. The configuration of FF&E typically needs a room depth of at least 7.8m. They include:

- food rooms (zone H) for practical cookery activities with a cooker and sink for each pair of pupils. A restrictive food room (zone G) can provide a cooker for each group of three pupils. A space for vocational catering courses, with specialist FF&E (zone H) may be needed;
- workshops for Design Technology (zone H) and vocational courses, such as engineering (zone I) or construction (zone J);
- a fitness/ exercise studio for PE (zone G).

If there is only one workshop or food room, it should be in the upper half of zone H, as resources cannot be shared. Both types of space need a prep/ storage area adjacent (see storage), although this can be shared if there are more spaces of either type.

Performance teaching spaces: Music, drama and media studies require specific spaces with appropriate acoustic properties, and blackout facilities where necessary, as well as occasional access to a hall for performances to audiences larger than the class group. Basic teaching spaces for these subjects include:

- music classrooms (zone D) and/ or an extensive music classroom (zone E), if the option for all pupils to have a keyboard is preferred;
- drama studio and/or music recital space (both zone F), or a shared space for both;
- audio-visual studio for media studies.

Dance needs to be taught in spaces in the 'halls, dining and PE' category.

Any suite of basic teaching spaces should include support spaces, and these are covered under learning resource area. This is particularly true in music, where a class group should be able to break into smaller groups. Local staff areas are also important and appropriate storage is crucial (see [page 25](#)).

2. Halls, dining and PE

This category (zones p, P and PP) covers predominantly large spaces for sports and performance, as well as for dining and social activities.

Any school should have a main hall for assemblies (for the whole school in small primary schools but for one or two year groups in larger secondary schools) examinations, public performances, parents' evenings and community events.

Primary school halls and studios

Primary schools larger than one form of entry (FE) will require an additional small hall and/ or studios (one for approximately every further FE). In a primary school, the total area for this category of space (figure 12 below) should include:

- a main hall of at least 120m² for infants or 140m² for juniors, sufficient for PE and dance, assemblies, performances, parents' evenings and dining;
- a studio of at least 45m² in schools with more than 300 pupil places, to provide more space for music, drama and 'circle time' if required;
- an additional small hall of at least 80m² in schools with more than 600 pupil places, for PE without apparatus.

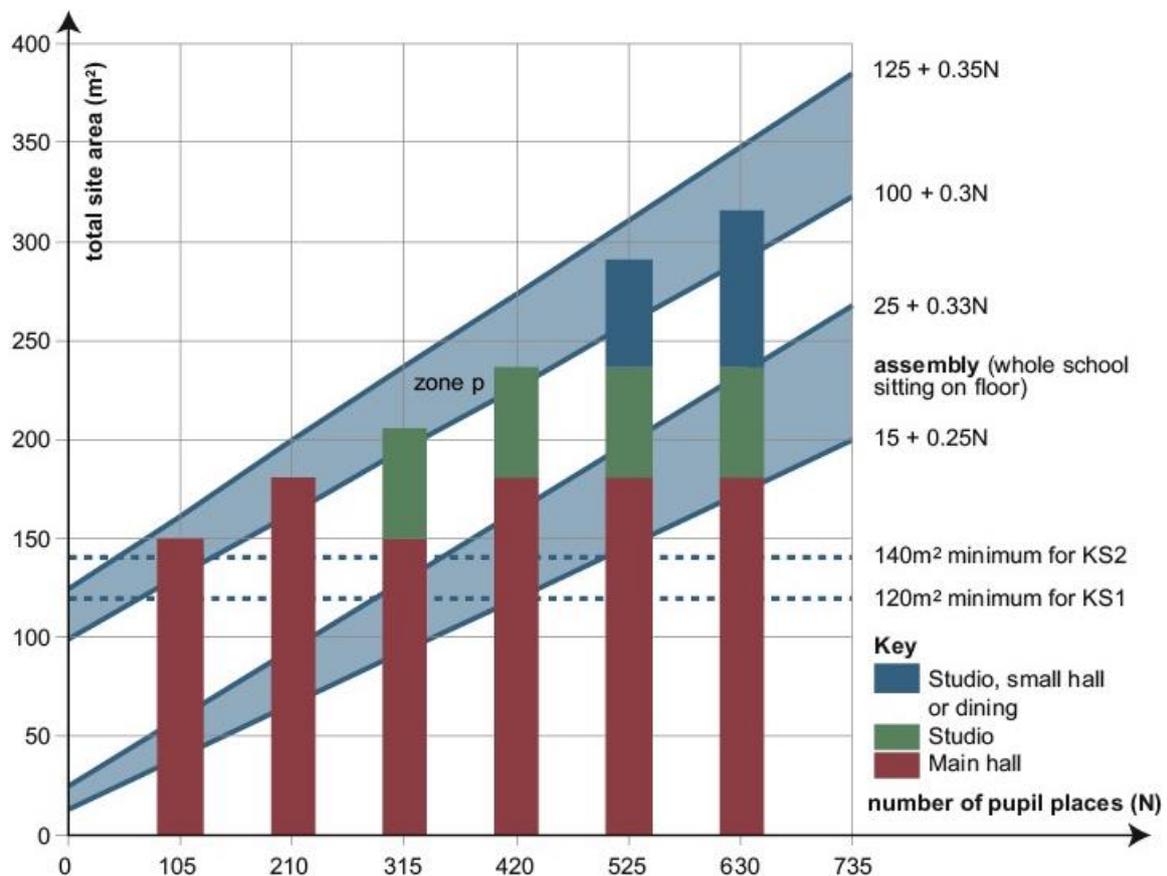


Figure 12: Recommended area for halls, dining and PE for any primary school.

The main hall will usually be used for dining, in two or three sittings (or equivalent if continuous flow) over the lunch period. It will have an adjacent servery that is usually within a space that can also accommodate the chair store for dining furniture.

In large primary schools, where there are three or more spaces in this category, one may be permanently set up as a dining space.

Secondary schools

All secondary schools will have a main hall. In new secondary schools the area for this category of space (figure 13 below) should include:

- a school sports hall, which should be designed to critical minimum dimensions, for three or four badminton courts in schools with more than 600 places (see below). Typically this will also be used for examinations;

