



An Roinn Oideachais  
Department of Education

# School Design Guide

## SDG 02-03

### Post Primary School Design Guide



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## **1. BACKGROUND TO LATEST REVISIONS**

The Department of Education (DoE) has an ongoing policy of updating and improving its suite of design documents for post primary schools, with a view to offering better guidance to school authorities and Design Teams. Older documents within this suite are known as Technical Guidance Documents (TGD), and updated or new documents will be known as School Design Guide (SDG). Since the introduction of the 1st Edition of TGD-023 February 2013, the DoE has undertaken an extensive Post Occupancy Evaluation exercise of recently built schools. Lessons learnt incorporating feedback from schools and also from Department specialist subject Inspectors has resulted in significant review of Schedules of Accommodation. Each individual Room Layout has been reviewed from first principles. Initial draft layouts benefited from further feedback. The outcome included here and is reflected in the final versions published on Department's website.

## 2. INTRODUCTION

### 2.1 GENERAL

#### School Design and Learning

Learning is inseparable from the learning environment. Good school design fosters a safe school environment and positive social interaction for students and teachers. Spacious and well-lit social areas build a sense of communality. School design must adapt to modern changing needs. The modern school is not just a venue for daily lessons, but also should be available for community use and for adult education. Architectural flexibility will make a major contribution to the longevity of any new school building. School architecture is guided by the national curriculum and pedagogical requirements. The classrooms and the furniture should be readily adaptable to meet the demands of new modes of learning and teaching. Learning is a context-dependent exercise: teaching strategies and learning opportunities are greatly influenced by the surrounding architecture. This is especially true when every space throughout the building can be seen as a learning space, and when students experience their learning as meaningful, active, hands-on, and as arming them with the proficiencies to function successfully in work and society.

School design should enable students to learn in diverse ways by engaging all their senses. Design should support autonomous study, pair work, group exercises, debate, and opportunities to demonstrate what has been learned. Schools must be multi-purpose centres of learning and provide real opportunities for lifelong learning. Schools must address the skills needed in a global, pluralistic, multicultural society, catering equally and fairly for the needs of all. Increasingly, schools are providing not just academic subjects, but basic life management skills.

The school environment also should support teachers in their work, and in the learning-to-learn process. The staffroom is not the focus in a modern school. The school is a coherent shared space for teachers and students alike. Spaces are provided for school staff to carry out their duties individually, jointly or in groups. The school building and environs define the practical parameters of teaching and learning and create the general atmosphere where learning, social interaction and a sense of belonging come together to form positive attitudes in an inclusive environment.

#### Flexible Design

The architecture of the school should promote cross-disciplinary learning. The learning environment is a type of pedagogical tool as it subtly supports learning through textures, colours, materials, and most of all through the innovative use of space. In this way, the interiors can be regrouped and used flexibly for various purposes. There should be easy movement and access to common areas, while noisy and quiet spaces are separated. A flexibly designed school enables groups of varying size to migrate fluently between spaces with minimal disruption. A truly flexible design is capable of predicting the needs of the future through adapting to meet changing functional requirements. Schools must be designed to be used creatively and imaginatively; where learning is not exclusively confined to formal teaching spaces; where the school library is at the heart of learning; and where students can learn individually, together or in groups; and seamlessly using the instruments of learning; and where those with special educational needs are catered for in an integrated way. Students' sense of the school is frequently based on aesthetic judgements. The physical aspects of a school should promote well-being in students. New learning methods, such as those promoted through Junior Cycle Reform are reshaping the design of schools. School buildings must be open, transparent, adaptable and flexible. Classrooms and specialist rooms alike must be suitably accessible and spacious to facilitate a student-centred approach, and to accommodate workshops, small group settings, areas for autonomous work, self-directed

study, and practical work. Classrooms must be adaptable for various types of learning. Specialist information & communication technology (ICT) must be available in every classroom, and not just in a specialist room.

### **Framework for Junior Cycle**

School design should support the implementation of the Framework for Junior Cycle. This framework will enable post-primary schools to provide a quality, inclusive and relevant education with improved learning outcomes for all students, including those with special educational needs. Eight principles underpin the Framework for Junior Cycle:

- Quality
- Well-being
- Creativity and Innovation
- Choice and Flexibility
- Engagement and Participation
- Inclusive-education
- Continuity and Development
- Learning to Learn.

These principles will inform the planning, development and implementation of Junior Cycle Programmes in all schools. School design must support these principles through flexibility in how learning takes place; while encouraging creativity on the part of students and teachers; and supporting the well-being and inclusive of all students in their shared learning environment.

The learning at the core of Junior Cycle is described in Twenty-Four Statements of Learning. These statements describe what students should know, understand, value, and be able to do at the end of Junior Cycle, having fully engaged with and participated in the Junior Cycle programme of their school. The framework outlines eight key skills required for successful learning by students across the curriculum, and beyond school with continued learning.

- Literacy and Numeracy Proficiency
- Managing Myself
- Staying Well
- Communicating
- Being Creative
- Working with Others
- Managing Information
- Thinking

“Literacy and Numeracy Proficiency”, which includes digital literacy is utterly fundamental to a student’s development right across the curriculum and in the other key skill areas.

The school learning environment and architecture can successfully facilitate students in developing these skills providing opportunity for individual and group learning in comfortable and well-serviced accommodation.

### **Pedagogical Imperatives**

School design should enable students to learn in diverse ways including through:

- Autonomous study
- Pair and group work
- Debate
- Demonstration and communication of what learned
- Cross-disciplinary learning

- Active, hands-on learning
- Students with special needs catered for in an integrated environment

### Spatial Impacts on Teaching

The design of teaching spaces stimulates and fosters improved teaching. The principles identified include:

- Flexibility
- Collaboration/Cooperation
- Active learning
- Differentiation
- Proximity of student and teacher
- Communication
- Comfort

## 2.2 DESIGN GUIDANCE SUITE

- In this document, [SDG 02-03 Post-Primary School Design Guide](#) the specific design requirements and room inter-relationships applicable to the design of post-primary schools are described.
- This document should be read in conjunction with other relevant design Technical Guidance Documents. Collectively, these form a Design Guidance Suite – a design tool-kit to inform School Authorities\*, School Managers and Design Teams alike. This tool-kit is also a reference used in the evaluation of design submissions. This ensures standards are applied fairly across all schools in the State. Furthermore, these standards and requirements are applied to all school works contracts: re-fitting, refurbishments, alterations, building-fabric replacement, and not solely to new-build and extensions.

*[\* In the case of Community and Comprehensive Schools, the Minister for Education is the school authority.]*

- The full suite of [DoE design guidance documents for Primary and Post-primary Schools](#) is available on the [DoE website](#).
- This latest suite replaces all previous DoE Design Guide, both Primary and Post Primary.
- This suite of design guidance comprising TGD documents along with the DoE [Post-Primary Room Layouts](#) is intended to assist in the proper planning and design of buildings; while also in responding to the educational needs of a particular school as determined in the individual Brief Formulation Report.
- The DoE [Post-Primary Room Layouts](#) referred to in the above are available on the [DoE website in Autocad, 3D Revit and PDF formats](#).
- These guidelines and the other relevant documents in the Design Guidance Suite should be read in conjunction with:
  - The Brief/Brief Formulation Report (BFR), and associated Schedule(s) of Accommodation. This is outlined below in: 3. PROJECT BRIEF.
  - The DoE Design Team Procedures (DTP) and associated Practice Notes, available on the [DoE website](#).

- The full suite of DoE design guidance documents for Primary and Post-primary schools, available on the [DoE website](#).
  - Frequent checking the Department's website for notices, updates, and for latest-versions of guidance and drawings
- h. In applying these guidelines to projects, school authorities and Design Teams will;
- be obliged to comply fully with the current DoE [Design Team Procedures](#), [Technical Guidance Documents](#),
  - be obliged to comply fully with other guidance issued by the DoE, except as stated in **2.4 Application of TGDs, Room Layouts, Brief & DTPs (f)** below.

### 2.3 DESIGN TEAM PROCEDURES (DTP)

- a. The DoE [DTP](#) documents set out the scope of service for all Consultants individually and collectively, and for all construction projects. They state the requirements and principles for each stage throughout the design, and construction processes. They start with Preliminary Design-Stage 1, and proceed through the design stages, and include satisfying the statutory requirements of Planning and Building Regulation compliance. Public Procurement compliance is mandatory in preparing Tender Documents, inviting and implementing a Tender Competition, and processing the Tender Outcome. The DoE Procedures also govern the management of (Construction) Works Contracts, and extending to effecting the Works Contract Final Account.
- b. The [DTPs](#) apply to all construction projects funded in part or in total by the DoE unless otherwise stated. For small-scale devolved projects Design Teams should refer to DoE [TGD-007](#).

### 2.4 APPLICATION OF TGDS, ROOM LAYOUTS, BRIEF & DTPs

- c. This SDG 02-03 Post-Primary School Design Guide (this document) together with [TGD-020](#) General Design Guide for Schools and [TGD-021](#) Construction Standards for Schools applies to all post-primary construction projects funded in part or in total by the DoE unless otherwise directed by the DoE in writing. This application applies where a decision to commence architectural design and planning has been confirmed in writing by the DoE Planning & Building Unit (PBU).
- d. The scope of the building project will be the Schedule(s) of Accommodation and other briefing instructions, such as a Brief Formulation Report as agreed between the School authority and the PBU.
- e. These guidelines and all associated documents in the suite of DoE [Design Guidance](#) and [TGDs](#) should be applied in full where it is proposed to construct a new school.
- f. In the case of existing school buildings, where an extension, conversion or renovation is proposed, a flexible pragmatic approach will be required. This is outlined in the project specific Brief Formulation Report and Schedule of Future-Use of Existing Accommodation issued by the PBU. However, it must be noted the dimensions and areas stated in this document and the DoE [Post Primary Room Layouts](#) will apply in full to the new build portion of all projects.
- g. The dimensions, areas, and room designation in the existing building will be retained except where the PBU specifies otherwise (based on educational need). In existing buildings, the room dimensions, and areas will be as specified in the brief Schedule of Future-Use of Existing Accommodation and in the Brief Formulation Report.

## 2.5 FURTHER INFORMATION

- a. This document and all other [DoE Guidance Documents](#) mentioned above are available on the DoE web-site at: [www.education.ie](http://www.education.ie).

*Always check the [Department's web site](#) for the most up-to-date version.*

- b. For further advice on these guidelines or any other matters relating to this document, please contact:

Department of Education,  
Planning & Building Unit,  
Portlaoise Road,  
Tullamore,  
Co. Offaly R35 Y2N5  
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## 3. PROJECT BRIEF

### 3.1 BRIEF

Design Projects should still adhere to the current Room Layouts and Guidelines where no extension, or additional accommodation is expected, such as when existing buildings are being adapted, altered and modified. The Brief for such projects might include a **Schedule of Future Use of Existing Accommodation** with existing room dimensions, ceiling heights and areas, and the intended Room Layouts to be used. A provisional **Schedule of Essential Remedial Works** applicable to that project only (see also DoE [DTP](#)) might be included.

Each Design Project where there will be a new building will have an agreed written Brief setting out the scope and extent of works. Every brief will comprise (where applicable):

- a. A **Schedule of Overall Accommodation** describing the total floor area, and the extent and range of accommodation appropriate to the school. This also identifies requisite external spaces as appropriate (technology yards, hard-surface play areas, soft play areas, sensory gardens, car parking). In the case of an entire all-new school building, and no existing building is involved (apart from demolition) this would be the only schedule.
- b. A **Schedule of Future Use of Existing Accommodation** with existing room dimensions, ceiling heights and floor area. This will identify necessary interventions, alterations and refurbishments. Typically, it might indicate combining multiple existing spaces to form a new room layout.
- c. A **Schedule of Residual (New Build) Accommodation** describing new-build extension(s) and external works (yards, ball courts, car parking).
- d. A **Cost Limit per square metre** for New-Build.
- e. A **Brief Formulation Report (BFR)** reflecting size and complexity of project, will be included. This narrative document further describes the Brief.

For Post-Primary School projects, the brief is determined by the PBU in agreement with the relevant School Management Authorities as follows:

- f. Forward Planning Section and the Schools Capital Appraisal Section (SCAS) of the Planning & Building Unit (PBU) first determine the Long-Term Projected Enrolments (LTPE) for the school. This is a target number of pupils which the school must accommodate.
- g. An Educational Worksheet (EWS) questionnaire, based on this LTPE, is issued to the School Management Authorities for completion. The EWS should be viewed as an integral part of long-term planning, where the School presents its vision of its future curriculum with an enrolment equal to the LTPE. Any deliberation about the scope of subject-choice, and number of periods should be discussed with the assistance of an Educationalist (the appropriate senior inspector in the Department). It is completed in the form of a summary of a projected timetable. Factors that influence the school educational policy, and hence the completion of the EWS, include the following:
  - School Development Plan.
  - Curriculum Policy Objectives (subject-choice offered, and collaboration with

- neighbouring schools)
  - Projected Enrolment
  - Subject Choice
  - Type of Courses e.g.
    - o Transition Year Programme (TYP)
    - o Leaving Certificate (LC)
    - o Leaving Certificate Vocational Programme (LCVP)
    - o Leaving Certificate Applied (LCA) Programme
    - o Post Leaving Certificate (PLC)
  - Special Needs
  - Student/Teacher Ratio
  - Ex-Quota Teachers
  - Teacher Working Week
  - Length of School Week
  - Length of Class Period
  - Number of Class Periods per Day/Week
  - Indicative Class-Sizes for each Subject/Period
  - Timetabling Policy (Lunch-Break/Dining arrangements/Sport)
- h. An Educationalist determines a **Schedule of Overall Accommodation** based on the LTPE, the completed Educational Worksheets, and the Department's current Area Norms and Design Guide. This is a defined list of rooms, spaces, and floor areas that is applied in the construction of an All-New School. Importantly, the scope and numbers of specialist rooms and classrooms are determined, and becomes a "fixed list" item of the Brief.
- i. The PBU then applies this Schedule of Overall Accommodation to assess the Educational Suitability of Existing Accommodation, and prepares a Schedule of Future Use of Existing Accommodation identifying Alterations & Remedial Works (if applicable). This process identifies the shortfall/deficit in present accommodation. The suitability of existing specialist rooms is always assessed. The deficits in vertical and horizontal circulation might also be identified. The external yards, play space and parking are also considered. Generic standardised Schedules exist for various sizes of schools, e.g. 1,000 students, 750 students, 500 students, etc.
- j. This deficit in accommodation i.e.. the difference between the Schedule of Overall Accommodation and the Schedule of Future Use of Existing Accommodation is listed and compiled into the Schedule of Residual (New-Build) Accommodation and defines the Total Floor Area (area limit) of new build to be funded.
- k. The above schedules are issued to the school authority for comments/acceptance at appropriate times resulting in agreement of schedule/s between the School Authority and SCAS.
- l. The Schedule of Overall Accommodation, the Schedule of Future Use of Existing Accommodation, and if New-Build accommodation is deemed appropriate (occasionally, it is feasible to house all the accommodation requirement within the existing building), the Schedule of Residual Accommodation, along with the applicable Floor Area Limit and Cost Limit all form part of the Brief for the project.
- m. A Brief Formulation Report (BFR) will also be included in the Brief. The BFR will indicate a Master Plan and design approach to be considered. This would be a Design Option that must be developed by the Design Team.

- n. The Project Brief, setting out the scope of works, must be agreed in writing between the School Authority and the DoE. The method of procuring the project is determined by the Department.

## 4. POST-PRIMARY AREA NORMS

### 4.1 ROOMS AND SPACES

- a. The entire school is a place of learning, and learning for all. In a school building however, spaces may be categorised, or more formerly identified as: Teaching, Administrative, Ancillary, Multi-Use/Physical Education Hall, Physical Education (PE) and External. The collection of spaces should be integrated rather than fractionated into zones. The layout-design should read as a single form and not compartmentalised into separate departments. Further detail on each category is given below.

### 4.2 TEACHING SPACES

- a. Individually, the school's number and type of teaching spaces will be based on the Educational Worksheet requirements. Consequently, for similar pupil numbers, the Schedule of Overall Accommodation can vary from school to school. However, as school-size approaches 1,000-pupils the schedules will be standardised; this is because the full scope of subject-choice can be offered. The full range of possible teaching spaces is listed below:

Layout No.	Room Description	Student Numbers	Dimension {m} (Depth x Width)	Area {m <sup>3</sup> }
1	General Classroom	30	7.65 x 7.65	58.6
2	2 x General Classroom interconnected	60	2 x (7.65 x 7.65)	117.2
3	3 x General Classroom interconnected	90	3 x (7.65 x 7.65)	175.8
4	General Classroom (20 Students)	20	7.65 x 5.03	38.5
5	Multimedia	30	7.65 x 11.58	88.6
6	Design & Communication Graphics	30	7.65 x 11.58	88.6
7	Graphics Room	30	7.65 x 15.5	118.6
8	Science Laboratory	24	7.65 x 11.58	88.6
9	Science Preparation Room	-	7.65 x 5	38.5
10	Music	30	7.65 x 11.58	88.6
11	Art Room	30	7.65 x 15.5	118.6
12	Home Economics Room	24	7.65 x 15.5	118.6
13	Textiles	30	7.65 x 11.58	88.6
14	Construction Studies & Wood Technology Room	24	7.65 x 19.45	149
15	Engineering Room	24	7.65 x 19.45	149
16	Technology	24	7.65 x 19.45	149
17	Wood Machining and Preparation	-	7.65 x 7.65	58.6
	Physical Education Lab	30	Not fixed	130
	Library	-	Not fixed	178.9
	Meditation	-	Not fixed	28.4

### 4.3 ADMINISTRATIVE SPACES

The range of possible administrative spaces is listed below. The actual schedule of spaces and their size will depend on the particular project.