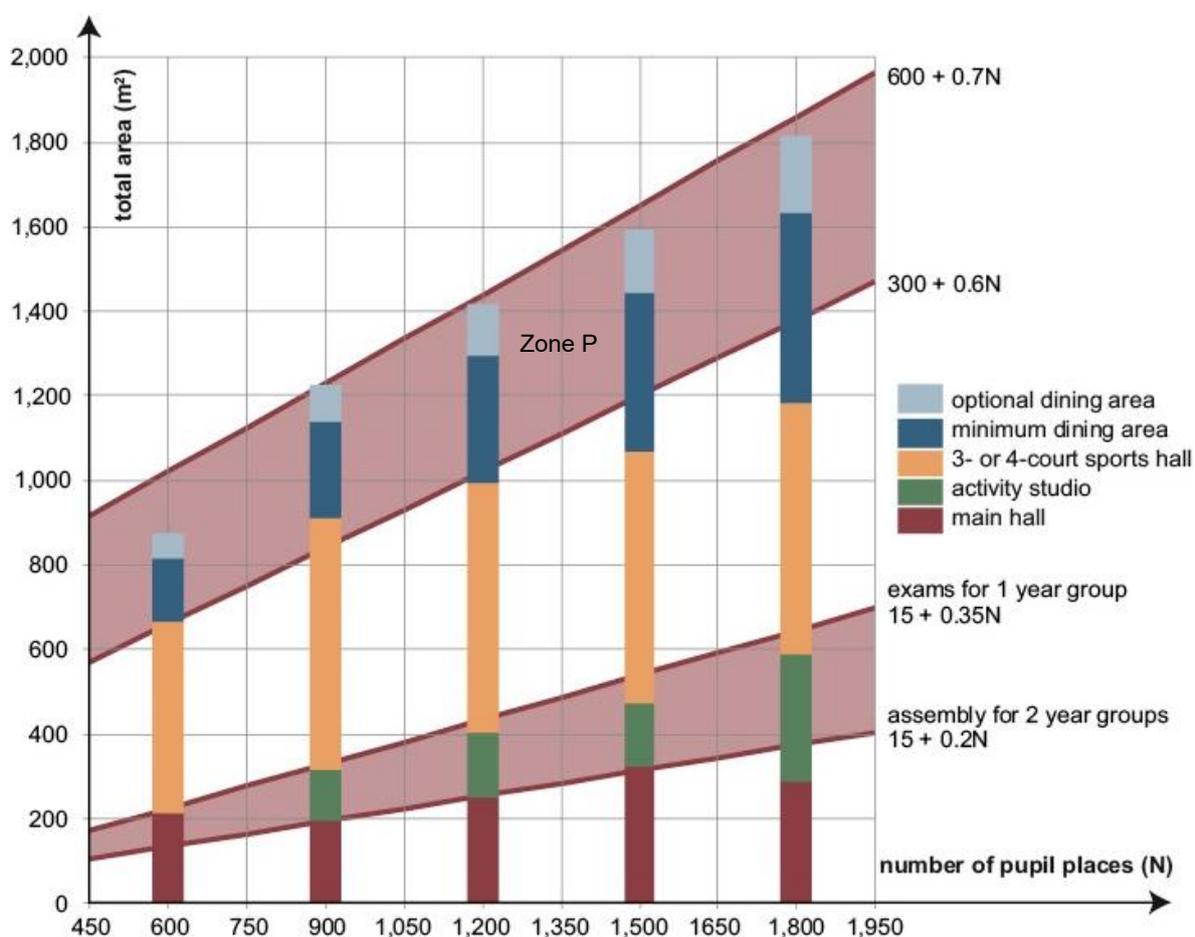


Figure 13: Area for halls, dining and PE for an 11 to 16 secondary school

Recommended area for halls, PE spaces and dining for any 11 to 16 secondary, as well as recommended area for assembly and exams based on five year groups. Note that the 600 place school is shown with a three court sports hall.

- one or, in schools with over 1500 places, two activity or dance studios of at least 120m², with a minimum internal width of 10m and height of at least 3.5m and a sprung floor, for some gymnastic activities, dance; and examinations if required;
- dining areas sufficient and appropriate for those pupils who wish to eat meals, based on the number of 'sittings', as discussed below;
- sixth form social spaces, where applicable, which should total at least 40m² plus 0.3m² for every sixth form pupil place.

In existing schools, there should generally be at least three large spaces totalling a similar area and volume as those for new secondary schools, as described above.

Sports halls in secondary schools can be a:

- *school sports hall*, providing a multi-purpose space for PE and also exams, and for informal recreational community use outside school hours, typically 18m x 28m or 33m (for three or four courts respectively) x 7.5m high if new; or
- *community sports hall*, if funding allows, for school use and formal club-level use outside school hours, designed to larger Sport England dimensions, typically 20m x 34.5m (with four courts) x 7.5m high if new. See Sport England 2012 design guidance note: [Sports Halls Design and Layouts](#).

Exams will typically be done in the sports hall, so the specification should allow for a suitable environment for this.

Dining area

The total area of spaces used for dining should allow 0.9m² per 'cover', or dining place. The number of covers should be based on the predicted number of pupils who would eat lunch on site (including packed lunches) divided by the number of 'sittings' or equivalent (if continuous flow) in the lunch break. Crucially, the number of sittings will depend on the time available for lunch.

Figure 14 shows the range of area needed, depending on the time available and therefore the number of sittings possible. It is important to note that the lower recommended area for dining is **only** sufficient if the lunch time available is at least an hour. This may be achieved by a single lunch break for all pupils or by a 'split lunch' break whereby some pupils work while others have a lunch break.

The main servery is part of the kitchen area allocation and should be adjacent to the dining area used for hot food diners. In a secondary school, the dining area will include:

- tables and chairs for dining 'covers' and space to access them;

- reasonable space for pupils to queue up to and in front of the main servery and past checkout facilities;
- clearance areas and waste disposal;
- where required, satellite or temporary servery areas.

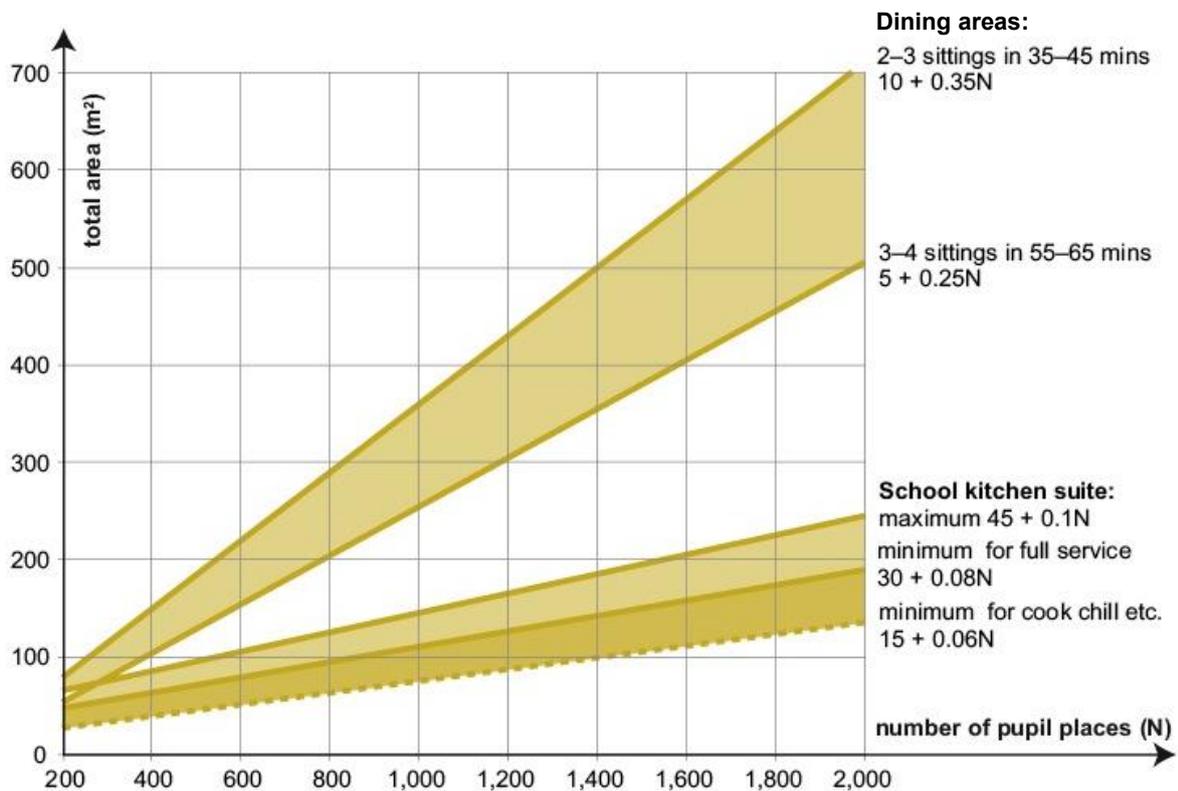


Figure 14: Recommended area for dining and kitchen suite for any school.

In secondary schools, there can also be opportunities to create a much wider range of eating spaces within the dining area allocation, such as cafés and buffet areas that also become social spaces. The area may include further provision for cold meals or snacks, for instance from vending machines.

Social spaces specifically for sixth form pupils may be used for eating cold food, from vending facilities or a satellite servery.

A useful option to enable a larger hall and smaller dining space(s) is to assume some of those eating cold food can use the main hall (or they may go outside in the summer). In this case the storage provision in the hall will also need to accommodate tables and chairs and the dining area will need to be sufficient to accommodate hot food sittings.