Room Description (dimensions not fixed)	Area (m <sup>2</sup> )
General Office	28.4
Photocopy	6
Principal's Office	18
Deputy's Office	15
Guidance/Pastoral Office /Special Education Tuition/ First-Aid/ Caretaker's Room	15
Meeting Room	28.4
Staff Room – social & work areas - for 1,000 student school – pro-rata dependent on staff numbers	178.9

#### 4.4 ANCILLARY SPACES

Ancillary Spaces is an umbrella-term to describe spaces that service the main functions of the building. Those areas that are still accessible to students will also contribute to the learning experience. Accordingly, their design should be well-considered. By far, the circulation area is the largest and most significant space; and its design will impose a form on the building. They are identified as follows:

Room Description (dimensions not fixed)	Area (m <sup>2</sup> )
Project Storage for Art & Technologies	*
General Storage	*
General Purpose / Dining	*
Counter Area / Queuing / Access	*
Servery Kitchenette / Store & Catering / Staff Changing / WC	*
GP Room Store	*
Student Social Areas at rate of 0.16m <sup>2</sup> per student	*
*Horizontal and vertical circulation space included lifts	*
Lockers at rate of 0.313m <sup>2</sup> per student	*
Visitors' Toilets	*
Staff Toilets	*
Student Toilets	*
Date Communications Centre	*
Heating Centre Plant Room	*
Main Electrical Switchgear Room	*
Water Storage Rooms (where applicable)	*

\*Areas to be determined by Planning & Building Unit in Schedule of Accommodation.

#### 4.5 MULTI-USE & PHYSICAL EDUCATION SPACES

The range of Multi-Use and Physical Education (PE) spaces are listed below. The actual schedule of spaces will depend on the particular project. These should be integral with the rest of the school. However, with severely constricted sites, where this is not practicable the block can be de-coupled.

Room Description	Dimension {m} (Depth x Width)	Area (m <sup>2</sup> )
Smaller Multi-Use/Physical Education Hall – Court Size 24m x 13m (200 to 449 students)	15.6 x 26	406
Larger Multi-Use/Physical Education Hall – Court Size 28m x 15m (450 + students)	18 x 33	594
Small Multi-Use/Physical Education Hall Equipment Stores	2 No. x 20m <sup>2</sup>	40
Large Multi-Use/Physical Education Hall Equipment Stores	3 No. x 20m <sup>2</sup>	60
PE Teacher’s Control Room (vision panel to Multi Use / Multi-Use/Physical Education Hall)	Not fixed	9
Tutor-use Changing Room (UA WC, WHB, & Shower)	Not fixed	11
Changing Suites (including WC’s WHB & Showers)	2 No. x 40m <sup>2</sup>	80
Physical Education Lab	Not fixed	130
UA WC, WHB, & Shower	Not fixed	11
General & Cleaners’ Store for Multi-Use/Physical Education Hall	2 No. x 8m <sup>2</sup>	16

### 4.6 EXTERNAL SPACES

The range of external spaces and sizes are as follows. The actual requirements may depend on the particular project:

#### COVERED AREAS, STORE AND SECURE YARD

Type of Space	Dimension {m} (Depth x Width)	Area (m <sup>2</sup> )
External Secure Store (materials for Technologies)	10 x 5	50
Secure Covered Area for Construction Studies	6 x 5	30
Secure Yard with durable cast-concrete apron		Min 50
Covered Bicycle Shelter		-

#### CAR PARKING (minimum requirements)

1 per full time staff member + 3 per 100 pupils (For guests/visitors etc. Provision is not made for student-parking). Total includes two or more spaces for the disabled.
Where appropriate, hard-standing area for buses/coaches can be provided
Where required, set-down and turning-areas are provided

Subject to policy of Local Authority Development Plans, particularly in urban areas.

#### OUTDOOR LEARNING SPACES

External hard-surface play area is an integral part of the school, and is considered learning-space. Where feasible and practicable, these level, tarmacadam-type spaces should be formatted in multiple Ball Courts. A pragmatic approach must be taken with sloping/undulating sites where multiple Ball Courts might not be feasible. Similarly, all play areas might not be fully universally-accessible. Exaggerated level-changes and retaining walls are best avoided where possible. For safety reasons and if practicable, define separate play areas/zones for juniors and seniors, and pupils with special educational needs.

**OVERALL HARDSTANDING AREA per Pupil is listed below;**

Pupils	Number	Total Area (m <sup>2</sup> )
Less than 250	2	1080
250 - 349	3	1530
350 - 499	4	2040
500 - 799	5	2550
800 +	6	3060

On restricted urban sites alternative solutions may be necessary subject to agreement with the Department's Planning & Building Unit.

**SOFT PLAY AREAS**

These provisions are only by specific-agreement; generally, they are not part of scheduled provision on the works contract. However, they can be incorporated where external-funding is secured and approved. The Sensory Garden may be funded by specific approval.

Landscaped & Lawn Grass Areas	Playing Area (m x m)
Sensory Garden associated with Special Education Provision	
Gaelic Games	(130 to 145) x (80 to 90)
Soccer	(90 to 120) x (45 to 90)
Hockey	91.44 x 54.86
Rugby	144 x 69 (Playing + in-goal areas)

## 5. PLANNING A POST-PRIMARY SCHOOL

### 5.1 INTRODUCTION

- a. The full suite of [DoE design guidance documents for Post-primary schools](#) (includes this SDG-02-03 guidance document), together with Schedules of Accommodation and any Brief Formulation Report, or other briefing document, should be used as a starting point for developing a design specific to the school.
- b. The [Schedule of Overall Accommodation](#), [Schedule of Future Use of Existing Accommodation](#) and [Schedule of Residual \(New Build\) Accommodation](#) (extensions to existing) list the accommodation to be provided (refer to [Section 3.0 The Brief](#) above for description of how these schedules are determined). The schedules are the primary briefing documents.
- c. DoE [TGD-020 General Design Guide for Schools](#) describes the general design principles for schools (both Primary and Post-Primary) including the Design Philosophy, the Built Environment, Health & Safety, Building Location & Orientation, Universal Access, Security, External Circulation and the general principles applying to internal layout.
- d. This document (SDG 02-03) provides detailed information on the spaces required (both internal and external), their area, height and any special requirements applicable to those spaces

### 5.2 THE SCHOOL TIME TABLE

- a. In agreement with the education partners a standardised school year is implemented in Irish post primary schools. The minimum number of teaching days per school year is 167 full school days. Generally, schools close for summer vacation from early June, and are closed for the complete months of July and most of August. Schools also close for two weeks during both Christmas and Easter. There are two shorter mid-term breaks of up to five working days at Halloween and in February.
- b. A full school day comprises a period of not less than six hours and forty-five minutes.
- c. A typical school day consists of 6 hours of instruction.
- d. The minimum number of instruction hours per week is 28 hours.
- e. In order to meet the needs of the communities which they serve, schools can, with some flexibility, determine the start time within their daily timetable while maintaining the integrity of the school day.
- f. Many schools have chosen to finish early on one day per week. Typically, this involves closing at lunch time on that day. This is permissible as long as the 28 hours of instruction time per week is adhered to.
- g. A possible version of a full day in one school, for example, may be 9.00am to 3.45pm, while others may be 8.45am to 3.30pm.

### 5.3 OVERALL DEVELOPMENT

- a. The overall development should maximise the potential of the site in relation to:

- i. Site access, with the main school entrance doors being visible for clear way-finding, and being easily reachable from the point of site entry.
- ii. Location, positioning and orientation of the building.
- iii. Allowance for expansion by way of an extension (at least 33%) to the school, unless where otherwise confirmed by PBU.
- iv. Location of a Sensory Garden if included in the Brief/Schedules.
- v. Location and extent of vehicular access, set-down, yards and service delivery routes, and parking. Fire brigade vehicle access to be building perimeter.
- vi. The layout of the school building and site layout should be carefully considered in relation to the maintenance requirements post-handover both externally and internally. Adequate space is to be allowed for mobile elevated work platforms (MEWP) access to the perimeter of the building and, where this is not possible, alternative methods for the maintenance of the façade and roofs may be considered. Dropped kerbs are to be considered from parking areas to allow for future maintenance access. Safe and secure maintenance access is to be provided to all roof areas in accordance with the requirements of [DoE TGD-021-7](#) (Minimum Performance Standards of Roof Materials and Finishes, 1st Edition April 2018).
- vii. Allowance for the potential provision of \*grass/all-weather playing pitches where site areas and configuration permits.
- viii. Locations of the hard surface play areas/Ball Courts, and any \*grass/all-weather playing pitches in relation to Multi-Use/Physical Education Hall changing facilities.

[\*The provision of grass/all-weather playing pitches is only by specific-agreement; generally, they are not part of scheduled provision on the works contract. However, they can be incorporated where external-funding is secured and approved.]

## 5.4 CONSTRUCTION PROGRAMME

- a. Where construction work is being carried out on the same site as an operational school, or portion of that school, and such work is unavoidable, particular care should be taken to minimise disruption to the school operation and exam centres.
- b. The construction programme must also take account of the school timetable. Tasks that are likely to be disruptive should be programmed to be carried out outside school hours or during holidays.
- c. Refer also to [DoE TGD-020](#) General Design Guide for Schools (Primary & Post-primary) Section 5.0 Health and Safety, and to [DoE Design Team Procedures](#), Health and Safety Sections.

## 5.5 AREAS AND HEIGHTS

- a. The areas of all spaces in the [Schedules of Accommodation](#) are net areas, measured to the internal faces of the enclosing walls.

- b. The Total Floor Area (area limit) in the schedules is the “total of all enclosed floor space measured to the internal faces of the enclosing external walls” and corresponds with the National Standard Building Elements definition.
- c. Ceiling heights should be considered in the context of the size and function of the space and should take into account the physical environment within that space. 3.15m is the minimum finished floor to ceiling height for all teaching spaces, except where indicated differently in the room data sheets and room layouts, or as required for appropriate proportions of rooms.
- d. In larger assembly areas such as General-Purpose Room and Multi-Use/Physical Education Hall, the height should be in proportion to the size and take into account the function in particular natural ventilation, daylight requirements, and acoustic performance.

## 5.6 WALL TO FLOOR RATIO

- a. The wall-to-floor ratio is one measure of the cost efficiency of a building layout; the lower the wall-to-floor ratio the more cost efficient the building layout.
- b. Design Teams should balance the need to minimise the wall-to-floor ratio (or improved layout cost-effectiveness) with the educational, planning, environmental and design requirements as set out in this document and [DoE TGD-020](#) General Design Guide for Schools (Primary & Post Primary).

## 5.7 CATEGORIES OF SPACES

- a. Spaces can be broadly be described as Teaching spaces, Administrative spaces, and Ancillary spaces. Teaching spaces can, in turn, be categorised as general teaching spaces, specialist rooms (e.g. Science Room, Home Economics Room, etc.) and Multi-Use and PE spaces. The success and smooth-running of the school will depend, less on group-categorisation of space, and more on the interrelation and juxtaposition of all these spaces and functions. An efficient design will recognise the dynamic of class-changes and movement throughout the day; and the value of the social interaction that this affords. Student development and learning that takes place outside the classroom and between classes cannot be overvalued.
- b. The General-Purpose (GP) Area is the social heart of the school, and it should provide a focal point for the school community while at the same time enhancing general circulation by its relationship to the rest of the building.
- c. The following rooms/spaces are frequently used by parents/visitors/community and should be located so that they can be accessed without infringing on teaching areas and the general movement of students:
  - General Office
  - Principal’s Office
  - General Purpose (GP) Area
  - Multi-Use/Physical Education Hall
  - Meeting Room
  - Home School Community Liaison Facility (if provided for in Schedule of Accommodation as a standard General Classroom)
- d. Some administrative spaces may be grouped together (e.g. General Office, Meeting

Room, Principal's Office); but others such as the Deputy Principal's Office(s) and Pastoral Rooms should be dispersed throughout the school to assist in implementing passive supervision.

- e. Careful consideration should be given to suites - the grouping of rooms. Suites combining Specialist Rooms and General Classrooms can reduce unnecessary commuting distances and minimise congestion at each change of class. While, as a general principle, specialist teaching rooms of a particular type (e.g. Science Laboratories and Science Preparation Room, Home Economics Rooms, and Arts Rooms) should be paired and grouped, these individual groups should form suites by being interspersed with some general classrooms.
- f. WC Facilities should be distributed throughout the school so to allow ease of access and to minimise travel distances, while complying with statutory Disability Access Certificate (DAC) requirements.

## 5.8 CIRCULATION

- a. The design solution for the school should ensure ease of circulation, orientation and way-finding for students, staff and visitors.
- b. Irrespective of where the school is entered, the layout should be legible and easily assimilated, and it should be possible to reach any part of the school without encountering congestion or pinch-points.
- c. Schools typically operate either a 42-period week, each of 40-minute duration, or a 28-period week, each of 60-minute duration. Most schools operate a teacher-based system resulting in the movement of the majority of students every 40 or 60 minutes. Careful consideration must therefore be given to circulation routes and the location of General Purpose and Student Social Areas.
- d. The minimum clear, unobstructed-width of corridors shall be 2.4m. To ensure this, lockers located in the circulation areas must be fully recessed by 1.56m; accordingly, access space for lockers must not reduce the circulation unobstructed-widths.
- e. Refer to [Section 9.7 Circulation/Internal Divisions](#) below.

## 5.9 SIGNAGE & WAY-FINDING

- a. The whole school environment both externally and internally should have appropriate signage as an aid to wayfinding for all persons regardless of ability. Signs should be large, clear and well positioned. Refer to the National Disability Authority's booklet "Building for Everyone Book 4" and to the NCBI, the national sight loss agency, for further guidance.
- b. Refer to [TGD – 020 General Design Guide for Schools \(Primary & Post-Primary\) Section 10 - School Signage](#). The Design Team shall ensure that all signage provided is in compliance with the requirements of the Official Languages Act 2003.

## 5.10 ROOM LAYOUTS

- a. Standard Room Layouts for most spaces are available on the DoE website at following link at School Building & Design Design-Guidance Room Layouts: <https://www.education.ie/en/School-Design/Design-Guidance/Room-Layouts.html>

- b. Specialist Rooms require some fixed furniture; and the specifications are available from the DoE PBU, and on the [DoE website](#). For new-build schools and extensions, the standard [DoE Room Layouts](#) where available, must be used.
- c. In the case of alterations to existing rooms as identified in the **Schedule of Future Use of Existing**, the layouts should normally be as close to the Standard Room Layouts in as far as is practicable.
- d. Where a DoE Standard Room Layout is not available, and where room dimensions are not stated, the width to length ratio shall provide comfortable and flexible usage of the space. Where there are specific requirements for Post Leaving Certificate (PLC) Rooms, as indicated in the **Schedules of Accommodation**, then layouts should be developed by the School Authority and the Design Team, and submitted for the approval of the PBU at an early Stage of the design process. These layouts should fully take into account any fixed furniture needs.

## 5.11 STAIRS DESIGN

- a. Projecting stairs without enclosed space below will cause a hazard for the visually impaired, and where the soffit is 2m or less above the floor level it should be enclosed by low level guarding including cane detection or a permanent barrier. Permanent enclosure is often the simplest solution, remembering that any sealed voids should be vented.

## 5.12 FLOOR FINISHES

- a. The design shall ensure that all floor finishes conform to all relevant Irish, British and European standards, including:
  - BS 8203 – ‘Code of practice for installation of resilient floor coverings’
  - 2EN 14041 – ‘Resilient, textile and laminate floor coverings - Essential characteristics’
  - BS 8300-2
- b. Where there is under-floor heating provided, floor finishes shall be able to withstand the effects of temperature up to 27°C.
- c. Where vinyl, lino or other sheet material is to be used, the under surface to which the sheet is to be laid shall be free of surface irregularities to standard SR1 in BS 8203. 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.
- d. The designer 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:
  - 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 1 shall have no dirt traps and shall incorporate coved skirting.
  - Smoothness – with minimal abrasion characteristics against the skin.
  - 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 SDG 02-05-03.
- Impact resistance.
  - Suitability for mobility equipment users and others with a physical disability or sensory impairment.
  - Colour and pattern – in terms of maintenance, way-finding and sensitivity.
  - Having a low volatile organic compounds (VOC) finish.
- e. Floor finishes shall be provided for each space as indicated in Table 1, unless (by exception) an alternative is required as a School-Specific brief. Particular characteristics in Table 1 include;
- Slip resistance, ensuring minimal tripping hazards.
  - Chemical and heat resistance.
  - Static resistance, for example in the Multimedia room.
  - Area elastic performance of A3 or A4 EN 14904, in sports or activity spaces.
  - Durability, to EN ISO 10874 'Resilient, textile and laminate floor coverings – Classification'.
- f. Where timber floor finishes are provided, they shall be finished with a 2-pack polyurethane flexible lacquer/sealant (no acrylic mixes). The court markings and lines shall match the slip resistance of the timber floor finish.
- g. In Table 1, there are three levels of water resistance required, defined as follows;
- Water resistance 1 – to withstand a reasonable degree of spillage and dampness from footwear etc.
  - Water resistance 2 – to allow frequent spillage or wetting without damage, staining or absorption. Requirements for resilience covered in BS EN 661 'Resilient floor coverings. Determination of the spreading of water'.
  - Water resistance 3 - to allow regular wetting without damage, staining or absorption. Requirements for spreading of water covered in BS EN 661 'Resilient floor coverings. Determination of the spreading of water', and BS EN 13553 'Resilient floor coverings. Polyvinyl chloride floor coverings for use in special wet areas'.
- h. When a mixed floor finish is required in Table 1 (using letter 'm' in table 1) the level of water resistance applies to the larger area, while the lino, rubber or vinyl finish around the sink and worktop would be water resistance 2 above.
- i. In Table 1, there are two levels of hygiene performance required. Where a high level is specified it shall be readily cleanable and not hold smells.
- j. When a carpet mat is required in Table 1 (using letter 'i') the designer shall specify the appropriate sized mat with a weighted and ramped edging in order to minimise trip hazards.
- k. For ramps and sloping surfaces, the sloping surface needs to have a higher coefficient of friction than an equivalent level surface. This can be approximated by expressing the gradient as a percentage and adding this to the SRV. For example, for a 1:20 slope, the gradient is 5% and the required SRV is increased by 5.