3. Learning resource areas

The total area for learning resource (within zones t – s, T – S and RR) in any school should include the following range of unmetabled spaces used for learning and therapy:

- a medical inspection (MI)/ therapy room, required by the [School Premises \(England\) Regulations 2012](#): for the medical examination and treatment of pupils: a separate 'sick bay' is also required (see staff and administration), so that the MI room will be free to be used for medical issues, visiting therapists or similar support for pupils;
- at least one library or learning resource centre (LRC) with a total area of at least 9m² plus 0.05m² for every primary pupil place and 0.12m² for every secondary pupil place;
- at least one small group room (zone B, typically 9m² for up to four pupils) for every 150 pupil places, to provide quiet, discrete facilities away from the classroom for a small number of pupils to work with a teaching assistant, peripatetic teacher or counsellor;
- a SEN resource base (zone C) specifically to support pupils with SEN or disability for learning and behaviour support, therapy and case conferences.

Figure 15 shows the zones of recommended area that suit various types of small space within both learning resources and the staff and administration area. Figure 16 shows the most common types of space in the learning resources area and their respective sizes used in the *SoA tool*.

Primary schools

In primary or all-age schools, the total area (zone t – s, figure 3) for this category of space may also include:

- a further small group room for the nursery, if applicable, for quiet activities such as storytelling;
- changing room(s) without showers for Key Stage 2 pupils, although this is unusual and other spaces may double for this function if required.

Secondary schools

In secondary schools, the total area (zones T - S and RR, figures 4 and 5) for this category of space should also include:

- music group/practice rooms (zone B): up to four for each timetabled music room, including one extensive group/ practice room (zone C) for drums and for groups up to seven;
- specific area(s) for sixth form study (zone B) where applicable totalling at least 20m² plus 0.2m² for every sixth form pupil place.

And may also include:

- a lighting and audio control room (zone B) at the back of the main hall;
- local resource areas within departments such as design and technology;
- a small recording studio or control room (zone B);
- a kiln room if there is also a 3D art room;
- a darkroom (zone B) or other ancillary areas.

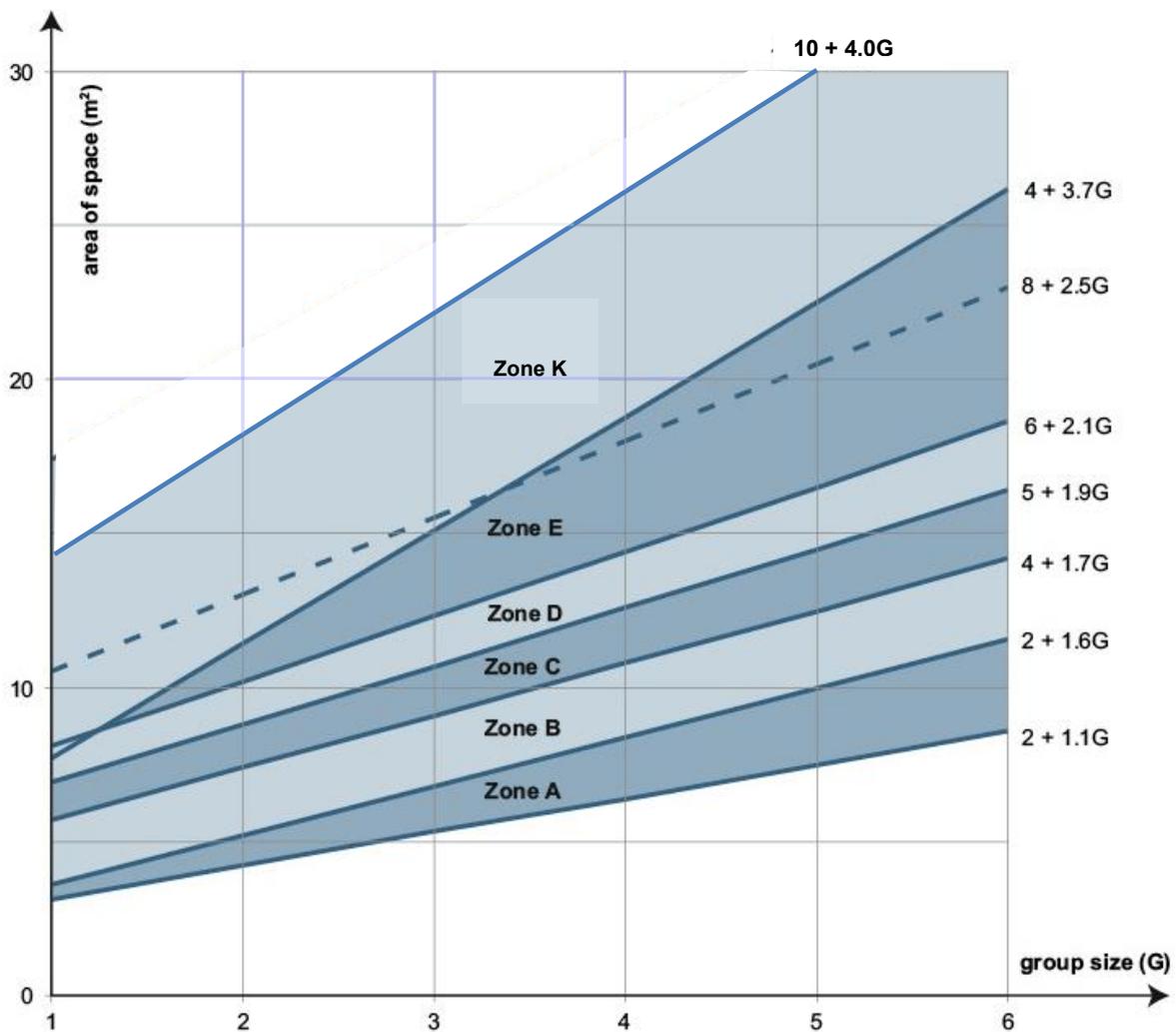


Figure 15: Recommended area for small spaces in all schools

Group size (G) represents maximum number of people accommodated, for instance in a meeting, rather than the number of workstations.

| ADS Code | zone | ADS name and description | Size used in SoA tool |
|----------|------|---------------------------------------------------------------------------------------------------------------|------------------------------|
| RES00 | B | Group room: For assistance with individuals and groups | varies |
| RES12 | B | Music practice/ group room: For music practice/ lessons | 8m ² for 3 |
| RES13 | C | Extensive music practice room: For music practice/ lessons, including drums | 16m ² for up to 7 |
| RES14 | B | Control room for recording: Housing specialist recording equipment | 8m ² for 3 |
| RES15 | B | Recording studio: For music practice and recording with specialist equipment | 9m ² for 4 |
| RES16 | B | Lighting/ audio control room: For controlling lighting and audio systems in adjacent performance space | 6m ² for 2 |
| RES21 | - | Kiln room: For kiln(s) and drying racks | 4m ² |
| RES22 | B | Dark room: Specialist dark room for photograph developing | 9m ² for 4 |

Figure 16: Typical small spaces in learning resources area

Key: Secondary only Secondary and primary

| ADS Code | Zone | ADS name and description | Size used in SoA tool |
|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| ADM02 | A | Interview room: Off reception area for meetings with visitors without the need to access the main school | 6m ² for 3 |
| ADM03 | - | Sick bay: Semi-open bay for pupils who are feeling unwell | 4m ² |
| ADM04 | - | Sick room: For pupils who are feeling unwell | 6m ² |
| ADM05 | K | General office: Main office for administrative staff, with reception desk for visitors, off entrance/ reception area | varies |
| ADM11 | D | Head's office (meeting room): Office for head teacher and meetings of staff, visitors or other adults | 16m ² |
| OFF00 | D | Office (only): For one or more members of staff, with admin storage | 7m ² for 1, 9m ² for 2 |
| OFF10 | C | Office/ meeting room: For one or more members of staff, with space for meetings | 13m ² for 2 + 3 |
| OFF15 | E | Office/workroom: For one or more premises managers, caretakers or ICT technicians, with space for repair of equipment | varies |
| OFF20 | C | Office/ pastoral room: For one or more members of staff, with space for meetings | 12m ² for 1 + 3 |
| OFF31 | C | Staff room (prep and social): Main space for any staff in school to work, meet and socialise, including preparation of teaching resources | varies |
| OFF32 | B | Staff room (social): Main space for staff to meet and socialise | varies |
| OFF33 | D | Staff work room: Space for staff in a school or a suite to work and meet | varies |
| OFF41 | C | Conference/ meeting room: For meetings of staff, governors and other adults | varies |