**Table 1 (Part 1)**

EN 14041 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	EN 14041 - Electrostatic rating	Heat Resistance	Area elastic (A3) sports floor EN 14904	EN ISO 10874: Flooring Use Classification (durability)
Floor Finishes	Description	Possible Materials						
Type F1	General	carpet, and/or lino, rubber or vinyl	No	No	Yes	No	N/A	Commercial 34
Type F2	Stores	lino, rubber, resin, or vinyl	R10	No	Yes	No	N/A	Commercial 34
Type F3	Non-slip	non-slip lino, resin, rubber, or vinyl	R10	SRV 36 + 20 microns	Yes	No	N/A	Commercial 34
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	Min. SVR 36	Yes	Yes	N/A	Commercial 34 for rubber & 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, or vinyl	R10	Min. SVR 36	No	No	N/A	Commercial 34
Type F8	Kitchen	heat resistant ceramic, resin, rubber, or vinyl	R11	Min. SVR 36	No	Yes	N/A	Commercial 34
Type F9	Entrance	barrier matting	N/A	N/A	No	No	N/A	Commercial 34

**Table 1 (Part 2)**

Key to codes			Water Resistance 1	Water Resistance 2	Water Resistance 3	Chemical Resistance	Hygiene Performance	Specific finishes requirement incl. part-covering, colour or pattern
Floor Finishes	Description	Area						
First digit: type, durability, slip resistance Second digit: water resistance 1-3 & chemical resistance								
Type F1.1	General	general areas not mentioned below	Yes	No	No	No	Moderate	
Type F1.1h	Special general	areas for students with special educational needs	Yes	No	No	No	High	suitable for wheelchairs, no transition strips.
Type F1.1m	Mixed general	staff rooms with sinks	Yes	No	No	No	Moderate	non-slip lino, rubber or vinyl around sinks etc.
Type F2.1	Stores	stores, DCC / switch rooms	Yes	No	No	No	Moderate	
Type F3.4	Chemical resistant non-slip	light practical, science preparation, cleaners stores	Yes	Yes	No	Yes	Moderate	suitable for heavy equipment and furniture on castors
Type F3.4h	Hygienic non-slip	home economics room, first aid room	Yes	Yes	No	Yes	High	suitable for heavy equipment and furniture on castors
Type F4.2h	Dining	dining areas	Yes	Yes	No	No	High	
Type F5.4	Heavy practical	construction studies, engineering, art room	Yes	Yes	No	Yes	Moderate	suitable for heavy equipment and furniture on castors
Type F6.1	Multi-purpose sport	multi-purpose hall, Physical Education Lab, music room	Yes	Yes	No	No	Moderate	
Type F7.3h	Wet area	changing rooms, showers, toilets	Yes	Yes	Yes	Yes	High	barefoot areas shall be barefoot slip resistant to R10/ Class B
Type F8.4h	Kitchen	kitchenette	Yes	Yes	No	Yes	High	
Type F9.2	Entrance	entrance lobbies	Yes	Yes	No	No	Moderate	barrier matting with aluminium inserts

## 6. ROOM DATA SHEETS

### 6.1 APPLICATION

- a. Room data sheets are provided in this document, in the sections following, for all Teaching Spaces, Ancillary Spaces and Multi-Use Physical Education Spaces.
- b. The general requirements listed at 6.3 below are applicable to all rooms, unless otherwise stated in the relevant data sheet.

### 6.2 SCHEDULE OF ROOM LAYOUTS

- a. Arising from research, inspections and detailed analysis of Post Occupancy Evaluations of existing schools, revised Schedules of Accommodation and Room Layouts were developed to reflect:
  - Ergonomically adequate space allowance.
  - Fully Disability Accessible Certificate (DAC) compliance.
  - Recognition of stacking-implications of spaces in typical multi-storey design.
  - Avoidance of deep-plan spaces, ensuring quality natural ventilation and daylight.
  - Improved natural and balanced day-lighting without glare throughout learning spaces.
  - Ergonomic comfort: light, heat, air-quality, acoustics and proximities.
- b. The re-configuration of accommodation achieves:
  - Safe use, accessible, and adequate storage.
  - Improved student-safety.
  - Flexibility and innovation in the use of space.
  - Every space being a learning space.
  - Classroom is module-unit for all other spaces.
  - Interlinked rooms.
  - Appropriately-sized Larger and Smaller Classrooms.
  - Rooms suitable for more than one purpose.
  - WiFi access to computer resources throughout the entire building.
  - Reduced distance for the “farthest-student” and the “display/teacher”.
  - Greater “openness and transparency” throughout the building.
  - Reduced, rationalised and simplified range of room-types.
  - More legible grouping and suites of rooms.
  - Modular facility to extend, alter, or convert rooms.
  - Improved ability to incorporate standard room layouts into many existing schools.
  - Improved systematic distribution of building services.

- c. The following [room layouts](#) are available in Revit, IFC, AutoCAD and PDF formats on the DoE website:

Layout No.	Room Name	Dimension {m} (Depth x Width)	Area (m <sup>2</sup> )
1	General Classroom (30 students)	7.65 x 7.65	58.6
2	2 x General Classrooms Interconnected (60 students)	2 x (7.65 x 7.65)	117.2*
3	3 x General Classrooms Interconnected (90 students)	3 x (7.65 x 7.65)	175.8*
4	General Classroom (20 students)	7.65 x 5.03	38.5
5	Multimedia Room	7.65 x 11.58	88.6
6	Design & Communication Graphics Room	7.65 x 11.58	88.6
7	Graphics Room	7.65 x 15.5	118.6
8	Science Laboratory	7.65 x 11.58	88.6
9	Science Preparation Room	7.65 x 5	38.5
10	Music Room	7.65 x 11.58	88.6
11	Art Room	7.65 x 15.5	118.6
12	Home Economics	7.65 x 15.5	118.6
13	Textiles Room	7.65 x 11.58	88.6
14	Construction Studies & Wood Technology Room	7.65 x 19.45	149
15	Engineering Room	7.65 x 19.45	149
16	Technology Room	7.65 x 19.45	149
17	Wood Machining and Preparation	7.65 x 7.65	58.6
18	Physical Education Lab (indicative only)	Not fixed	130
19	Library – (indicative only) size for 1,000 student school	Not fixed	179
20	Staff Room – (indicative only) size for 1,000 student school	Not fixed	179
21	Principal's Office (indicative only)	Not fixed	18
* when opening / interlinked, the dividing wall footprint floor area is additional.			

### 6.3 GENERAL REQUIREMENTS

#### DESIGN CONSIDERATIONS, WINDOWS

- Natural day-lighting should be optimised when designing rooms, to minimise the dependence on artificial lighting.
- Windows for teaching spaces should have a view of a horizontal vista, enhancing well-being.
- Good quality daylight distribution across the room is required with a 4.2% average day-lighting factor for each space. The emphasis is on an “even and balanced” light distribution throughout the space.
- Refer to [DoE TGD-020 General Design Guide for Schools \(Primary & Post-primary\)](#), Section 4.6 Natural Daylight and [TGD-031 Amendments to the M&E Building Services Guidelines](#), Section 3 Daylight Distribution.
- Orientation of spaces, and their position relative to access to the external environment must be considered in the planning of the school.

- f. Glare shall be avoided where practicable; or controlled by means of translucent roller blinds that minimise light reduction. These should be supplied and fitted as part of the construction works contract.
- g. Ventilation where possible should be natural ventilation by means of permanent wall vents and windows with opening sections. Vents should incorporate baffles for noise, wind and rain. Refer to [SDG-02-05-03 Acoustic Guide](#).
- h. The ventilation area provided shall exceed the current Department of Housing, Planning, Community & Local Government Building Regulations, [Part F Ventilation](#) and shall be designed to suit the class environment having regard to the high levels of occupancy generally.
- i. For further information on natural day-lighting and ventilation see also [DoE TGD-020 General Design Guide for Schools \(Primary and Post-primary\)](#), Sections 4.5 Natural Ventilation and Section 4.7 Natural Daylight, [TGD-031 Amendments to the M&E Building Services Guidelines](#), Section 4 Daylight Distribution, Section 5 Natural Ventilation & Overheating.
- j. Windows generally should be double glazed, and readily easy to clean, service and maintain.
- k. All spaces should have the benefit of high and low level natural ventilation from independently-controllable opening sections in windows in compliance with [DoE TGD-031 Amendments to the M&E Building Services Guidelines](#), Section 5 Natural Ventilation & Overheating.
- l. The position and size of opening window sashes must take into account ease of operation, natural ventilation requirements, and Health and Safety. Stays or restrictors should be used on all opening windows at low level. Refer also to [DoE TGD-021.1 Guidance on the Specification of Windows](#), Section 4.7 Openable Windows.
- m. The window design with respect to geometry and opening sections must be based on overheating calculations, which should take into account the air tightness and thermal performance standard. These calculations should factor the dimensions, volume, opening locations, and typical use occupancy levels.
- n. Adequate natural ventilation should be achievable without unwanted draughts.
- o. Doors should be easy to open and close. Care should be taken in the design of the door, frame, and opening mechanism to minimise the risk of collision and injury to fingers, etc.
- p. A glazed viewing-panel should be provided in the solid core door and the side panels serving teaching areas, offices and pastoral rooms off the corridor. For privacy, blinds may be required for viewing panels in sensitive Offices/Pastoral Rooms. As per Room Layouts, glazed screens are important for transparency between circulation and teaching spaces; and should be provided to aid supervision and safety.
- q. Specialist rooms with a high ICT content should be north facing to minimise glare and over-heating risk.

## ACOUSTICS

- r. Refer also to the [DoE SDG-02-05-03 Acoustic Performance in Schools](#) for performance standards on Indoor Ambient Noise Levels, Rain Noise and Airborne Sound Insulation between Spaces, Impact Sound Insulation of Floors and Reverberation in Various Spaces. Particular attention is drawn to high-volume spaces.

## FINISHES

- s. Floor finishes must safe, hard wearing and suitable for their intended use.
- t. Design Team members should consider the Health and Safety implications of the selected flooring (e.g. non-slip, etc.) and in particular the risks associated with junctions between surfaces with different slip resistances.
- u. Floor finishes will normally be a sheet material or anti-static contract carpet consistent with the room's use and Health & Safety considerations.
- v. Wall finishes generally should be durable, resistant to wear and easily cleaned.
- w. Refer also to [DoE TGD-021 Construction Standards for Schools](#).

## MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- x. Mechanical & Electrical Building Services Engineering including Information & Communication Technology (ICT) should be as outlined in [DoE TGD-003 Mechanical & Electrical Building Services Engineering Guidelines for Post Primary Schools](#), [TGD-005 Information & Communication Technology \(ICT\) Infrastructure Guidelines for Post Primary Schools](#), [TGD-031 Amendments to the M&E Building Services Engineering Guidelines](#), and on the DoE post-primary [Room Layouts](#).
- y. The supply and installation of data projectors/interactive white boards or LED screen is a matter for the School authority to deal with and as such is not part of the Building Contract. Where feasible the type of equipment to be used should be identified during design in order to ensure full and detailed co-ordination of associated fixed furniture and electrical services.

## FITTED FURNITURE

- z. Fixed Furniture and associated fittings are part of the main building contract. Refer to individual DoE Room Data Sheets, and the DoE [Room Layouts](#).
- aa. Sanitary fittings, traps, dilution pots, taps and other items, which are part of special room fittings, are deemed to be fixed furniture.

## LOOSE FURNITURE & EQUIPMENT

- ab. Refer to individual DoE Room Data Sheets and the DoE [Room Layouts](#).
- ac. [Loose Furniture and Equipment](#) is to be procured directly by the School authority, and is outside the Building Contract.
- ad. Heavy items of equipment, e.g. lathes, kilns, have specific requirements in relation to installation and power supply. Co-ordination is required with the School Authority,

as it is essential that the specific requirements of such individual items are fully known before the services are installed.

## 7. ROOM DATA SHEETS (TEACHING SPACES)

### INTRODUCTION TO THE TECHNOLOGY SUITE OF SUBJECTS

Each subject of the technology suite offers the student different experiences which contribute towards their education in technology education. As a result, preparing students for learning in the technology subjects is not just about teaching towards the technology but towards the skills that are fundamental to the technology subjects and are transferable into other areas of their learning. Skills that encourage the student to problem-solve through creation, innovation, communication, collaboration and exploration, all of which are developed in an active learning environment where students can advance their ideas from conception to realisation. This practical subjects also supports student wellbeing which illustrates the positivity of these subjects.

Technology suite of subjects in Post Primary	
Junior Cycle Subject	Senior Cycle Subject
Wood Technology	Construction Studies
Engineering	Engineering
Applied Technology	Technology
Graphics	Design and Communication Graphics (DCG)
Technologies Preparation Room	

### 7.1 GENERAL CLASSROOM (30 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
1	7.65 x 7.65	58.6	3.15

#### DESIGN CONSIDERATIONS

- a. Learning is inseparable from the learning environment. Good school design fosters a safe school environment and positive social interaction for students and teachers. School design must adapt to modern changing needs. New learning methods, such as those promoted through Junior Cycle reform are reshaping the design of schools. School buildings must be open, transparent, adaptable and flexible. Classrooms and specialist rooms must be accessible and spacious to facilitate a student-centred approach, and to accommodate small group settings, workshops, areas for autonomous work, self-directed study and practical work. Classrooms must be adaptable for various types of learning, and specialist ICT technology must be available in every classroom, and not just in a computer room.
- b. Architectural flexibility will make a major contribution to the longevity of any new school building. A flexibly designed school enables groups of different sizes to migrate fluently from space to space with minimal disruption. A truly flexible design is capable of predicting the needs of the future and adapting to meet changing functional requirements. The classrooms should be readily adaptable to meet the demands of new modes of learning and teaching.
- c. One or more General Classrooms should be associated with each of the specialist teaching spaces. General classrooms should be spread around the building and not overly clustered.



## 7.2 HOME SCHOOL COMMUNITY LIAISON CLASSROOM (24 PERSONS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
1	7.65 x 7.65	58.6	3.15

### DESIGN CONSIDERATIONS

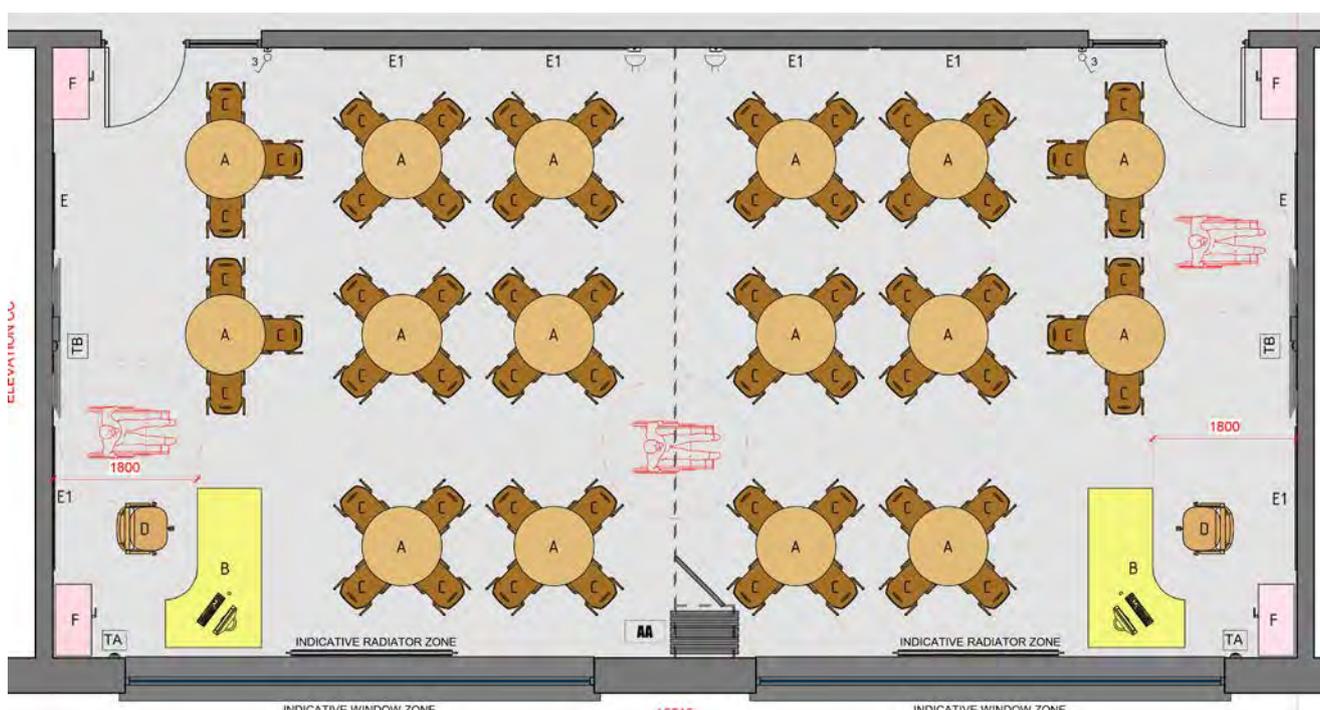
- a. It should be discreetly located so that it is accessed minimizing the need to pass by teaching areas (i.e. close to the main or other entrance).
- b. It will also function as a Standard General Classroom.

### 7.3 INTERCONNECTING GENERAL CLASSROOMS (X2) (60 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
2	2 x (7.65 x 7.65)	117.2	3.15

#### DESIGN CONSIDERATIONS

- These are two interconnected large classrooms capable of seating a total of 60 students.
- A folding partition should be provided between the two rooms, providing reasonable acoustic separation (minimum 45dB), thus allowing the two classrooms to operate separately. Refer to SDG-02-05-03 Acoustic Guide.
- Interconnected Rooms should be located close to the main entrance of the school to facilitate parent and community uses.
- Orientation must be considered in the planning. Glare must be avoided where practicable and controlled by means of translucent blinds.
- A minimum floor to ceiling height of 3.15m (e.g. Multiple of standard concrete block size) is required, taking into account an even distribution of natural light and natural ventilation.
- A 4.2% average Day-Lighting Factor at worktop-level is required across the whole floor area.

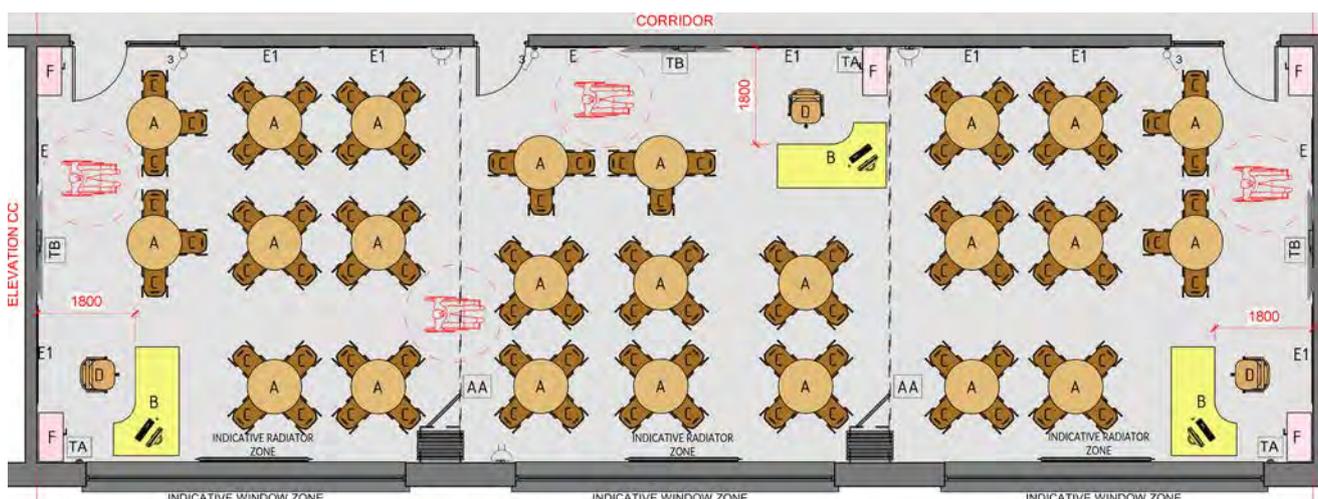


### 7.4 INTERCONNECTING GENERAL CLASSROOMS (X3) (90 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
3	7.65 x 23.35	175.8	3.15

#### DESIGN CONSIDERATIONS

- These are three interconnected classrooms capable of seating a total of 90 students.
- Two folding partitions should be provided between the three rooms, providing reasonable acoustic separation (minimum 45dB), thus allowing the three classrooms to operate separately. Refer to SDG-02-05-03 Acoustic Guide.
- Interconnected Rooms should be located close to the main entrance of the school to facilitate parent and community uses.
- Orientation of must be considered in the planning. Glare must be avoided where practicable and controlled by means of translucent blinds.
- A floor to ceiling height of 3.15m (e.g. Multiple of standard concrete block size) is required, taking into account an even distribution of natural light and natural ventilation.
- A 4.2% average Day-Lighting Factor at worktop-level is required across the whole floor area.

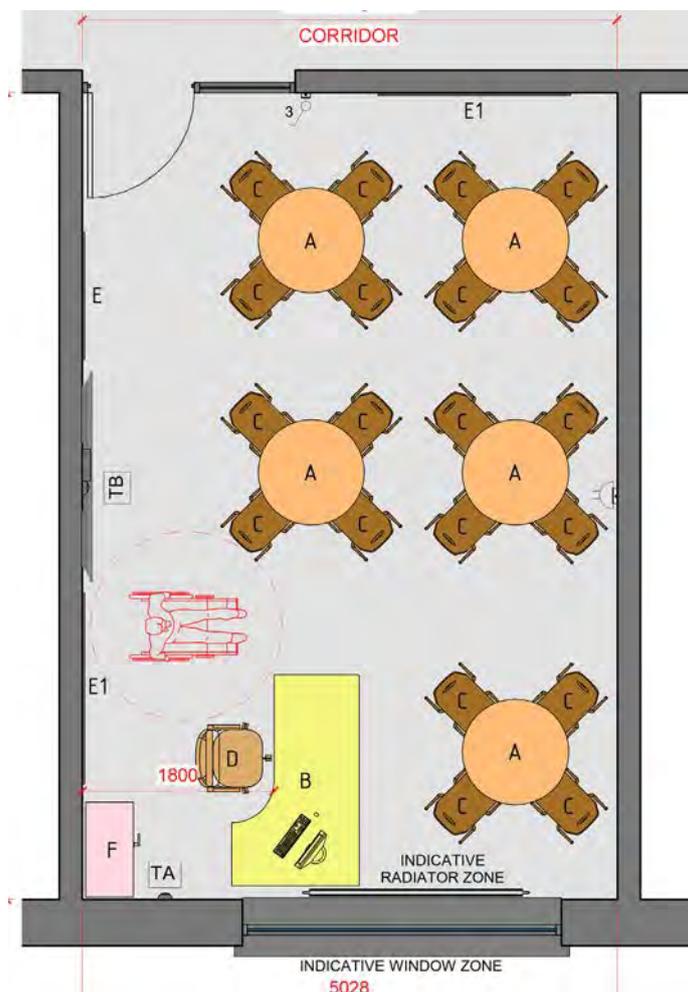


### 7.5 GENERAL CLASSROOMS (20 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
4	7.65 x 5.03	38.5	3.15

#### DESIGN CONSIDERATIONS

- a. The provision of smaller rooms offers a flexibility when timetabling for smaller group/class numbers. Research into timetables of schools with approximately 1,000 pupils indicates that there are in excess of 10 groups at any one time with 20 or fewer students. School principals surveyed are in agreement that the provision of 10 smaller rooms is a positive development. In schools with fewer students, the numbers of these 20-student classrooms will be pro-rata and in proportion to numbers of larger 30-student classrooms. This will be defined in Schedules of Accommodation.
- b. These smaller classrooms are used for the teaching of general subjects or the theoretical aspects of practical subjects. Often, these are optional subjects with a lower uptake compared to core subjects. These classrooms should be distributed throughout the building and should not be clustered together.



### 7.6 MULTIMEDIA ROOM (30 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
5	7.65 x 11.58	88.6	3.15

#### DESIGN CONSIDERATIONS

- a. Ideally the room should be north facing and contain a level of natural light without glare or solar gain, and should have an effective high level of natural ventilation.
- b. To avail of digital graphics programmes, this room might be located in proximity to the Art Room.
- c. The ceiling height must be 3.15m or higher.

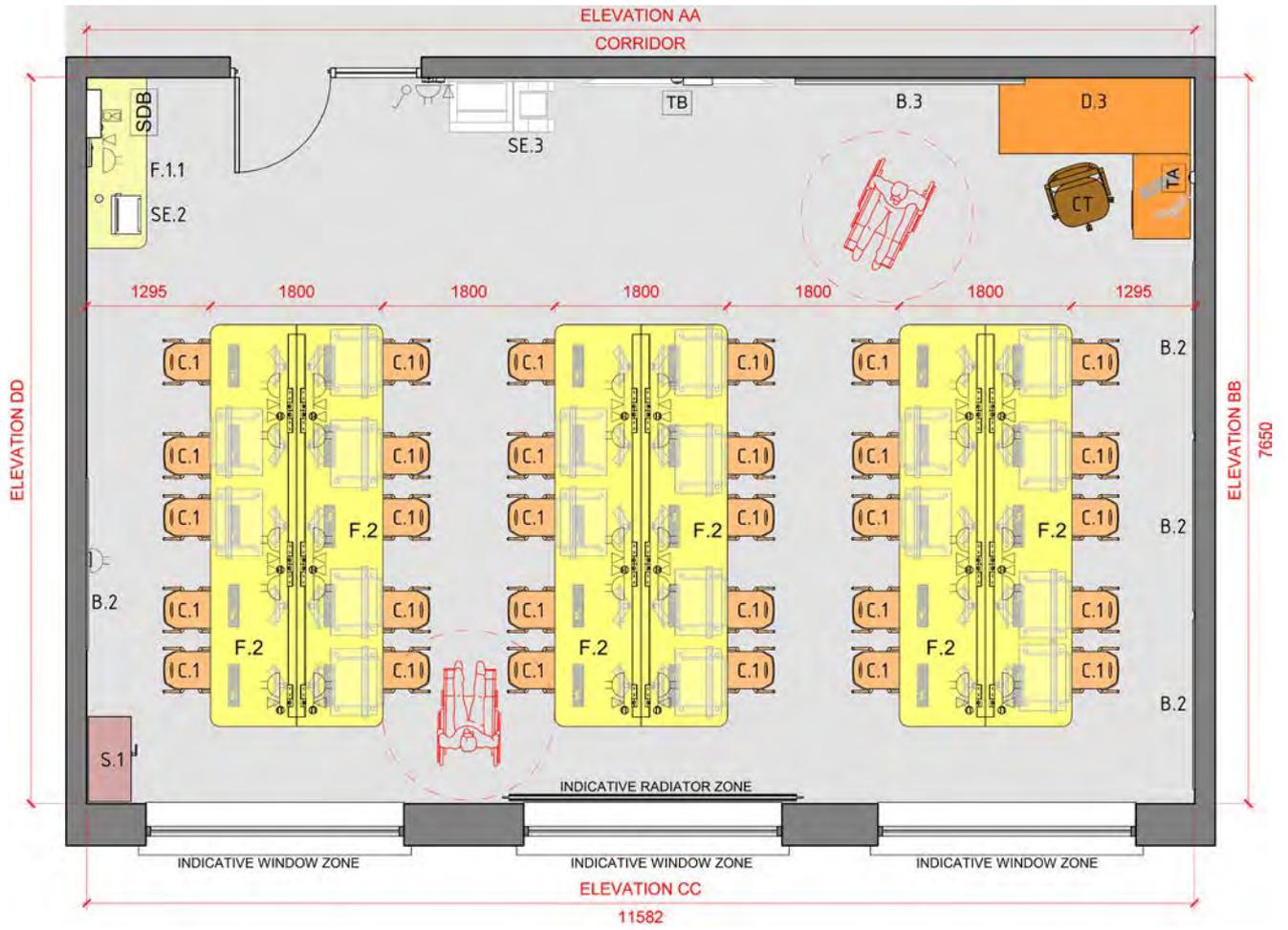


## 7.7 DESIGN AND COMMUNICATION GRAPHICS (30 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
6	7.65 x 11.58	88.6	3.15

### DESIGN CONSIDERATIONS

- a. This room should be located in proximity to the Construction Studies & Wood Technology, Engineering, and Technology Rooms to facilitate interchange of drawing equipment and other teaching resources between these spaces.
- b. Ideally the room should be north facing and contain a high level of natural light without glare or solar gain and should have an effective high level of natural ventilation.
- c. The ceiling height must be 3.15m or higher.
- d. Develop the student's creativity, spatial ability, and capacity to reason and communicate ideas through engagement with abstract and applied geometric problem-solving activities.
- e. Encourage the development of the cognitive and practical dexterity skills associated with graphical communication.
- f. Instil an appreciation of the role of graphics in the world around them.
- g. Equip all students to make judgements on the best mode through which to represent their ideas and solutions.
- h. Encourage the production of drawings that promotes the skills of communicating through graphics.
- i. Develop students cognitive and practical skills associated with modelling and graphical communication.



Design and Communication Graphics (DCG)

### 7.8 GRAPHICS ROOM

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
7	7.65 x 15.5	118.6	3.15

#### DESIGN CONSIDERATIONS

- This room should be located in proximity to the Construction Studies & Wood Technology, Engineering, and Technology Rooms to facilitate interchange of drawing equipment and other teaching resources between these spaces.
- Ideally the room should be north facing and contain a high level of natural light without glare or solar gain and should have an effective high level of natural ventilation.
- The ceiling height must be 3.15m or higher.
- Encourage the development of the cognitive and practical dexterity skills associated with graphical communication.
- Instil an appreciation of the role of graphics in the world around them.
- Equip all students to make judgements on the best mode through which to represent their ideas and solutions.
- Encourage the production of drawings that promotes the skills of communicating through graphics.
- Develop students cognitive and practical skills associated with modelling and graphical communication.





Science Laboratory and Science Preparation Rooms (Related text on the next page)

## 7.9 SCIENCE LABORATORY (24 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
8	7.65 x 11.58	88.6	3.15

### INTRODUCTION

Official Government policy, through various initiatives is to promote Science, Technology, Engineering and Mathematics (STEM) education through the curriculum at primary and post-primary level. The new Junior Cycle Framework requires that all students experience 24 statements of essential learning as part of their Junior Cycle programme, many of which are experienced through Science and Technology subjects.

- Science has not been compulsory at the Junior Cycle; however, the majority of students decide to take it, with the uptake increasing, and currently standing at 90.1%.
- Modern research and best international practice dictates that all science lessons, not just double periods should be conducted in a laboratory.
- Current science syllabus review at junior and senior cycle focus on investigative practical activities as part of all lessons.
- Practical assessment must be conducted in laboratories.
- Research projects and open-ended investigations must be conducted in a laboratory.
- The myriad of science subjects on offer, all of which require laboratory space: Junior Science, Physics, Chemistry, Biology, Agricultural Science, Physics and Chemistry combined, Leaving Certificate Applied Elective Science, Transition Year Science.

### DESIGN CONSIDERATIONS

- A Science Laboratory should facilitate 24 students to follow courses of a general science character. In all cases it should be connected to a Science Preparation Room. A pair of Science Laboratories should share a single Science Preparation Room.
- To facilitate window-box, shadow-measurement and other sunlight experiments at least one of the laboratories shall have south-facing eye-level windows.
- Windows with an outside view are essential. Blackout facilities should be provided in all of the Science Laboratories.
- Locating at least one laboratory (designated for Biology or Agricultural Science) at ground floor level is desirable to facilitate the potential addition of a garden or greenhouse where plants and crops can be grown and observed.
- The ceiling height must be 3.15m or higher.

### FITTED FURNITURE, LOOSE FURNITURE, FITTINGS, & EQUIPMENT

- Fitted Furniture for Post Primary Schools [Specifications & Standards](#) and [Drawings](#).
- Equipment List & Specifications for Science Laboratories i.e. [Basic Science](#), [Science Data Collection](#), [Chemistry](#), [Physics](#), [Biology & Agricultural Science](#) (Procured directly by a School authority and is outside a building contract).

## 7.10 SCIENCE PREPARATION ROOM

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
9	7.65 x 5	38.5	2.7

### DESIGN CONSIDERATIONS

- a. The Science Preparation Room, besides facilitating preparation of class material, will contain or store equipment of a more specialised nature in the fields of Physics, Chemistry, Biology, and Agricultural Science.
- b. The secure Chemical Store in the Science Preparation Room shall be fire resistant, and have a controlled ventilation system, but no windows.
- c. Adjacent Science Laboratories should share a common Science Preparation Room of 38.5m<sup>2</sup> with one secure Chemical Store.
- d. A non-slip, hardwearing floor is required.

### SPECIAL REQUIREMENTS

- e. A Fume Cupboard is provided and located within the Science Preparation Room in accordance with the DoE room layout. The Fume Cupboard must comply with relevant Irish or European Standards, and shall be provided with gas, water and electrical services. Extraction of noxious gases is also required, with extract ductwork routed to an appropriate external location above roof level. Refer to DoE [TGD-003](#) Mechanical & Electrical Building Services Engineering Guidelines for Post-primary Schools, [TGD-031](#) Amendments to the M&E Building Services Guidelines.
- f. Where Chemical Stores are provided, they should ideally be located on an External Wall to facilitate passive high and low-level ventilation directly to outside. Additionally, mechanically-assisted ventilation is required, with an extract ducted to above the building roof-line. The time-controlled mechanical extract ventilation shall provide a minimum of two air-changes per hour (this equates to a ventilation rate of 10 Litres/second); and set to ventilate the space for 60 minutes every 8 hours i.e. 3 times per 24-hour period. The system shall be quiet in operation with noise levels below 65 dB at 3m. The noise must not impair working in the Science Preparation Room, and safeguard teachers remaining audible in an adjacent Science Laboratory.

### FITTED FURNITURE, LOOSE FURNITURE, FITTINGS, & EQUIPMENT

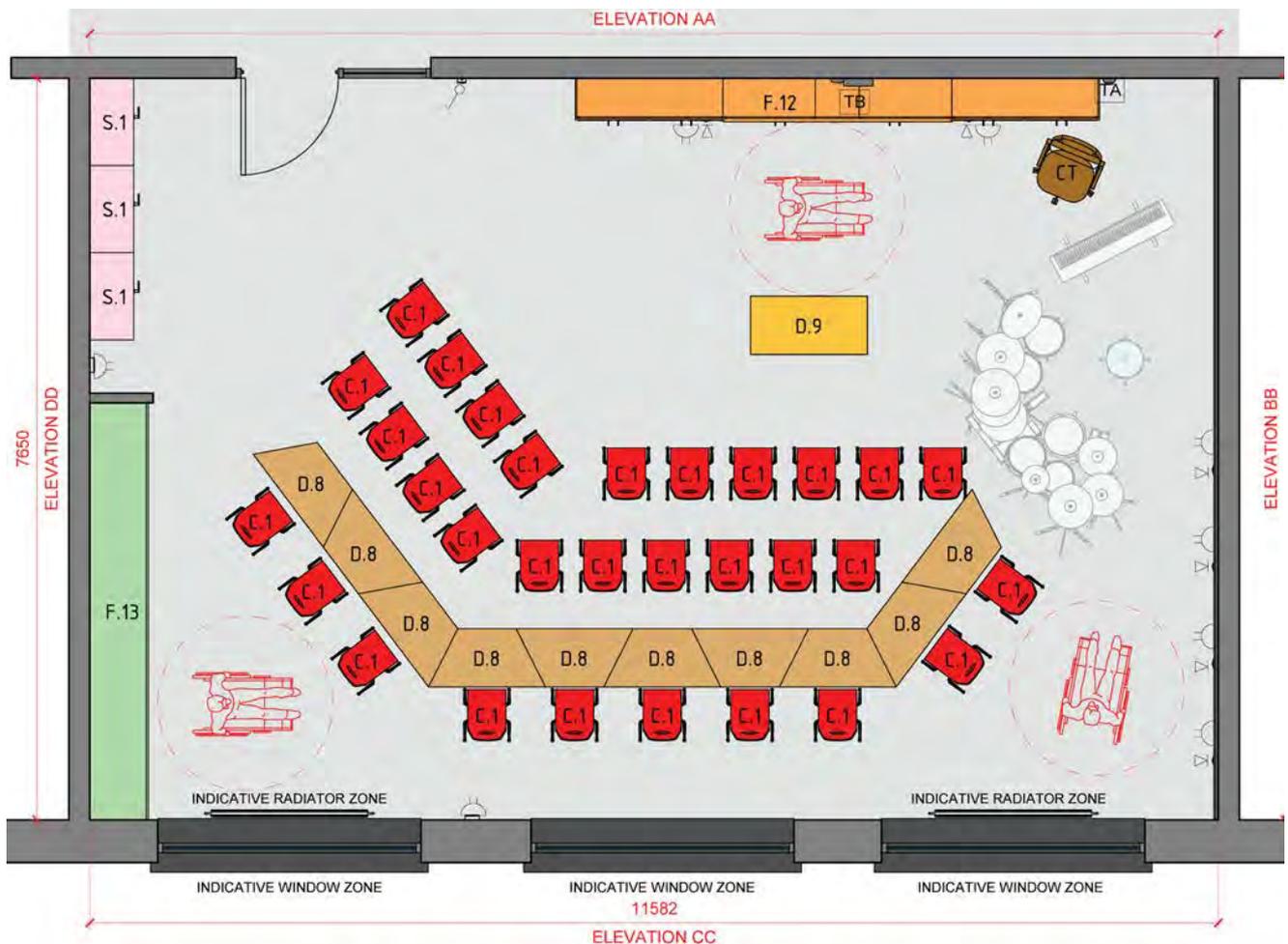
- g. Equipment List & Specification for [Science Preparation Rooms](#) (Procured directly by a School authority and is outside a building contract).