Figure 17: Typical small spaces in staff and administration area

4. Staff and administration

The total area for staff and administration comprises most non-teaching areas within the net area except stores. The total area (zones r – q, S - R and TT) should include the following range of spaces for any school:

- a general office (zone K) for administrative staff, with storage for confidential records in FF&E, a reception desk onto the reception area, and the option of a second reception desk onto a part of the school open to pupils;
- a secure reception area for visitors, with access to the rest of the school controlled by the office staff (this net area is for seating and display, over and above the circulation space through the entrance/ reception space);
- an interview room (zone A), ideally accessed from the entrance foyer or reception area, along with an accessible visitors' toilet, so that they can be used by visitors without them entering the main school;
- a sick bay or sick room, required by the [School Premises \(England\) Regulations 2012](#): for the short term care of sick and injured pupils. This is different to the MI/ therapy room described under learning resource areas and should be near to the main office and a toilet, and include a washing facility;
- a head teacher's office (meeting room) (zone D) of about 16m²;

Figure 17 shows the most common types of space within the staff and administration area and their respective sizes used in the *SoA tool*.

Primary schools

In primary and middle schools, the total staff and administration area (zone r – q) should also include:

- a preparation and social space (zone C) for teaching staff, usually in the form of a central staff room for work and social use, including a kitchenette.

And may also include:

- a separate staff work room (zone D);
- offices for other senior teaching staff, such as the deputy or assistant heads, who may need privacy for interviews and pastoral support;
- separate reprographic facilities, if they are not in the general office;
- an office for a facilities manager or caretaker (zone E) in schools with over 400 pupil places.

Secondary schools

In secondary and all-age schools, the total staff and administration area should include:

- reprographic facilities, which schools may choose to provide as a series of bays or a separate specialist room with appropriate ventilation;
- a staff social area or staff room (zone B) with a kitchenette usually centrally located;
- staff work area, either centrally located (combined with or adjacent to the staff social area) to encourage interaction, or in smaller local staff work rooms (zone D), usually department-based - providing both would result in the under-use of space;
- offices for other senior teaching staff (zone D), particularly heads of year, who will need privacy for interviews and pastoral support;
- a meeting room or conference room (zone C), usually near to the head's office;
- an office/ meeting room (zone C) for the SENco and team.

And may also include:

- additional accommodation for the bursar and other administrative staff (zone K);
- an office / workshop for facilities manager or caretaker (zone E);
- an office/ workshop for ICT technician (zone E).

5. Storage

The total area for storage (zones s – r, R – Q and SS) for all schools includes teaching storage, for teaching resources such as materials and equipment, and pupils' work. It also includes non-teaching storage for pupils' belongings, administrative resources, and cleaning and maintenance equipment.

Primary school teaching storage

Where there are primary places, the total storage area (zone s – r) should include the following teaching storage:

- full height, lockable storage of at least 1m² for every classroom, easily accessible by staff (but not pupils), for resources such as valuable or hazardous items;
- specialist walk-in stores for teaching resources: at least one 5m² storeroom, accessible ideally from a corridor or shared teaching area, housing shared resources for practical subjects such as science, design and technology and art;
- indoor PE equipment storage, opening onto one side of the main hall, totalling at least 10% of the area of the hall.

It is important that defined teaching storage is provided to avoid compromising the usable area and flexibility of the teaching spaces.

Secondary school teaching storage

Where there are secondary places, the total storage area (zone R – Q) should include:

- *general teaching/ ICT stores*: at least one of 5m² for every general teaching department for books and materials for general teaching subjects: preferably accessed from a circulation area or perhaps a shared staff workroom;
- *science preparation/ storage*: central preparation room for science laboratories totalling 0.35 to 0.5m² for every workplace in science laboratories, depending on the age range and storage available in laboratories, including a cupboard for radioactive materials: ideally one for all science spaces but this may need to be more, for instance if science is over two floors;
- *chemical store*: separate store for chemicals off or near the preparation room;
- *practical stores*: specific walk-in stores for materials, equipment and pupils' work-in-progress in practical subjects: two of 5m² for each art room and at least one of 5m² for all other light practical teaching rooms except science spaces;
- *DT preparation/ storage*: room for resistant materials workshops of at least 30m², of a suitable shape to safely accommodate machinery (such as a circular saw) in the centre and storage around the edge;
- *food store/ prep room*: preparation/ storage room or smaller store rooms for food rooms totalling at least 10m²;
- *music store*: at least one shared music instrument store of at least 5m²;
- *drama store*: a store for costumes and props off one drama studio, where applicable, of at least 10m²;
- *indoor PE equipment storage* at least 10% of the size of the teaching space, opening onto the side of the sports hall and of the activity studio;
- *outdoor PE storage*, accessed externally, ideally near to outdoor PE facilities.

Non-teaching storage

Non-teaching storage should include:

- for primary pupils, coat and bag storage for pupils' personal belongings, equivalent to at least 3m² per class (the net area not including the circulation past the coats), located in separate cloakrooms, corridors or directly off classrooms, depending on the routes used to access classrooms from the playground;

- for secondary pupils, lockers off the circulation space and the area in front of them to open doors, which is part of the locker area (typically 0.75m deep), can enhance the width of corridors when the lockers are not in use;
- secure storage for valuable items such as school and personal records, archives or examination papers, located to suit the relevant examination board requirements;
- storage bays suitable for mobility equipment around the school;
- central storage for bulk stock, such as pens or paper;
- storage for maintenance equipment and cleaners' and caretaker's equipment;
- furniture storage for seating, chairs, tables, exam furniture and staging, and for dining furniture when the hall is used for dining. This may be positioned immediately adjacent to the main servery in the kitchen, so it can double up with the queuing area in front of the servery when the furniture is in use.

Non-net Area

The non-net area is made up of variable areas that are not included in the net area of the school. It comprises the three categories of space listed below, plus non-net areas needed to support any supplementary net areas (see [page 33](#)):

1. toilets and personal care;
2. kitchen facilities (see [figure 14, page 24](#));
3. circulation, plant and internal walls.

The first two categories of space will depend on the number of pupil places, other uses such as non-school activities and for kitchens, the type of catering arrangements in the school. The last category will generally be directly proportional to the net area, so it is important to include any supplementary net area in the total net area before calculating the requirement for these areas.

Toilets and personal care

The total area of toilet and personal care facilities must include:

- *toilets for pupils*: this should provide approximately one for every 20 pupils in total, but there must be one for every ten full-time equivalent pupils aged two to four, including reception and nursery places, see [EYFS](#);
- separate toilets for staff: at least one toilet with wash hand basin plus one for every 25 full-time equivalent members of staff (not including catering staff);

rounded up, see the [Workplace Health, Safety and Welfare Regulations 1992, Approved Code of Practice and Guidance, L24](#);

- accessible toilets for disabled pupils, staff or visitors (which may also count towards the number of staff toilets above);
- in schools with pupils in Year 7 and above, changing rooms with showers, near to indoor and outdoor sports provision.

And should also include:

- changing facilities for staff, which may also offer accessible changing facilities;
- a specialist hygiene room with fixed or mobile hoist and space for assistants to change a pupil. In a primary school this should contain a changing bed and accessible WC unless this is included in an adjacent accessible toilet (9m²). In a secondary school this should contain an accessible shower, sluice toilet and a changing trolley (12m²).

Some of the spaces listed above may be designed to allow facilities appropriate to:

- use outside the school day;
- particular religious requirements, including orientation and ablutions.

Normally in secondary schools it is sufficient to provide changing facilities for half a year group with equal and separate facilities for boys and girls in co-educational schools. Showers should generally be in the form of separate cubicles, with about one for every seven pupils changing. At least one accessible changing area (with a sanitary fitting, wash basin and shower) should be provided, although this may be also be used by staff.