### 7.11 MUSIC ROOM (30 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
10	7.65 x 11.58	88.6	3.15

#### DESIGN CONSIDERATIONS

- The activities that will be take place in this room will depend on the emphasis on music and/or drama in the school. The room should be capable of facilitating choir, instrumental work, drama presentation, etc. in a class accommodating 30 students.
- This is a discrete room for learning and practice; and not required to function as stage or performance space. Furthermore, it must not be used as overflow space for the GP/Dining Area. Undisturbed silence for concentration is critical. Accordingly, the preferred location is remote from likely sources of noise generation within the school building or external environment. Therefore, it is recommended that Music Rooms must not be placed adjacent to or directly above noise generating spaces such as the General-Purpose Area, Multi-Use/Physical Education Hall, Construction Studies & Wood Technology, Engineering or Technology, Technologies Science Preparation Room, Boiler & Plant.
- Correspondingly, to minimise disturbance caused by sound emanating from Music Rooms consider utilising Store Rooms, Sanitary Facilities, Fire Escape Stairwells, external corner locations, as acoustic buffers to any adjacent teaching spaces, including another Music Room.

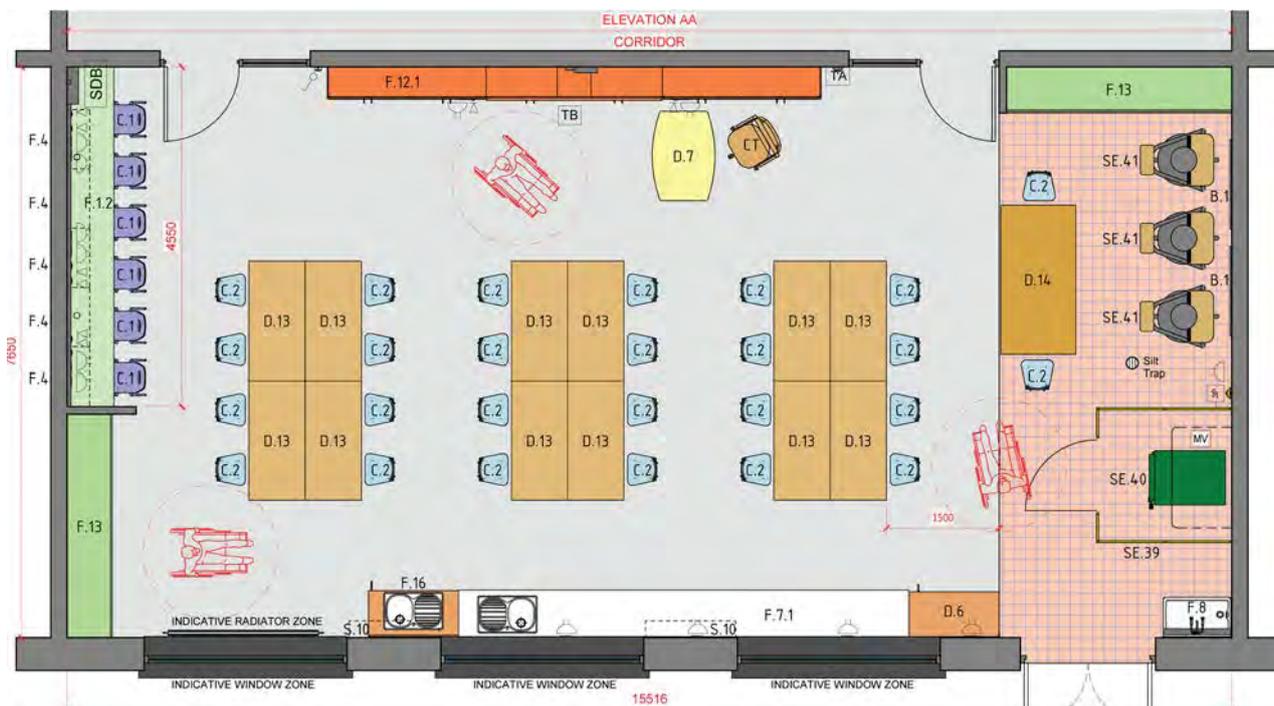


### 7.12 ART ROOM (30 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
11	7.65 x 15.5	118.6	3.15

#### DESIGN CONSIDERATIONS

- Art Rooms should preferably be located at ground floor level and where possible should have direct access to the outside. Alternatively, a location on an upper-level with access to roof terrace/balcony may be considered. Given the importance of the visual environment, they should have windows that provide a view of the external landscape or cityscape. Exhibited displays of artwork should be visible from the corridor.
- An even distribution of natural light with 4.2% average Day-Lighting Factor at worktop-level is required across the whole floor area. The quality of light is important to art-working and 3-D modelling.
- The “Wet Area” should be appropriately tiled, having a suitable floor drain and silt trap. It must be capable of accommodating a kiln with associated drying racks and trough. The floor must be able to support a typical kiln with a mass of 400 kg. The kiln with plan dimensions of 900mm x 700mm must fit through the room’s 900mm-clear door opening. A protective cage will be supplied with the kiln.
- Flooring in both the wet area and the classroom area should be non-slip, durable and easily washable.
- Where two or more Art Rooms are provided, one kiln only is supplied.
- Where the location of this room on an upper floor is unavoidable, it must be possible to install/replace the kiln without removing windows or using a crane.
- The ceiling height must be 3.15m or higher.

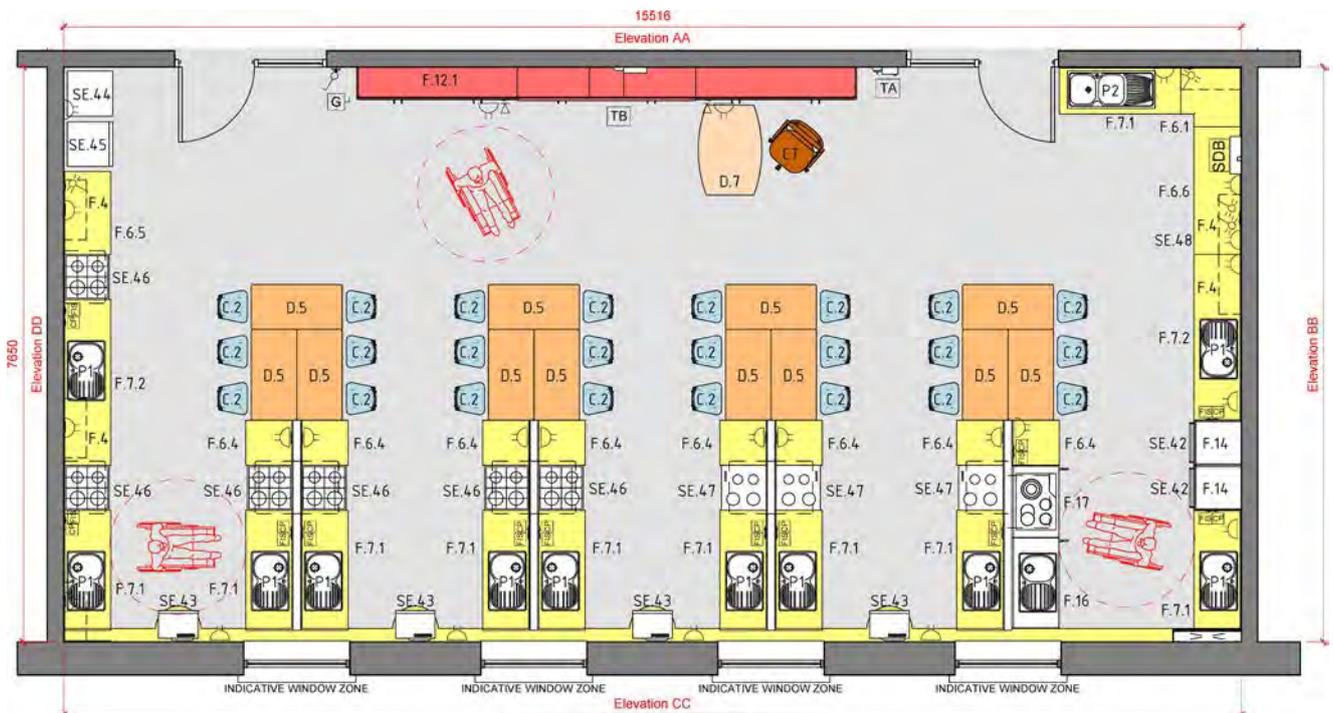


### 7.13 HOME ECONOMICS (24 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
12	7.64 x 15.5	118.6	3.15

#### DESIGN CONSIDERATIONS

- The Home Economics Rooms and Textiles Rooms (where applicable) should be located near to each other.
- The floor finish should be durable non-slip and consistent with the room use and easily cleaned (refer to “Table 1” above).
- A mechanically-assisted extract ventilation system is required above each cooker in order to remove steam and odours generated during cooking and baking. This fan-assisted extract system must meet the Acoustic Performance requirement as set out in [SDG 02-05-03](#) in order to ensure an appropriate acoustic environment for Teaching & Learning, suitable for all students and teachers. Accordingly, a centralised extract system with the extract-fan located outside the Teaching Space is preferable. Meeting the Acoustic Performance requirement by keeping the extract velocity low will necessitate substantially-increased duct cross-section area. The design of all the ceiling-mounted services and finishes must be thorough and coordinated. There should be appropriate teacher-controls for varying the extract rate as necessary.
- The ceiling height must be 3.15m or higher.

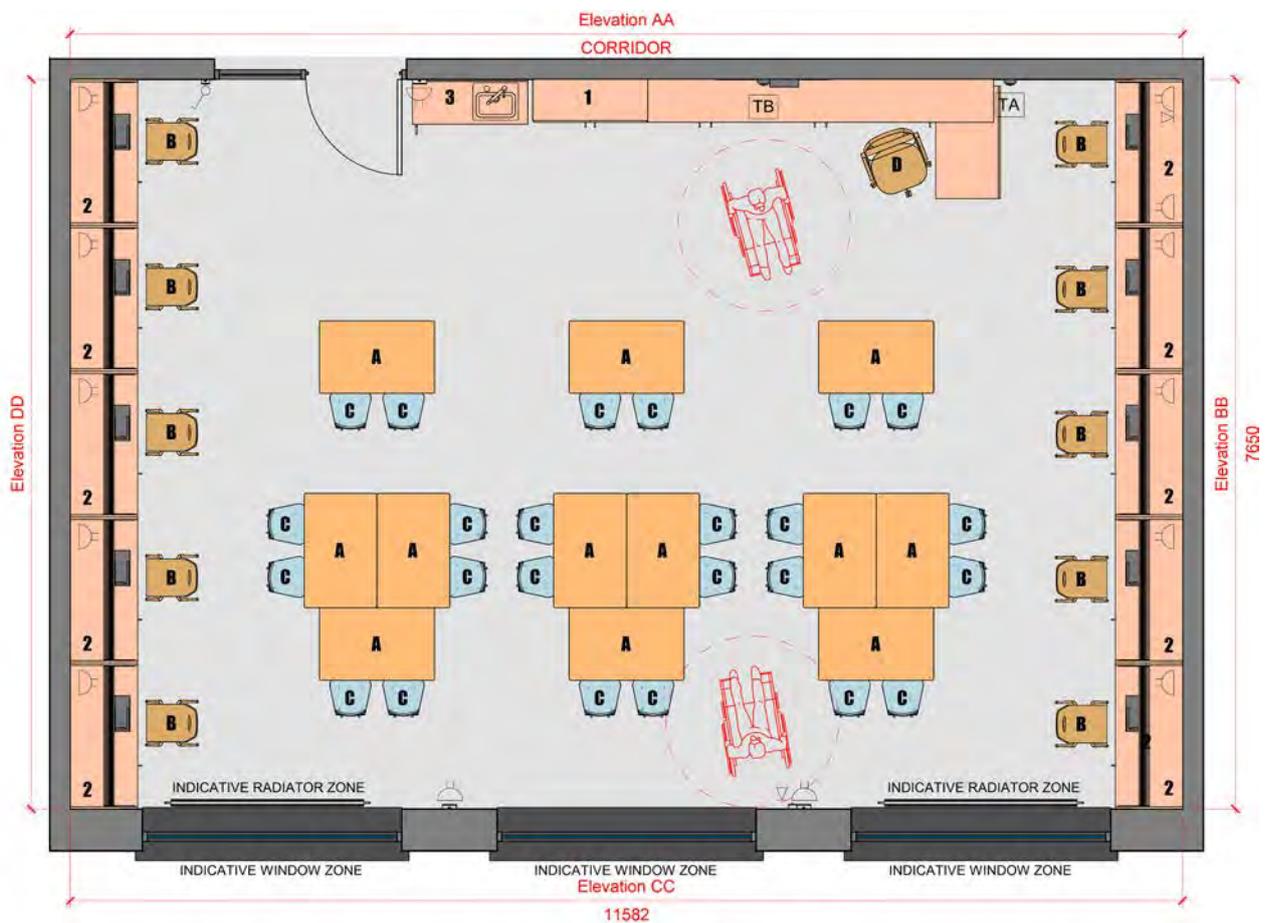


### 7.14 TEXTILES ROOM (30 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
13	7.65 x 11.58	88.6	3.15

#### DESIGN CONSIDERATIONS

- a. Home Economics Rooms and Textiles Rooms should be located near to each other.
- b. The Textiles Room should have a durable non-slip floor covering consistent with the room use. It should not be carpeted.
- c. The ceiling height must be 3.15m or higher.



## 7.15 CONSTRUCTION STUDIES / WOOD TECHNOLOGY ROOM (24 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
14	7.65 x 19.45	149	3.15

### DESIGN CONSIDERATIONS

- a. This room is used for the teaching of Construction Studies at Leaving Certificate Level and Wood Technology at Junior Certificate level. It must be located on the ground floor, and is designed to accommodate 24 students.
- b. This room must be connected to a Wood Machining and Preparation with direct access and a glazed large viewing-panel into the Preparation Room. This safeguards observation and supervision.
- c. The external Covered Area for this subject should be in the secure yard, and directly accessible from this room. The yard surface should be poured-concrete bays suitable for repeated building/removal of student block/brickwork panels. See Schedule of External Requirements in Schedules of Accommodation.
- d. Enable students to develop the necessary conceptual understanding, disciplinary skills and subject knowledge to design and create artefacts of value.
- e. Empower students through designing and making, whilst developing an awareness of sustainability and the use of natural resources.
- f. Develop a range of core design skills and relevant manipulation skills through modelling and processing wood and other materials.
- g. Develop the confidence and resilience of students through engagement with the uncertainty of design challenges.
- h. Encourage students' innovation and creativity through recognition and appreciation of their capacity to design and create.

### SPECIAL REQUIREMENTS

- i. Dust extraction requirements for this room shall be in accordance with DoE [TGD-032](#) Guidelines for the Design & Installation of Woodwork Dust Extract Systems in Post-primary Schools.
- j. The dust collection unit on a centralised dust extraction system shall be internally located in the Wood Machining and Preparation. In operation it should have acoustic attenuation and comply with [SDG-02-05-03](#) Acoustic Performance in Schools. The design of all the ceiling-mounted services and finishes must be thorough and coordinated. There should be appropriate teacher-controls for varying the extract rate as necessary.
- k. The ceiling height must be 3.15m or higher.

### ACOUSTICS

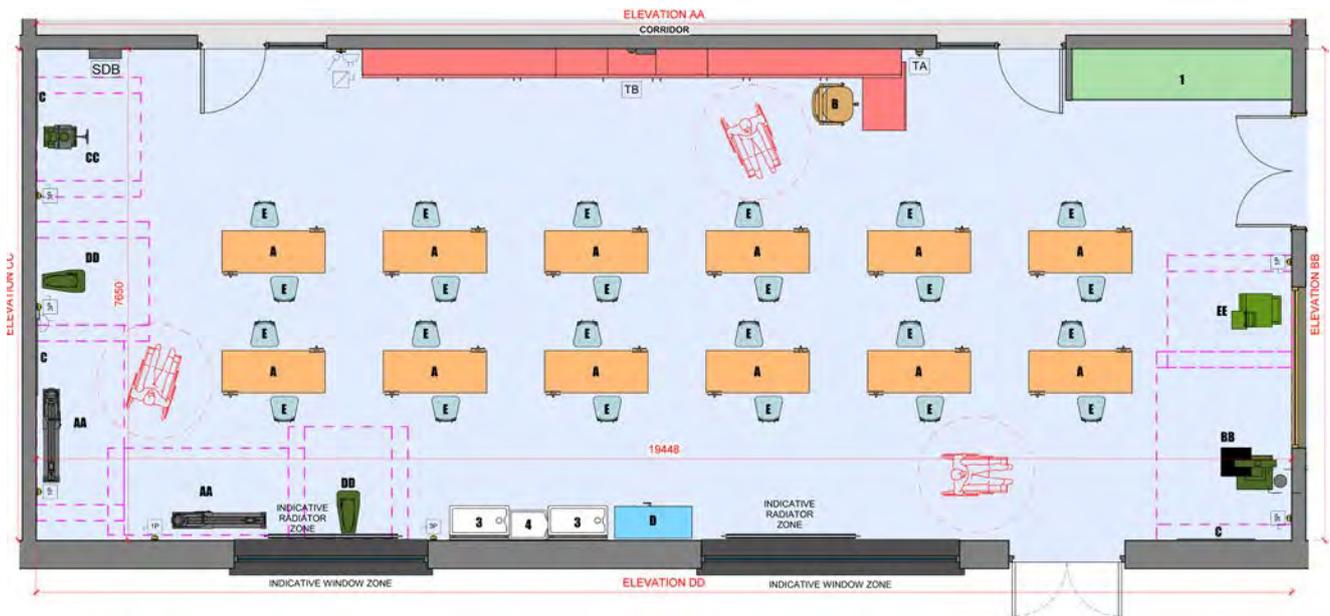
- l. Certain activities in this room can generate high noise levels and it is therefore necessary to ensure that it is located away from noise-sensitive spaces such as the

Library, Music Room, Meditation Area, refer to [SDG-02-05-03](#) Acoustic Guide.

- m. An acoustic-absorbing ceiling and, if necessary, supplementary wall treatment is essential to maintain the room as a place of learning - refer to [SDG-02-05-03](#) Acoustic Guide.

## FINISHES

- n. The flooring must be consistent with the room-use and Health & Safety concerns by being robust, durable, slip-resistant, and easily maintained. A sealed concrete or resin-finished floor may be suitable. Manufacturer-recommendations should be followed. Refer to “Table 1” earlier in this document.



## 7.16 ENGINEERING ROOM (24 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
15	7.65 x 19.45	149	3.15

### DESIGN CONSIDERATIONS

- a. This room is used for the teaching of Engineering at Leaving Certificate level and at Junior Certificate level. It is designed to accommodate 24 students.
- b. Ideally, it should be located on the Ground Floor, and also be directly accessible from the secure yard. However, where site restrictions deem it necessary, it may be located on an upper floor level provided a ground floor Technologies Preparation Room and lift are readily accessible.
- c. Normally, where an Engineering Room is connected to a Wood Machining and Preparation it must have direct access and a glazed large viewing-panel. This safeguards observation and supervision.
- d. The ceiling height must be 3.15m or higher.
- e. Enable students to develop the disciplinary skills and knowledge to engineer an end product.
- f. Enable students to engage in goal-oriented problem solving, creating an awareness of engineering processes.
- g. Develop the necessary skills and apply engineering processes to manipulate material to manufacture a product with efficiency, accuracy, precision and a high-quality finish.
- h. Develop an engineering mindset through the exploration of contemporary engineering developments.

### ACOUSTICS

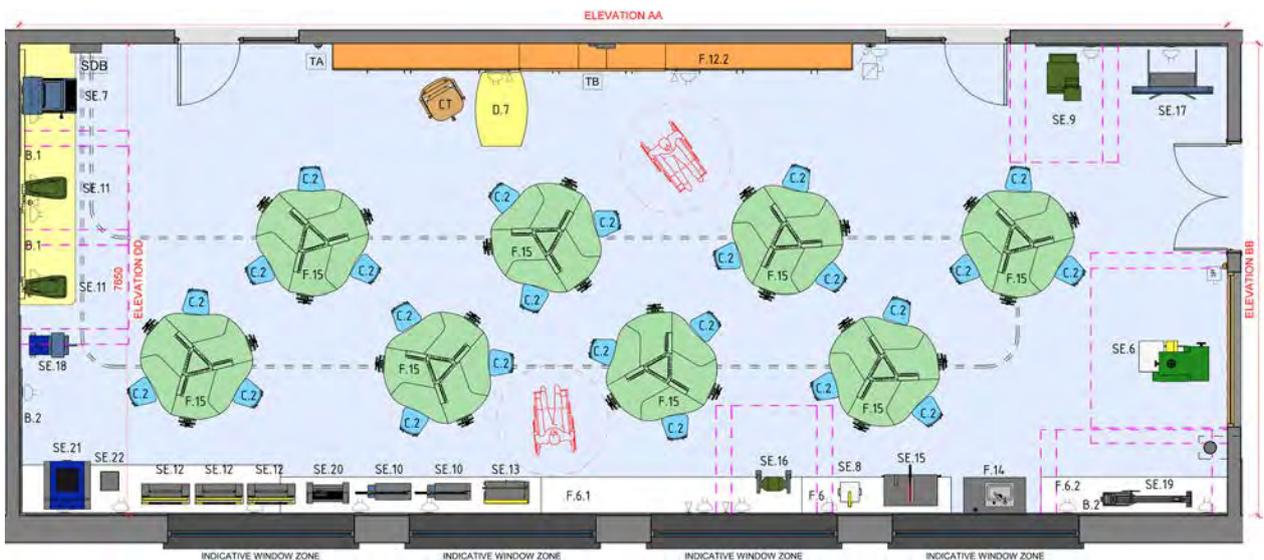
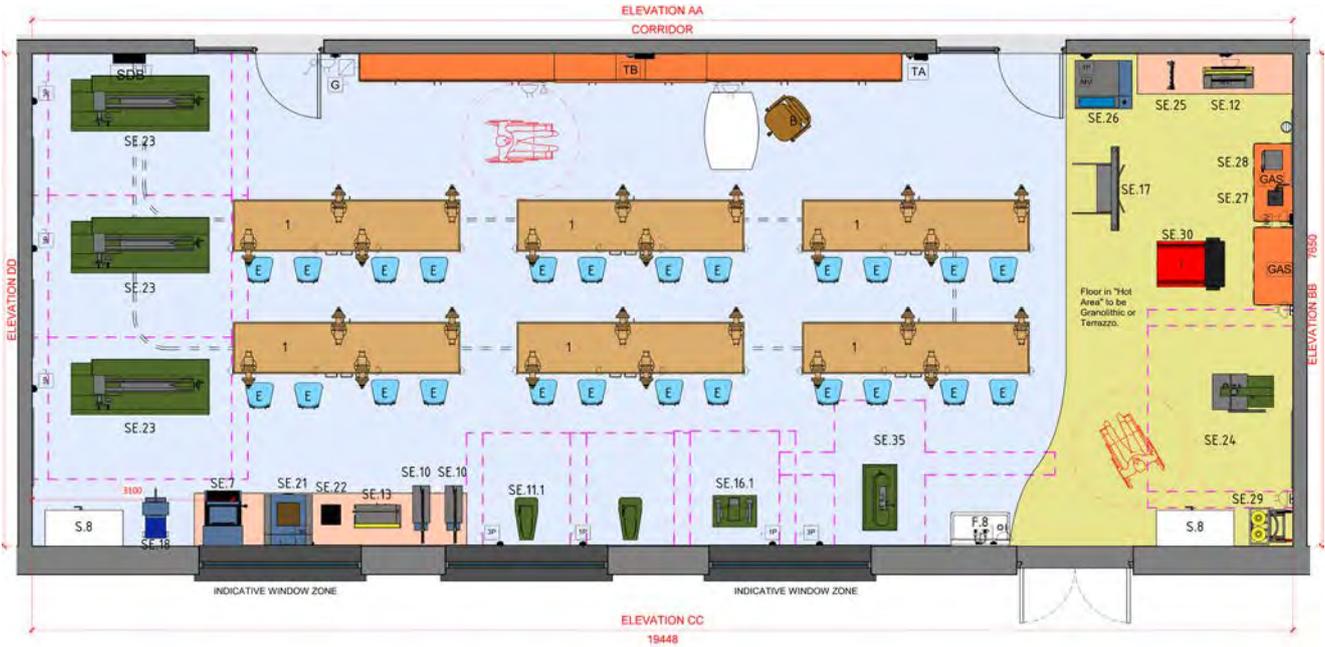
- i. Certain activities in this room can result in high noise levels and it is therefore necessary to ensure that it is located away from noise-sensitive spaces such as the Library, Music Room, Meditation Area. refer to [SDG-02-05-03](#) Acoustic Guide.
- j. An acoustic-absorbing ceiling and, if necessary, supplementary wall treatment is essential to maintain the room as a place of learning - refer to [SDG-02-05-03](#) Acoustic Guide. Guide.

### FINISHES

- k. The flooring must be consistent with the room-use and Health & Safety concerns by being robust, durable, slip-resistant, oil-resistant and easily maintained. Consideration should be given to the raw materials, the process and the waste generated from the activities performed in the room. The “hot metal area” of this room requires a granolithic or terrazzo floor finish and a wash-down gulley with a silt trap. Subject to Health & Safety considerations and Manufacturers’ recommendations, a sealed concrete or resin-finished floor may be suitable. Manufacturer-recommendations should be followed. Refer to “Table 1”, earlier in this document.

## MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- I. Mechanical extraction is required from the “hot metal area” for the brazing hearth, welding, soldering and kiln. In operation it should have acoustic attenuation and comply with [SDG-02-05-03](#) Acoustic Performance in Schools.



Technology Room (related text on next page)

## 7.17 TECHNOLOGY ROOM (24 STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
16	7.65 x 19.45	149	3.15

### INTRODUCTION

Technology is an important area in a student's general education. The desired educational outcomes are best met by providing a range of experiences that match varied learning styles and interests. Equal gender-participation in science and technology is the goal. Technology as a subject can provide a more accessible option in some schools. Providing a Technology Room in schools, where Construction Studies and Wood Technology and Engineering Room are not available options, promotes the aim of introducing more students to the technologies.

### DESIGN CONSIDERATIONS

- a. This room should be located on the Ground Floor.
- b. This room should be connected to a Wood Machining and Preparation with direct access and a glazed large viewing-panel. This safeguards observation and supervision.
- c. Enable students to develop the necessary conceptual understanding, disciplinary skills and subject knowledge to investigate and solve real-life problems.
- d. Promote the enjoyment of the study of the subject while developing a curiosity about the technological world.
- e. Develop the ability of students to generate and evolve their ideas through an iterative process and communicate through appropriate media.
- f. Develop students' resilience through constructive critique and support their learning in a 'safe failure' environment.
- g. Encourage a disposition of enquiry, innovation, creativity, and self-efficacy.

### ACOUSTICS

- h. Certain activities in this room can generate high noise levels and it is therefore necessary to ensure that it is located away from noise-sensitive spaces such as the Library, Music Room, Meditation Area, refer to [SDG-02-05-03](#) Acoustic Guide.
- i. An acoustic-absorbing ceiling and, if necessary, supplementary wall treatment is essential to maintain the room as a place of learning - refer to [SDG-02-05-03](#) Acoustic Guide.

### FINISHES

- j. The flooring must be consistent with the room-use and Health & Safety concerns by being robust, durable, slip-resistant, and easily maintained. A sealed concrete or resin-finished floor may be suitable. Manufacturer-recommendations should be followed. Refer to "Table 1", earlier in this document.

## 7.18 WOOD MACHINING and PREPARATION

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
17	7.65 x 7.65	58.6	3.15

### INTRODUCTION

The Construction Studies and Wood Technology Room, and the Engineering Room in combination and/or in multiples is frequently a provision in larger schools. A Wood Machining and Preparation is essential to each room; however, it is normal for two rooms to share a single Wood Machining and Preparation.

The Technology Room was introduced and aimed at schools that had no Construction Studies and Wood Technology Room, or Engineering Room, as an alternative subject. However, it has become a popular subject; and often features in (larger) schools where Construction Studies and Wood Technology and/or Engineering are already available options.

### DESIGN CONSIDERATIONS

- a. Where only a single Wood Machining and Preparation is provided, this space must be connected to the Construction Studies / Wood Technology Room, and/or to the Engineering Room, and/or the Technology Room. Two rooms can share a single Wood Machining and Preparation. The rooms connected must each have direct access and a glazed large viewing-panel into the teaching area. This safeguards observation and supervision.
- b. Where there is a single Wood Machining and Preparation, it is not essential that it is located directly adjacent to the Engineering, that may be located elsewhere, including if necessary, on an upper floor level (provided there is ease of access via a lift).
- c. The Wood Machining and Preparation should be located on the ground floor with direct access to the outside secure yard so as to facilitate the delivery of materials and machinery.

### SPECIAL REQUIREMENTS

- d. Dust extraction requirements for this room shall be in accordance with the DoE [TGD-032](#) Guidelines for the Design & Installation of Woodwork Dust Extract Systems in Post-primary Schools.
- e. The dust collection unit on a centralised dust extraction system shall be internally located in the Wood Machining and Preparation. In operation it should have acoustic attenuation and comply with [SDG-02-05-03](#) Acoustic Performance in Schools. The design of all the ceiling-mounted services and finishes must be thorough and coordinated. There should be appropriate teacher-controls for varying the extract rate as necessary.

### ACOUSTICS

- f. Certain activities in this room can result in high noise levels and it is therefore necessary to ensure that it is located away from noise sensitive spaces such as the Library, Music Room, Meditation Area. Adequate acoustic separation is also



## 7.19 LIBRARY

SMALL (200 - 499 STUDENTS) VARIES 58m<sup>2</sup> TO 199m<sup>2</sup>

LARGE (500+ STUDENTS)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	178.9	3.15

### DESIGN CONSIDERATIONS

- a. Literacy, OECD Programme for International Student Assessment (PISA) and the School Library - A spacious well-designed and well positioned School Library is an essential space for student autonomous learning, for project research, and as a space to support students in developing their Literacy and Numeracy Proficiency including digital literacy skills. Research for projects and practical activities increasingly form part of junior and senior cycle education. The National Strategy for Literacy and Numeracy among Children and Young People 2011-2020 acknowledges that literacy includes all forms of written and printed communication from handwriting to digital literacy and that literacy skills are developed not only in language lessons but in every subject.
- b. The case for a school library has strengthened in recent times for many reasons. These include Junior Cycle reform, where student research and self-directed learning are key skills. The Senior Cycle curriculum explicitly supports the central role of self-directed learning, a spirit of enquiry, critical thinking and problem solving. Recently revised syllabi contain references to the student as a researcher. This requires the skills of analysis of a range of data to make judgements based on the student's research.
- c. The Library is one of the most important areas in the school. It is a dual-purpose resource area and teaching space and will be used for referencing, computer-based research, project work and group discussions as well as teaching. The room layout should allow for a number of different activities simultaneously.
- d. The Library should be centrally located as a key symbol of the ethos of the school. It should therefore be conveniently related to all other learning/teaching areas but particularly to the Social Studies area and to a number of General Classrooms and Group Rooms.
- e. The Library should be glazed onto the circulation area to provide informal supervision. Windows with an outside view are essential. A high level of natural light is required without glare and should also facilitate work on computers/laptops.
- f. The acoustic design internally of the Library and acoustic separation from active circulation areas should be carefully considered, refer to [SDG-02-05-03](#) Acoustic Guide.
- g. The library is a quiet area. Consideration may be given to a heavy-duty anti-static contract carpet, or other suitable finish, consistent with the room's use and Health & Safety considerations.

## 7.20 MEDITATION AREA

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	28.4	2.7

### DESIGN CONSIDERATIONS

- a. A Meditation Area should be located in a calm part of the school to minimise disturbance caused by noise, and ideally adjacent to the PE Lab.
- b. Lighting with dimmer switches and blinds for the windows should be provided in the Meditation Area.
- c. This space should be fitted with floor to ceiling, wall to wall, mirrors on one elevation.
- d. Provide a built-in sound system that would be suitable in the teaching of dance etc.
- e. This is a multi-use space and should be designed to be suitable for meditation/ yoga/pilates/dance.

## 8. ROOM DATA SHEETS (ADMINISTRATIVE SPACES)

### 8.1 PRINCIPAL'S OFFICE

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	18	2.4

#### DESIGN CONSIDERATIONS

- a. The Principal's Office is multifunctional and should be capable of being used as an office; an interview room; a meeting room and a study. It may be used for meetings with parents. The office should be comfortable and private with good sound quality and acoustic security.
- b. The Principal's Office should be located close to the General Office with easy access to that office. For Health & Safety reasons it should have an exit door direct to the main circulation.
- c. The General Office/Administrative Staff should regulate access to the Principal's Office for visitors. Members of the public should not be able to gain direct access to this room without first reporting to the General Office off the secure lobby at the main entrance.
- d. Best practice guidance would recommend that a Deputy Principal's Office of 15m<sup>2</sup> should be located elsewhere in the school to facilitate school supervision. Larger schools will have two or three Deputy Principals.
- e. An even distribution of natural light and natural ventilation as well as an average day lighting factor of 4.2% is required across the whole floor area.

#### MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- a. The PA/class change bell system amplifier controls may be located in the Principal's Office or General Office.
- b. The monitor on the CCTV camera installation may sometimes be located in the Principal's Office.
- c. A concealed under desk double push alarm unit (panic button) linked to the intruder alarm system shall be provided.
- d. A telephone point shall be provided.
- e. An additional telephone point may sometimes be required in the office.
- f. Information from the school's Energy Monitoring System shall be available on the school's IT network, and capable of being monitored in the Principal's Office.