Kitchen facilities

The total kitchen area ([figure 14, page 24](#)) should include:

- facilities for preparing food and drink, and washing up afterwards, where needed;
- food store rooms;
- facilities for catering staff, including changing areas, toilets and a workstation for administration;
- main servery serving hot food and other items.

The size of the core preparation area will depend on the equipment needed, which in turn will depend on the type of preparation system to be used that ranges from traditional, through cook-chill to pre-prepared 'fast food'. The minimum recommended area in figure

14 will suit a cook-chill kitchen, or similar, whereas the minimum size for a full service kitchen is $30\text{m}^2 + 0.08\text{m}^2$ for every pupil dining on site.

There should be easy access for deliveries and a secure site for bins.

Circulation, plant and internal walls

Circulation

The circulation should be at least 22.5% of the total net area of primary schools (or 20% in single-storey schools) and 25% of the total net area of secondary schools. This also applies to supplementary area. Within this area:

- all rooms should be accessed from a circulation route, except store rooms accessed directly from learning spaces;
- corridors leading to more than one or two teaching rooms should have a clear width of at least 1.8m wall to wall (2.55m wall to wall where there are lockers);
- shorter corridors leading to one or two small spaces should have a clear width of at least 1.2m;
- where there is an access route through a space, such as dining or library, to another room, a 'strip' of circulation at least 1.2m wide should be discounted from the usable net area.

Plant

An area equivalent to 1.5% to 3.5% of the total net area will be needed to accommodate boiler rooms and a server room, as well as hub rooms and vertical ducts. Further area will generally be needed if ventilation plant, chimneys or sprinkler tanks are included in the gross area of the building.

Internal walls

The area of internal walls will occupy an area equivalent to at least 4% of the net area, and up to 6%, if the walls are thicker due to existing or different forms of construction.

Supplementary area

Supplementary area is used for non-school or support functions not normally provided in mainstream schools catering for 3 to 18 year olds. This will include specially resourced provision for a specific special need, such as a designated unit, but not typical facilities for pupils with SEN.

It is important to note that a dedicated, additional funding stream needs to be identified for any supplementary area, including the associated non-net area, unless that area already exists in appropriate accommodation.

There are three types of non-school and support area that fall within the category of supplementary area listed in figure 18 below and matching those in the [net capacity assessment method](#).

| Category | Types of facilities |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Early years and childcare | Crèche Nursery provision for 0 to 3 year olds Child-care provision for out of school hours |
| Adult learning and skills | Adult learning and skills facilities not available to the school during the school day Centres for Local Authority Services, such as staff training |
| Additionally resourced facilities | Additional facilities for pupils with SEN or disabilities, such as specially resourced provision or a designated unit Non-school facilities funded from other sources and not available to the school during the normal school day, such as community library facilities or youth centres Accommodation for Local Authority designated support services, including peripatetic and support staff |
| Parent/ community rooms and chapels | Parent or community room not available to the school Chapel or similar place of worship not available to the school except for that purpose |

Figure 18: Table showing types of non-school and support provision

Additionally resourced facilities are those where the premises related costs of maintaining the accommodation are covered by specialist funding from the Local Authority or other sources.

Some small non-school areas may be in supplementary area but can also be included in the recommended net area for the school, including:

- separate space not normally available to the school during the school day, such as a parents room, an office for community staff who run facilities out of school hours, or separate locker or equipment storage for use by separate users such as after school/ holiday clubs;
- area to accommodate the enhancement of school facilities for community use: this will include spaces which have been enlarged beyond the recommended 'standard', for instance to allow for spectators in the sports hall;
- a chapel or contemplation room also used by the school for other purposes.

Part B: The site

This part of the guide sets out how to establish the site area requirements for a school. For middle schools and all age schools the sizes of spaces can be established by referring to the relevant areas for primary and secondary schools, as explained in [annex B](#). It is in three sections: net site area; non-net site area; and, supplementary area.

Part A is in three sections, shown in figure 19 below:

- **Net site area**, which is the usable site area available to pupils, and is also known as the 'playing field area' when considering land disposals ([Section 77 of the School Standards and Framework Act 1998](#));
- **Non-net site area**, which supports the functioning of the site and includes the footprint of buildings and access areas such as paths, roads and parking;
- **Supplementary area**, which is used for non-school or support functions such as specially resourced special needs facilities.

The gross or total site area is the total of the net and non-net site area. Generally, the total site area needed for a new 5 to 11 primary or a secondary school will vary between around 111% and 125% of the net site area such that the net site area is 80% to 90% of the total. The net site area for infants' schools is likely to be smaller as there is no requirement for soft outdoor physical education (PE) area (such as pitches). The gross site area may therefore be as high as 135% of the net site area, as the buildings and access area is a larger proportion of the total site.

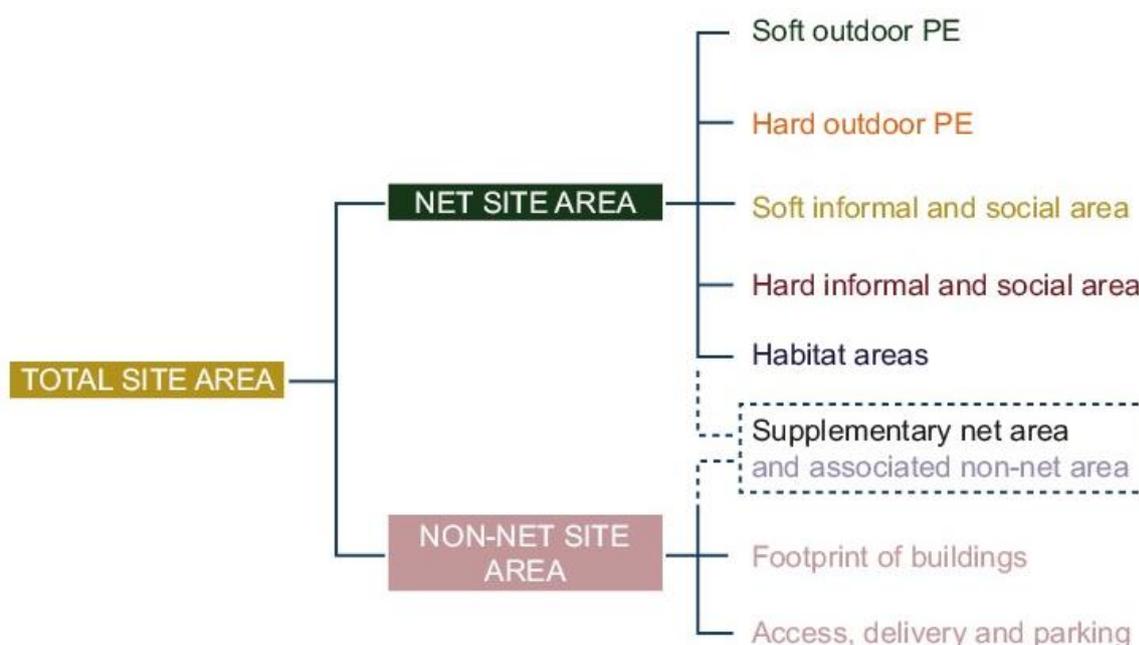


Figure 19: Categories of space for net and non-net site area

Net Site Area

The net site area, also known as the school playing field area in [Section 77 of the School Standards and Framework Act 1998](#) 'protection of school playing fields', can be divided into the following five categories of outdoor space:

1. soft outdoor PE (zone u or U);
2. hard outdoor PE (zone X - W);
3. soft informal and social area (zone W - V);
4. hard informal and social area (zone Y - X);
5. habitat areas (zone Z - Y).

The graphs in figures 20 and 21 below show the zones for each category of outdoor space. As with the area of buildings, the top of each zone is the recommended maximum area for the category, and the bottom is the recommended minimum area. Each is calculated for the number of pupil places by using the formulae shown in the graphs and [annex B](#). The graphs also show the recommended minimum and maximum net site area, and the likely range of gross area needed, based on the minimum and maximum proportion of net to gross (see [page 35](#)). The range in the graphs allows for variation in the shape and contours of the site, and size of the building footprint.

The total net site area required by an inclusive community school should not normally need to exceed the maximum recommended net site area for the number of pupil places and age range of the school. However, existing sites with at least this site area available must generally keep this area for 105% of the current capacity to allow for future growth, see [Section 77 of the School Standards and Framework Act 1998](#).

Some schools will be on restricted sites and will not have enough outdoor space to meet requirements on site. In these situations pupils will need to be provided with access to suitable off-site provision. On restricted sites, where space will be at a premium, a flexible approach to the site area and the management of the use of that area will be needed, and consideration should be given to providing the following, in priority order:

- firstly, space for hard informal and social area including outdoor play area immediately accessible from nursery and reception classrooms (zone Y);
- then some hard outdoor PE space to allow some PE or team games to be played without going off site, ideally in the form of a multi-use games area that can also be used as hard informal and social area (zone X);
- then soft informal and social area for wider range of outdoor educational opportunities and social space (zone W);
- finally some soft outdoor PE can be provided. If this is in the form of an all-weather pitch, it can count twice towards the recommended minimum (zone U or u).

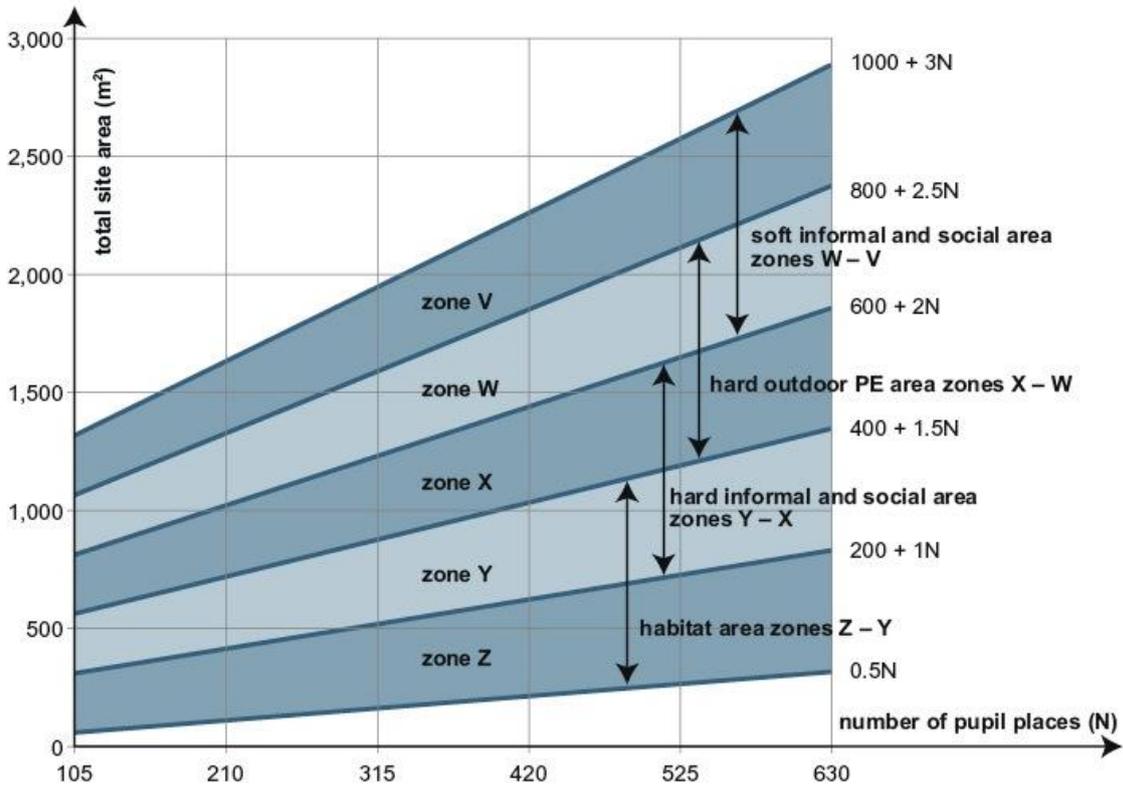
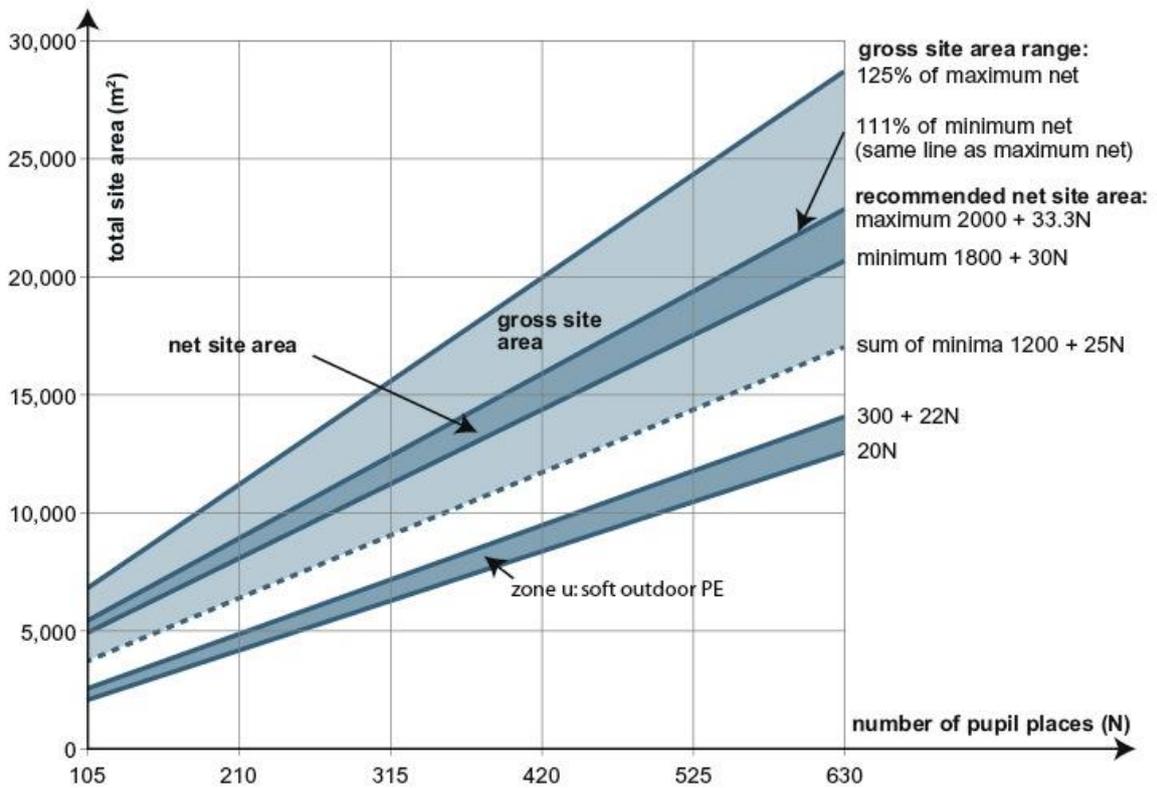


Figure 20: Gross and net site area for 5 to 11 primary schools

The **top** graph shows the recommended minimum and maximum net site area with the related formulae; it also shows the minimum and maximum likely total site area as a proportion of the net site area; and shows the soft outdoor PE (zone u), which allows for 35m² for pupils in Key Stage 2. The **bottom** graph shows the remaining four of the five categories of net area and related formulae, which applies to all schools.