## 8.2 GENERAL OFFICE, RECEPTION AND WAITING AREA

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	28.4	2.7

### DESIGN CONSIDERATIONS

- a. The General Office is the first point of contact for all visitors and should be located adjacent the secure lobby at the main entrance with a natural view of the entrance doors to the school from a hatch in the wall of the office. The General Office is to be accessed from the general internal circulation only. Windows and glazed screens to this space are to be located where they maximise passive supervision over the external environment, entry routes and secure lobby. The access hatch is to be positioned in order to maximise passive supervision within the secure lobby area. Internal screens and counters are to be designed and located in order to maximise internal passive supervision.
- b. The main entrance and associated lobby is to be clearly legible from the site entrance.
- c. Access to the school building through the main entrance is to be regulated by means of a secure lobby with inner doors controlled from the General Office. The means of fire escape must also be considered. The area and dimensions of the lobby are to be considered in relation to the spatial requirements of access controlled doors and disabled access. The floor finish to the entire lobby is to be of continuous and robust entrance matting.
- d. To deal with queries from visitors it should have a secure counter hatch opening directly to the secure lobby at the main entrance. The design, dimensions and operational requirements of the reception hatch are to be given careful consideration in relation to draught exclusion, security, universal accessibility, robustness, airtightness, staff comfort and ergonomics. A further separate hatch is to be provided between the reception office and the main circulation area, for students.
- e. The hatch glazed panel should be robust capable of withstanding physical abuse, and any openable section lockable.
- f. The counter and hatch opening should facilitate disabled users. It should be located so that a group of people waiting at the hatch/counter are out of the main circulation route and will not obstruct circulation through the school.
- g. A Waiting Area should be provided off the main circulation and adjacent to the General Office. The waiting area should be designed and located in order for passive supervision from the general office.
- h. Wayfinding signage should be clearly visible within the entrance area to highlight key school facilities, lifts, stairs, toilets, and GP Areas.
- i. Where required, there should be clear wayfinding to passenger lift from the main entrance area.
- j. The Principal's Office should be located nearby but not necessarily be directly accessed from the Waiting Area.

## MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- k. The remote monitoring and control system on the mechanical installation may be located in the General Office or in the Principal’s Office.
- l. The main control panel for a PABX telephone system as outlined in [DoE TGD-031](#) Amendments to the M&E Building Services Guidelines, [TGD-003](#) & ICT Infrastructure Guidelines [TGD-005](#) for Post-primary Schools, Section 26.3 Telephony, shall be located in the office.
- m. An additional telephone point, as well as an associated socket outlet, shall be provided.
- n. A concealed double push alarm unit (panic button) linked to the intruder alarm system shall be provided.
- o. The release switch for the door entry system incorporating an appropriate power supply with stand-by shall be provided in a location that allows the user a clear view of the internal doors in the secure lobby.
- p. A permanent Induction Loop and associated equipment shall be provided at the Hatch to facilitate hard of hearing Visitors, Staff & Students.

### 8.3 PASTORAL OFFICE / DEPUTY PRINCIPLE / GUIDANCE / S.E.T.

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	15	2.4

#### DESIGN CONSIDERATIONS

- a. Pastoral Offices have multiple uses. They may serve, for example, as rooms for teacher study and preparation.
- b. These offices are fully interchangeable with a Deputy Principal’s Office.
- c. These rooms are regularly used for small-group meetings/work.
- d. The Guidance and other teachers often take small classes in these rooms.
- e. These rooms are ideal for tutoring students with Special Educational Tuition (S.E.T.) needs: singly or in small groups.
- f. Pastoral Offices should be distributed throughout the school and located at key points off main circulation, stairwells or social areas, with glazed side panels to aid passive supervision.
- g. A glazed screen with privacy blinds should afford a view of the circulation/social area from the Pastoral Office.
- h. Adequate natural daylight and ventilation must be available.

## 8.4 STAFF ROOM

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	Varies	3.15

### DESIGN CONSIDERATIONS

- a. The area allowance is as per the issued Brief/Schedule of Accommodation and is determined by the numbers of staff reflecting overall pupil numbers.
- b. The Staff Room should have social and work areas, in a ratio of circa 2:1. The separation of the areas can be achieved by appropriate arrangement of furniture.
- c. An area for desk work, with appropriate power points and fixed I.T. points supplementary to the Wi Fi network, and integrated with the normal work area.
- d. Lockers and pigeon-holes should not be overly intrusive.
- e. The Staff Room should be centrally located and easily accessible by staff. However, members of the public should not be able to gain direct access to this room without first reporting to the General Office.
- f. Staff sanitary facilities should be either accessible directly en-suite or adjacent.
- g. It is prudent to position the Staff Room next to a large, non-specialist room/general classroom, with soft-spot in dividing wall to allow for future expansion.

### MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- h. Dedicated power points shall be provided in suitable locations in the kitchen area for a dishwasher, fridge, microwave oven and water boiler etc. Number of appliances and associated services to be agreed, by the Design Team, with the school. An unobtrusive extract installation for steam/cooking fumes.
- i. A network point and associated socket outlet shall be provided at high level on the corridor wall for an electronic notice board. The supply and installation of the device shall not form part of a building contract.

## 8.5 MEETING ROOM

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	28.4	2.7

### DESIGN CONSIDERATIONS

- a. A Meeting Room, should be located near the General Office; and may be used by Board of Management, staff, parent groups or students.
- b. It should be located so that it can be easily reached from the main entrance avoiding having to pass teaching areas.
- c. It should be comfortable and with good acoustic attenuation and separation for privacy of conversations, refer to [SDG-02-05-03](#) Acoustic Guide.

## 8.6 FIRST AID ROOM

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	15	2.4

### DESIGN CONSIDERATIONS

- This is intended for the administration of First Aid and as a Rest Room for sick students. It should be located close to the General Office for the purposes of care and monitoring.
- Provide sink with drinking water.
- Provide Suitable worktop with lockable storage for first aid materials.
- The room doorway should be wide enough to accommodate an ambulance trolley, stretcher, wheel chair or carrying chair and a clear route to the main entrance is to be considered.

## 8.7 CARETAKER'S WORK AREA

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	15	2.4

### DESIGN CONSIDERATIONS

- The Caretaker's Work Area should be located within the school but with good access to the outside through a nearby door. It should be located near the external store and boiler room.

## 8.8 PHOTOCOPY ROOM

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	6	2.4

### DESIGN CONSIDERATIONS

- The Photocopy Room should be located near the General Office and easily accessible from it (but not within the office). It should also be easily accessible from the main circulation area by staff and authorised students.
- A permanently open-air inlet having a clear equivalent area of at least 7,000mm<sup>2</sup> shall be provided in this space.

## MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- Where Photocopy Rooms in schools will be in substantial use as outlined in the Department of Housing, Planning, and Local Government's Building Regulations, Part F Ventilation i.e. greater than 30 minutes per hour, mechanical extract ventilation at a rate of 20 litres per second per machine and incorporating PIR control should be provided.

## 9. ROOM DATA SHEETS (ANCILLARY SPACES)

### 9.1 GENERAL PURPOSE/DINING AREA AND KITCHENETTE

#### 250 TO 999 STUDENTS

#### GENERAL PURPOSE (GP)/DINING AREA

#### DESIGN CONSIDERATIONS

- a. The General-Purpose/Dining Area should be the social heart of the school. It should bring a sense of openness to the school, giving order to movement and enhancing general circulation. However, circulation pathways should not fragment its function.
- b. Besides providing a dining/study area, it can also be used for assemblies, plays, exhibitions and social events during and outside school-hours; thus, serving both school and community. With this in mind, sanitary facilities should also be suitably located in close proximity.
- c. The GP Storage Area should ideally be accessed directly from the GP Space, alternatively close by. All doors are to be robust and incorporate suitable clear opening widths to allow for free movement of furniture between the spaces.
- d. It should be possible to isolate a zone including the GP/Dining Area, associated sanitary facilities and entrance area, including all necessary building services within these spaces.
- e. After hours, it should have easy access from the main entrance without compromising the whole school security.
- f. The height and proportion of the space of the GP/Dining Area should be suitable to its proposed function taking into account an even distribution of natural light across the whole floor area. The natural ventilation of this high occupancy space is critical. The clear height from floor to ceiling should not be less than 3.15m at any point.
- g. The Kitchenette may be used to prepare light refreshments and should be equipped with a cooker, a water boiler, a fridge, a dishwasher worktop and a suitable sink. It should be divided from the general-purpose dining area by a counter not less than 3m long, fitted with a fire-rated roller shutter.
- h. The Kitchenette may facilitate the common arrangement of commercial caterers providing pre-prepared meals. It may also have a small store attached. Deliveries should be considered. Waste management enclosed yard, and how deliveries are made should be carefully considered.
- i. The kitchenette should be located with a suitable servery ensuring orderly queuing and minimised congestion.
- j. Robust, durable non-slip flooring consistent with the room's use and traffic.
- k. Dedicated Catering Staff Change/WC facilities must be provided in accordance with regulations governing preparation and storage of foodstuffs.

## ACOUSTICS

- l. Activity in this room can generate high noise levels; therefore necessary to ensure noise sensitive spaces such as the Library, Music Room, Meditation Area are located remotely, refer to [SDG-02-05-03](#) Acoustic Guide.
- m. An acoustic-absorbing ceiling and, if necessary, supplementary wall treatment is essential for it to function as a multi-use space, and to minimise negative impact on any adjacent spaces. Refer to [SDG-02-05-03](#) Acoustic Guide.
- n. All space heating systems within General Purpose Room must comply with requirements of [SDG-02-05-03](#) Acoustic Performance in Schools.

## MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- o. A drinking water outlet should be provided in the GP/Dining Area, with a high spout capable of filling a jug/water bottle. This is in line with Department of Communication Climate Action and Environment's policy to eliminate single-use plastic bottles and cups. The outlet should be provided with an adjacent small power outlet to facilitate the use of a water cooler by the school authority at its own expense.
- p. A network point for an electronic notice board shall be located in a suitable location in the GP/Dining Area.
- q. Electricity, Gas (if available), mains water, hot and cold water, and waste water connections shall be provided in the Kitchenette for the various appliances being provided.
- r. A gas pressure proving system will be required on the gas supply where gas appliances are being provided.
- s. Mechanical ventilation will be required in the Kitchenette. The system shall be similar to a light commercial kitchen with extract ductwork and filter capable of easy and regular cleaning. System should ensure appropriate face velocity at canopies to entrain steam and odours generated during cooking equipment use. Ductwork should terminate above roof level.

## 9.2 GENERAL STORAGE

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	As Schedule	2.7

### DESIGN CONSIDERATIONS

- a. The area allocated for storage will vary depending on the size of the school.
  - Under 350 students - 38.5m<sup>2</sup>
  - 350 - 699 students - 58.6 m<sup>2</sup>
  - 700 + students - 98 m<sup>2</sup>
- b. The area allocated should include a Secure Store, Cleaner's Store(s) and General Storage. Storage may be provided either in dedicated storage rooms or as recessed fire-rated cupboards to the circulation (e.g. Cleaner's Store).
- c. The number, designation, and arrangement of storage areas or rooms, is at the discretion of the School authority in consultation with their Design Team. However, the design should ensure that adequate storage is provided within the area limits.
- d. The areas given may be grouped together or spread over a range of uses and dispersed throughout the school. In larger schools it will be necessary to distribute the storage in different locations. The number and type of stores to be provided and their general location should be agreed with the School authority before architectural planning commences.
- e. Cleaners' Storage areas that contain chemicals, cleaning agents, etc., for school maintenance, must be suitable for the intended purpose, provide adequate security, and be properly ventilated via suitably sized high- and low-level wall vents.
- f. A Cleaners' Store should be provided on each floor to facilitate ease of maintenance.
- g. Where a Safe Store or Secure Store is provided the door and frame should be of a sufficient standard to safeguard the contents, i.e. steel sheeted security door and frame. It should not be on an external wall and should have suitable security protection to floors, walls, and ceiling. Note: There is a separate store for student projects.
- h. Durable flooring must be consistent with the room-use and Health & Safety concerns by being robust, durable, slip-resistant, and easily maintained. A sealed concrete or resin-finished floor may be suitable. Manufacturer-recommendations should be followed.

### MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- i. Low temperature protection in stores should be provided via suitably sized low-level pipes or pipe coils. Radiators are not required in stores.
- j. Lighting provision should reflect the use of the space.

## FURNITURE – FITTED AND LOOSE, FITTINGS, EQUIPMENT

- k. Appropriate shelving, where required by the School authority, should be provided (e.g. for a book store.) as part of the Works Contract. School Authorities may add supplementary shelving later.

### 9.3 PROJECT STORE

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Not fixed	As Schedule	2.7

#### DESIGN CONSIDERATIONS

- a. This storage area is for the storage and assessment of examination projects, so it should be designed as a secure store. For larger schools, depending on the area allocated, it may be divided into a maximum of two areas provided each project storage area is sufficiently large to permit efficient storage of the projects.
- b. It should be located near to the practical subjects teaching areas, i.e. Construction Studies & Wood Technology, Engineering, Technology, and Art, to facilitate day-to-day use.
- c. Adequate natural ventilation for the intended purpose is required with appropriate location of light fittings. View windows are not required or desirable.
- d. Durable non-slip flooring consistent with use. Subject to Health & Safety considerations and Manufacturer's recommendations a sealed concrete floor may be suitable.

#### MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- e. Low temperature protection in stores should be provided via suitable sized low level pipes or pipe coils. Radiators are not required in stores.
- f. Lighting provision should reflect the use of the space.

## FURNITURE – FITTED AND LOOSE, FITTINGS, EQUIPMENT

- g. Floor to ceiling adjustable shelving of various depths is to be provided as part of the construction Works Contract. Large and irregularly shaped objects may be stored as project work.

### 9.4 SANITARY FACILITIES

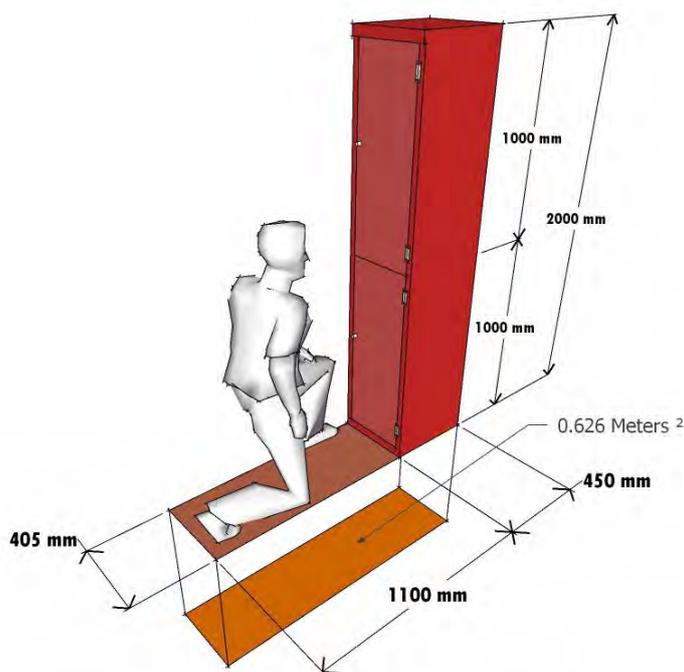
Sanitary facilities for students, staff and visitors should be provided as outlined in the [DoE SDG-02-06](#) Guidelines & Standards for Sanitary Facilities in Post Primary Schools.

## 9.5 STUDENT LOCKER FACILITIES

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	1.56 x 0.405 per double locker	As Schedule	2.7

### DESIGN CONSIDERATIONS

- The allowable area for lockers is as stated in the Schedule of Accommodation.
- Locker areas must be located and designed in such a way as to avoid circulation congestion.
- Lockers should be conveniently accessible for students in relation to student entrance(s) etc.
- Lockers should not be located on ramps or at circulation pinch points.
- Locker access must not compromise use of Student Social Areas.
- The preferred arrangement is that lockers be located adjacent to the general Circulation Area to provide ready access. Separated locker or bag rooms are not recommended due to bullying risk. A minimum recess of 1.55m off clear circulation is required for safely accessing lockers, as per diagram below.
- Locker areas should be well- and evenly-lit with no dark recesses.
- The location of any radiators should be coordinated with the location of lockers.
- The design of the Locker Area including services, lighting, switches, sensors, door openings, wall notices, and finishes must be thorough and coordinated.



## LOOSE FURNITURE, FITTINGS, EQUIPMENT

- j. 1 no. locker unit (overall size 2000mm x 405mm x 450mm) in 2 compartments to be provided per 2 pupils (1 compartment per pupil). It should be manufactured from 1.2mm cold rolled mild steel, folded, reinforced and fabricated to give adequate rigidity with single point lockable catch on each compartment door. Refer to DoE Loose Furniture for Post Primary Schools Specifications and Standards.

## 9.6 STUDENT SOCIAL AREAS

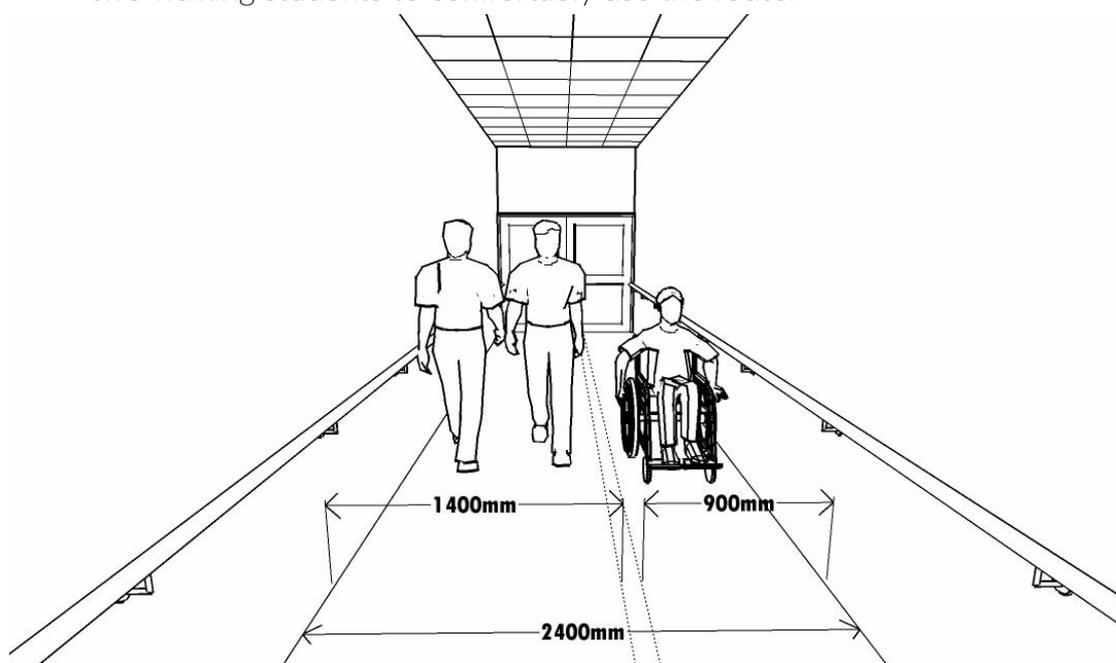
- a. Student Social Areas provide for social dialogue and relaxation for students. They may also be used for informal individual or group learning. Casual seating group layouts should be possible.
- b. It is critical that their use is not compromised by circulation pathways or access to lockers.
- c. They should be dispersed around the school and readily access at circulation nodes, and not in isolated locations to aid passive supervision.