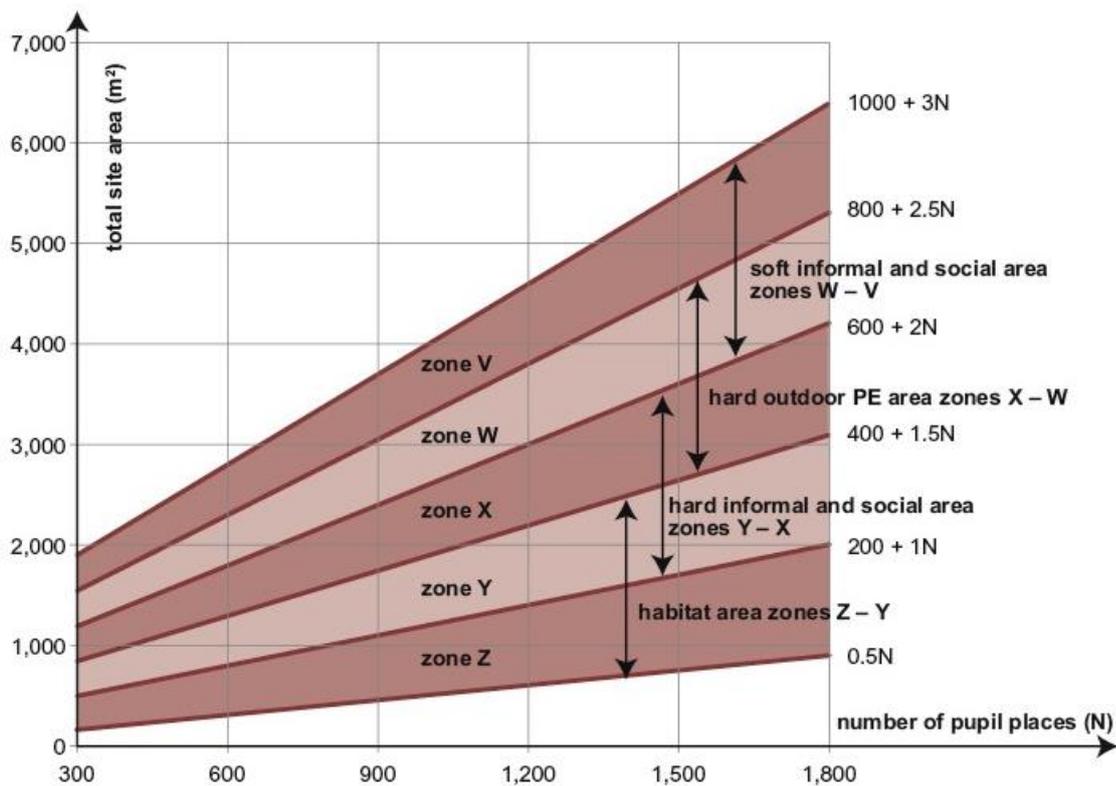
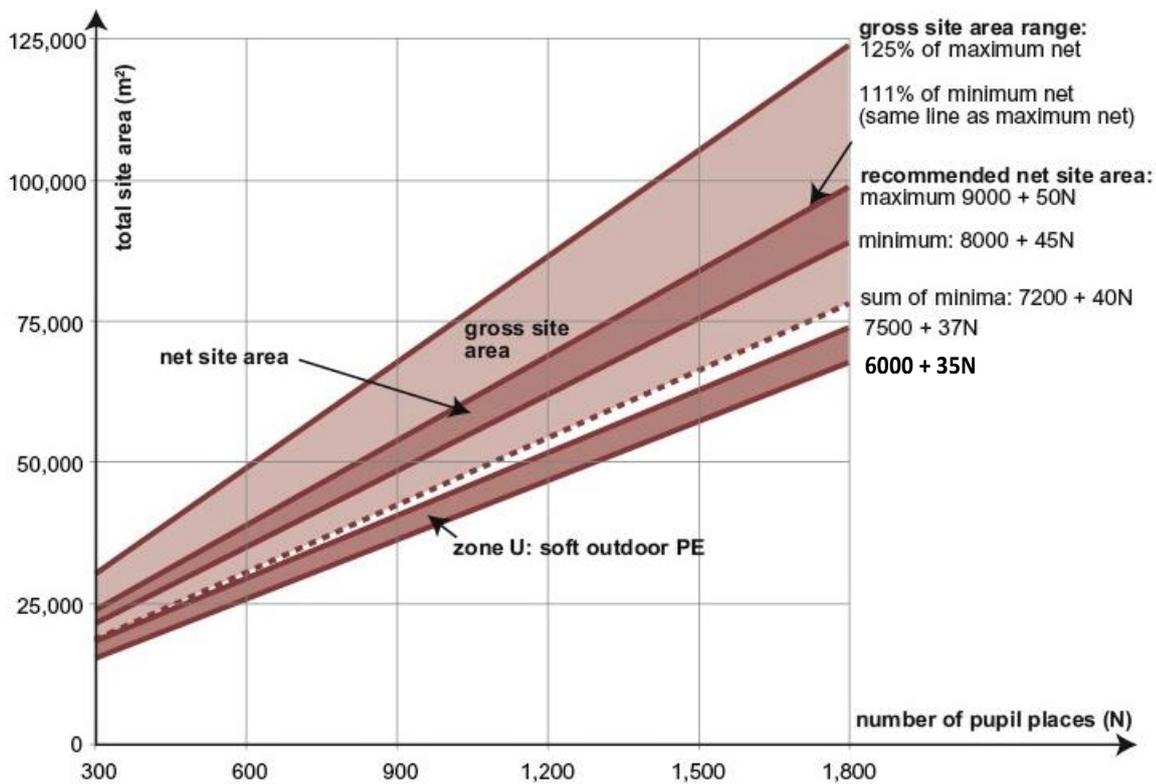


Figure 21: Gross and net site area for secondary schools

The **top** graph shows the recommended minimum and maximum net area with the related formulae; it also shows the minimum and maximum likely total site area as a proportion of the net area; and shows the soft outdoor PE area (zone U). The **bottom** graph shows the remaining four of the five categories of net area and related formulae, which applies to all schools.

1. Soft outdoor PE area

The total area of soft surfaced outdoor PE (zone u for 5 to 11 primary or zone U for secondary) should include sports pitches laid out to suit team games including:

- winter pitches for the school's preferred team games, such as football, rugby and hockey; and,
- overlapping summer pitches, such as cricket, a 400m athletics track and facilities for field events.

As well as the grass pitches above, the area may also include:

- all-weather pitches such as synthetic turf pitches, which allow more intensive use than grass and, particularly with floodlighting, can also offer a popular community resource (*Sport England, 2012: Artificial Surfaces for Outdoor Sport*);
- other soft-surfaced facilities that can provide for the PE and sports provision such as trim trails and bike tracks.

The area of all-weather pitches can be counted twice for the purposes of both these guidelines and [section 77](#) applications, as they can be used for significantly more than the seven hours a week assumed of grass pitches.

The location, size and shape of grassed outdoor PE areas should be based on a number of considerations including the statutory requirements, safety considerations, gradient, relationships between winter-games pitches and summer athletics and cricket provision (as appropriate), orientation of pitches and accessibility.

2. Hard outdoor PE area

In new schools, the total area of hard surfaced outdoor PE (zone X - W) should include:

- a porous macadam multi-use games area (MUGA), with three netball courts overlaid, with critical dimensions of 22m x 33m plus margins for primary or 60m x 33m plus margins for secondary pupils;
- further tennis/netball courts in larger schools.

Laying out a variety of courts within a single multi-use games area makes supervision easier and extends the range of games.

In existing schools, a similar amount of hard surfaced area should be laid out for games.

3. Soft informal and social areas

A variety of informal and social areas should be created to suit the learning development and cultural needs of pupils during breaks as well as before and after school, and for a range of more formal curriculum needs. These will include soft-surfaced, usually grassed, areas and hard-surfaced courtyards, paths and playgrounds.

The soft-surfaced areas should be conveniently situated, safe and provide some shade.

The total area (zone W - V) could include:

- soft-surfaced areas, such as grass, sand or bark mulch, for play, or to sit and socialise;
- grassed banks or terraces that can be used for large gatherings;
- shrubs or planted areas (including those near buildings);
- meadowland or woodland, where there is space available.

4. Hard informal and social areas

To complement the soft informal and social areas, there should be hard-surfaced playgrounds for the encouragement of healthy, active, creative outdoor play, as well as for more formal learning activities including outdoor study groups and for pupils to engage in outdoor art, theatre, dance and design. There may also be the need for areas dedicated specifically to early years (nursery and reception), including some sheltered space.

'Furniture' can be created through the introduction of natural materials that blend into the landscaping.

The total area (zone Y - X) may include paths and rooftop play areas in restricted sites.

5. Habitat areas

Habitat areas can include a range of outdoor classroom spaces and designs, to provide a valuable resource for teaching and learning across the whole curriculum.

The total habitat area (zone Z - Y) should include grounds developed for a range of supervised activities, for instance meadowland, wildlife habitats (such as ponds), gardens and outdoor science areas to support the curriculum. Such areas should generally be fenced to avoid unsupervised access.

Parts of this area may be designed to be developed over time by the school.

Non-net site area

The non-net site area will vary depending on the configuration of the site and buildings. It will include:

- the 'footprint' of all buildings;
- access for people and deliveries;

Access will usually include:

- entrance paths, roads and related landscaping other than that related to play and social areas available to pupils;
- parking (a few bays for disabled car parking and visitors, car parking for staff and community use and bicycle parking, to meet local transport planning requirements).
- refuse and recycling areas (secure or distant from the buildings to meet local planning requirements);

Non-net site area may also include:

- space for coaches, buses or taxis to safely drop-off pupils, particularly those with SEN or disabilities;

It is most important to consider means of separating children's access from vehicular circulation, delivery areas and parking.

Supplementary site area

As discussed on [page 33](#), any school may have supplementary site areas for non-school or support functions, for example play space for a crèche or extra car parking for community use. Any site area associated with these functions will be supplementary site area, and will either need to be funded from other funding streams or on an existing site left as additional to the site area needed for the school.

Glossary and references

Glossary

All-weather pitches: includes synthetic turf pitches and those with polymeric surfaces such as shredded rubber bonded with bitumen, latex or polyurethane.

Extensive space: is a version of the space that can accommodate a wider range of relevant activities and FF&E layouts than would typically be required

FE: Form of entry

FF&E: Fittings, furniture and equipment

Float: The difference between the sum of the recommended minimum area of each category of space and the overall recommended total net area

Key stage (KS): Specific part of child's education and relates to their age and year group

Mainstream schools: all those except special schools and alternative provision

MUGA: Multi-use games area

Restrictive space: Smaller space than would be typically be recommended that will only accommodate a very limited number of activities, and FF&E

SEN: Special education needs

References

Schedule of Accommodation (SoA) tool (see Gov.uk school building design website)

Area Data Sheets (ADSs) (see Gov.uk school building design website)

[Baseline Designs](http://www.gov.uk/government/collections/school-building-design-and-maintenance), Education Funding Agency, Department for Education:
www.gov.uk/government/collections/school-building-design-and-maintenance

EYFS: [Statutory Framework for the Early Years Foundation Stage 2012](http://www.gov.uk/government/publications/early-years-foundation-stage-framework):
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Net capacity assessment method, [Assessing the Net Capacity of Schools](http://www.education.gov.uk/schools/adminandfinance/schooladmissions/net/a0076743/assessing-the-net-capacity-of-schools):
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[Schools Premises \(England\) Regulations 2012](http://www.legislation.gov.uk/uksi/2012/1943/contents/made):
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Sport England, 2012, design guidance note: [Sports Halls Design and Layouts](http://www.sportengland.org/media/31363/Sports-Halls-Design-and-Layouts-2012.pdf):
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[Workplace Health, Safety and Welfare Regulations 1992, Approved Code of Practice and Guidance, L24 2nd Ed. 2013](http://www.hse.gov.uk/pubns/priced/l24.pdf): www.hse.gov.uk/pubns/priced/l24.pdf

Annex A: Building areas

| Recommended minimum areas for mainstream schools | Base area for: | | | | Area per pupil place for: | | |
|---------------------------------------------------------|----------------|----------------|---------------------------------|-------------|---------------------------|---------------|-------------|
| | All primary | Middle schools | Secondary and all-age up to 750 | | All primary | Key Stage 3/4 | Post-16 |
| | | | up to 16 | with 16+ | | | |
| 1. Basic teaching | - | - | - | - | 2* | 2.9 | 3.2 |
| 2. Halls, dining and PE | 100 | 200 | 300 | 375 | 0.3* | 0.6 | 0.6 |
| 3. Learning resources | 10 | 50 | 75 | 125 | 0.1 | 0.15 | 0.4 |
| 4. Staff and admin. | 30 | 75 | 100 | 100 | 0.2 | 0.2 | 0.2 |
| 5. Storage | 20 | 75 | 125 | 150 | 0.15 | 0.25 | 0.3 |
| Float | 80 | 100 | 150 | 250 | 0.15 | 0.4 | 0.3 |
| Minimum net area | 240 | 500 | 750 | 1000 | 2.9 | 4.5 | 5 |
| Non-net area | 110 | 200 | 300 | 400 | 1.2 | 1.8 | 2 |
| Minimum gross area | 350 | 700 | 1050 | 1400 | 4.1 | 6.3 | 7 |
| Recommended maximum areas for mainstream schools | | | | | | | |
| Maximum net area | 275 | 575 | 875 | 1175 | 3.1 | 4.9 | 5.4 |
| Maximum gross area | 400 | 835 | 1270 | 1700 | 4.5 | 7.1 | 7.85 |

Recommended building areas for all types of mainstream school

* nursery places for 3 to 4 year olds should have 2.3m² basic teaching but do not need hall, dining and PE area.

All age above 750 places, or with more than about 300 11 to 16 places, should use the total of the primary and secondary base areas. Split sites (where a significant part of the school is provided in buildings on more than one site) may need extra gross area of up to 75m² in some cases, to allow for the replication of administrative and kitchen facilities, depending on the distance between sites and the facilities on each site.

Note: The net area includes a 'float'. When the recommended minimum areas of each category of space are added together, the total will be less than the recommended total net area. This difference provides the 'float' that can be used to enhance some areas, depending on the priorities of the school.

See Building Bulletin 104 for building area formulae recommended for special schools, alternative provision, specially resourced provision and units.

Annex B: Site areas

| Recommended minimum site areas for all schools | Base area for any: | | Area per pupil place for: | | | |
|---------------------------------------------------------------------------------------------------------|--------------------|----------------------------|---------------------------|---------------------------|---------------------------|-----------------|
| | primary school | secondary or middle school | Nursery | Reception and Key Stage 1 | Key Stage 2 - 4 & post-16 | 5 to 11 primary |
| 1. Soft outdoor PE | - | 6000 | - | - | 35 | 20 |
| 2. Hard outdoor PE | 400 | 400 | - | 1.5 | 1.5 | 1.5 |
| 3. Soft informal and social area | 600 | 600 | 2 | 2 | 2 | 2 |
| 4. Hard informal and social area | 200 | 200 | 1 | 1 | 1 | 1 |
| 5. Habitat | 0 | 0 | 0 | 0.5 | 0.5 | 0.5 |
| Float | 600 | 800 | 2 | 5 | 5 | 5 |
| Minimum net site area | 1800 | 8000 | 5 | 10 | 45 | 30 |
| Non-net | 200 | 1000 | 1 | 1 | 5 | 3.3 |
| Minimum total site area | 2000 | 9000 | 6 | 11 | 50 | 33.3 |
| Recommended maximum site areas for new schools (minimum for existing schools where available) | | | | | | |
| Maximum net site area | 2000 | 9000 | 6 | 11 | 50 | 33.3 |
| Maximum total site area | 2400 | 11000 | 7.5 | 14 | 63 | 42 |

Recommended site areas for all types of mainstream schools

Note: The net area includes a 'float'. When the recommended minimum areas of each category of space are added together, the total will be less than the recommended total net area. This difference provides the 'float' that can be used to enhance some areas, depending on the priorities of the school.

Where there is limited outdoor space available to pupils on a restricted site, consideration should be given to providing the following:

- firstly, hard informal and social area, including outdoor play area immediately accessible from early years classrooms;
- then hard outdoor PE space, ideally in the form of a multi-use games area;
- then soft informal and social area;
- finally soft outdoor PE area.

See Building Bulletin 104 for site area formulae recommended for special schools, alternative provision, specially resourced provision and units.



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