## 9.7 CIRCULATION / INTERNAL DIVISIONS

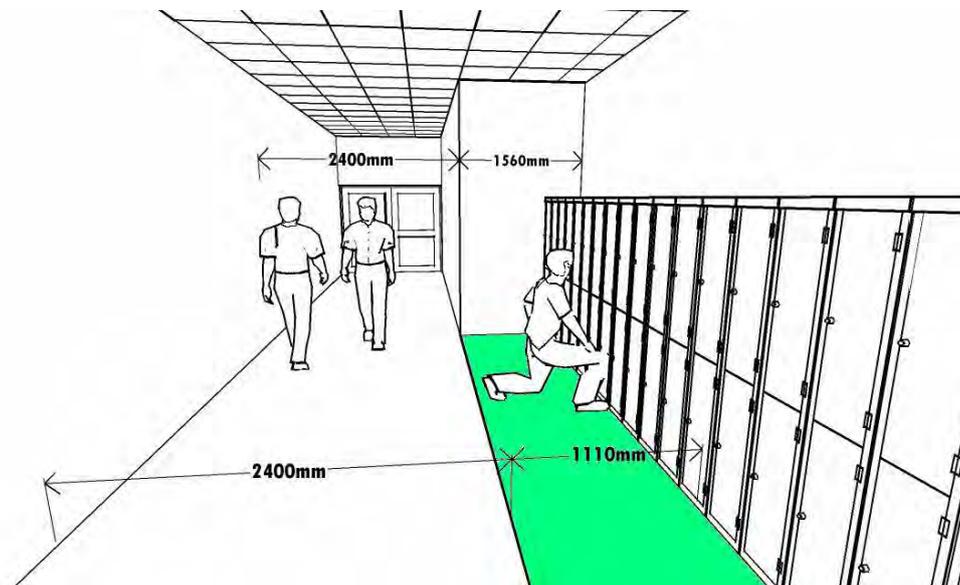
Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Varies - 2.4 minimum	As Schedule	2.7

### DESIGN CONSIDERATIONS

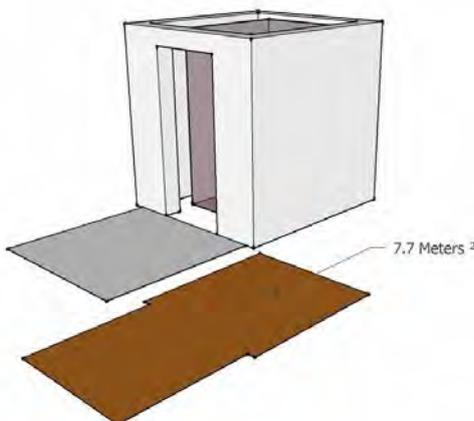
- a. The design solution for all schools should ensure ease of circulation and orientation/ way-finding for students, staff and visitors including those with special needs. On accessing the school via any entrance, it should be possible to move to any point in the school without meeting an area of congestion.
- b. All rooms should be directly accessed from a circulation route. The minimum clear width of corridors must be 2.4m. This clear width will allow a wheelchair user and two walking students to comfortably use the route.



- c. A minimum recess for lockers of 1.56m (as per diagram below) off circulation routes is required to ensure uninterrupted clear pathways, particularly in emergencies, and also for the safety of disabled or visually impaired. Access to lockers must not compromise Pupil Social Areas.



- d. A lift shall not reduce the minimum width requirements for circulation within its vicinity. A landing turning area of 1.8 m x 1.8 m must be available at entrance doors to lifts.



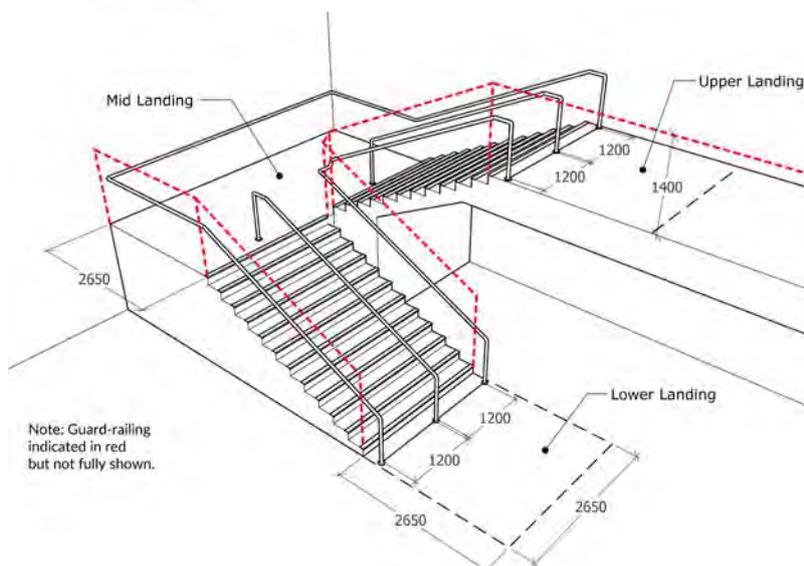
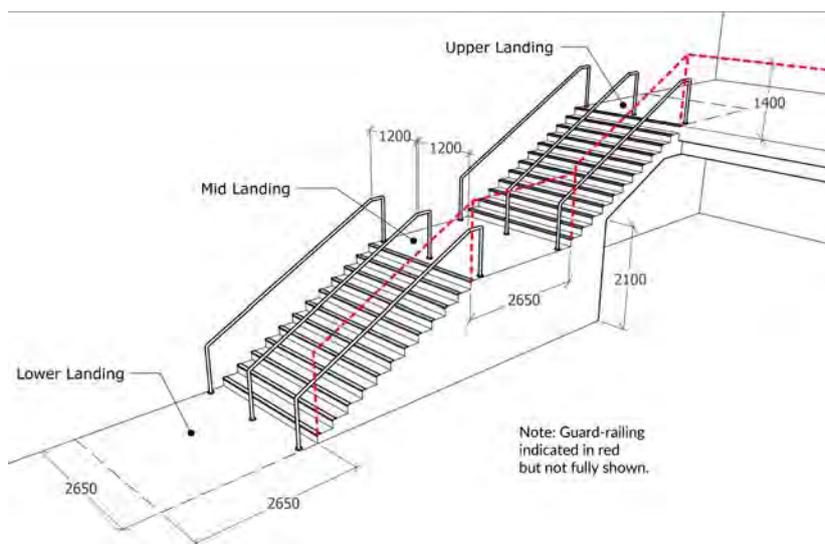
- e. Stairwells especially fire escape stairs at base or ground, any areas under stair flights or landings with restricted headroom under 2000mm clear height are to be enclosed to prevent both risk of collision and unauthorized storage of materials.
- f. Cross-corridor doors: All cross corridor doors, especially fire compartment doorsets, should be located and robustly designed so as not to interfere with the main circulation of the school. Adequate consideration is to be given to the location of and type of hold-open devices to avoid trips hazards, and to ensure the durability of the assemblies.
- g. Drinking water points should be distributed around school and located so as not to restrict main circulation.
- h. Refer also to DoE [TGD-020](#) General Design Guide for Schools (Primary & Post

Primary), Section 8 Universal Access & Section 11 Internal Layout.

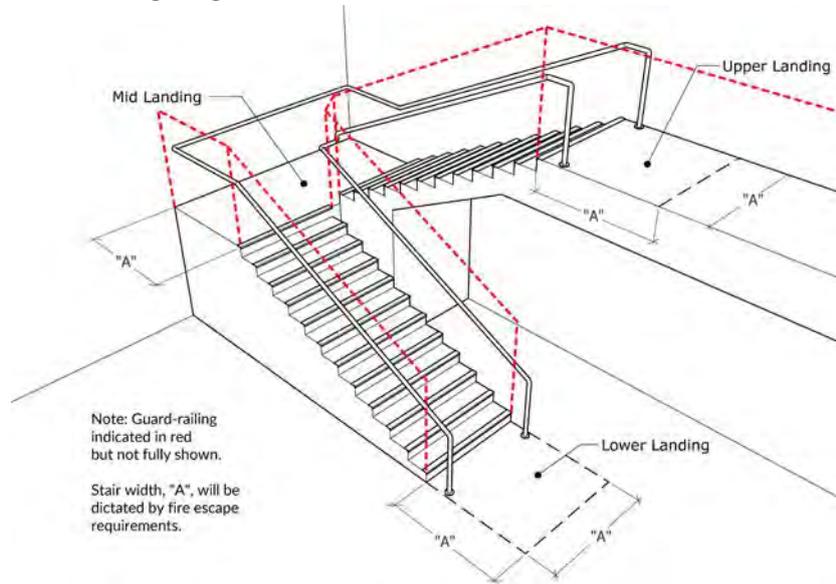
- i. The area of internal walls will occupy an area of up to 7% of the net area, to allow for structural wall/frame and for acoustic separation between spaces, refer to [SDG-02-05-03](#) Acoustic Guide. Where less than 7% of the net area is used for internal divisions, the unused area can be allocated to circulation and/or student social space.
- j. A suitable durable non-slip easy clean floor finish should be used in circulation and social areas. Refer to “Table 1”, earlier in this document.
- k. Circulation should be designed to facilitate future expansion without major alteration works to the existing building.

## 9.8 VERTICAL CIRCULATION

- a. The main accommodation staircase should have sufficient width to allow the anticipated student population to comfortably circulate as necessary. The staircase must fully comply with the requirements of the current related Building Regulations and should be designed to be an ambulant staircase. The suggested minimum width is 2,650mm, which will require an additional central handrail. The flights and landings should be protected by a suitable guarding that has a minimum height of 1,400mm.



- b. Fire escape stairs should have sufficient width to allow the safe escape of students, in compliance with the fire escape strategy and the approved Fire Safety Certificate. The flights and landing must be protected by guarding that have a minimum height of 1,400mm. The staircase must fully comply with the requirements of the current related Building Regulations.



## 10. ROOM DATA SHEETS (MULTI-USE / PE SPACES)

### 10.1 MULTI-USE/PHYSICAL EDUCATION HALL

#### SMALLER - 200 TO 449 STUDENTS

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	15.6 x 26.0	406	7.0

#### LARGER - 500 + STUDENTS

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	18.0 x 33.0	594	7.0

#### DESIGN CONSIDERATIONS

- a. The Multi-Use Hall is a teaching area that caters for the teaching and learning of appropriate Physical Education skills as an essential component of the curriculum, and also dance, music, drama performances. It may also be used for exhibitions, as an examination hall or for functions requiring a large assembly area.
- b. The Physical Education Hall must be physically integrated within the main school building where a new school is being built, with ease of access. The building design should facilitate its isolation for independent use after school hours. M&E services should be designed and zoned to facilitate such separation.
- c. Given the continuous use of this space for multiple functions, good quality daylight distribution is required with an average day lighting factor of 4% with the emphasis on an even and balanced light distribution throughout the space.
- d. Given the occasional high occupancy of this space, provision for adequate natural ventilation via high-level openable windows is essential. This must be fully modelled with any ancillary mechanical ventilation provided only when deemed necessary.
- e. A high level of co-ordination is required between Design Team members during the design development stages of the project. This is to ensure that provision is made in the tender documentation for mechanical and electrical services connections and structural fixings for any equipment being provided.
- f. Coordination between PE equipment supplier and main contractor is essential onsite to ensure the installation of equipment is catered for and runs smoothly e.g. structural drawings of the roof must be made available to the PE equipment supplier. Consultation between the school, the PE department and the design team should take place at the design stage, with regard to the layout of the different rooms related to Physical Education.
- g. Consideration should be given to the location of the whiteboards and the projectors that are required for the PE hall.
- h. The Physical Education Hall should have easy access to the changing rooms and to the related storage spaces.

## STRUCTURAL REQUIREMENTS

- i. The Design Team must ensure that adequate support is provided for basketball boards. The roof/ceiling structures must be capable of supporting the loads required for the listed furniture.
- j. Refer to the DoE [Equipment Lists & Specifications](#) for Multi-Use/Physical Education Halls i.e. 406m<sup>2</sup>, 594m<sup>2</sup>.
- k. The equipment loads for the main basketball goals are as follows:
  - The weight of a ceiling mounted basketball goal as specified ranges from 250 kg to a maximum of 300 kg depending on height of ceiling and span of main roof supporting members. This weight to be spread over 2 such members.
  - If the position of the basketball court, in relation to the roof supporting members, is such that the additional steelwork spans 3 main roof supporting members, then the total weight will be increased by 75 kg giving a total of 325 kg or a maximum of 375 kg.
- l. Where wall mounted 'practice' basketball goals are to be installed, then the wall must be of suitable strength to support a load of 200 kg on a cantilever arm of 4 m extension from the wall at a height of 4 m. The goals must be sideways folding for safety reasons.
- m. As a matter of policy the DoE do not promote or encourage the use of climbing walls or similar artificial climbing structures within Multi-Use/Physical Education Halls in second level schools. Accordingly there is no requirement to reinforce or strengthen walls or other structural elements of the building in order to facilitate the installation of such climbing walls or similar structures. Should a School authority wish to install such a facility, the School authority must enter into separate appropriate arrangements with the Design Team. The DoE will not be a party to such arrangements and will not be responsible for any costs whatsoever arising. Where a Design Team has been requested to enter into such an arrangement, all associated costs, including professional fees, must be separately identified in all cost plans.

## SPECIAL REQUIREMENTS

- n. A surface mounted Induction Loop System shall be provided on the walls in the Multi-Use/Physical Education Hall. Refer to DoE [TGD-031](#) Amendments to the M&E Building Services Guidelines [TGD-003](#) & ICT Infrastructure Guidelines [TGD-005](#) for Post-primary Schools, Section 26.2 Induction Loop System.
- o. Sharp and potentially dangerous corners must be avoided in the activity zone. Care should be taken to ensure that there are no projections that would prove hazardous while the hall is in use. All surfaces shall be free of projections and sharp edges e.g. at columns, service conduits, switches, power sockets, door openings, etc., from finished floor level to a minimum of 2.25 m above finished floor level. Ledges should be avoided or where unavoidable shall be sloped.
- p. Doors should open outwards (away from Multi-Use/Physical Education Hall). Doors and jambs should be brought flush with adjacent wall surfaces. Door furniture should be flush or recessed. Where it is not possible to have doors and jambs flush

with the walls, then the sharp corners may be rounded by a hardwood fillet or by a bull-nose brick. Rebound panels should be fitted above and below the panic bolts to protect players' shoulders and heads from striking exposed doorframes. Jambs and architraves must be rounded when a flush face to the rebound zone cannot be achieved. Door saddles shall be avoided in all areas. Entrance doors should not be positioned in the centre of the end walls to avoid conflict with game goals locations.

- q. Floor Anchors and wall anchors (where required) should be fitted with due consideration given to the floor materials specified.
- r. Viewing windows must be of safety glass, without projections, and located so as to minimise glare.

## ACOUSTICS

- s. The Physical Education Hall should not be located beside noise sensitive rooms e.g. teaching spaces particularly Music. Consideration should be given to the internal acoustics of the hall so that it may be used as an examination hall (i.e. break-in noise, reverberation, etc.). Refer to DoE [SDG-02-05-03](#) Acoustic Performance in Schools. Acoustic absorbing surfaces must be impact resistant. Consideration should be given to the acoustics for performance based assessment recordings at Junior and Senior cycle.

## FINISHES (INCLUDING FLOOR)

- t. The floor should be sprung maple/beechn or other suitable material Refer to the DoE [Equipment Lists & Specifications](#) for Multi-Use/Physical Education Halls i.e. 406m<sup>2</sup>, 594m<sup>2</sup>. For general PE activities appropriate floor resilience and finishes to ensure appropriate traction and slip resistance are required (DIN 18032 and BS 7044).
- u. Wall finishes must be durable, impact resistant, and easily cleaned. All surfaces shall be non-abrasive for a height of 2.25 m above finished floor level.
- v. Ceiling finishes must be consistent with acoustic requirements and be impact resistant as necessary.

## MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- w. A zone free of all Mechanical and Electrical services and other fittings shall be provided above the basketball court so as to allow the basketball units to fold flat in the "UP" position. Refer to Basketball Markings and Dimensions layout drawings below.
- x. All Mechanical and Electrical (M&E) services and other fittings shall be free of sharp edges.
- y. For mechanical services i.e. space heating if standard LPHW radiators are chosen they should be accommodated in an appropriately sized recess in the walls, with pipework fed from a manifold in an adjacent accessible area, with continuous under floor pipe runs without connections. Other Space Heating solutions will employ pipework and equipment at high level and outside the occupied zone. All space heating systems must comply with requirements of [SDG-02-05-03](#) Acoustic Performance in Schools.

- z. For Electrical Services equipment within the inhabited zone should be kept to a minimum, and where necessary should have rounded edges, and be robust enough to take impact from users and game balls. Where necessary equipment within this zone should have wire guards to eliminate damage due to user or ball impact. Electrical switchgear and controls for PE Equipment shall be mounted in suitable locations in the Multi-Use/Physical Education Hall Control Centre and shall not be installed in the Multi-Use/Physical Education Hall or the Equipment Store.
- aa. An Induction Loop system shall be provided in the Multi-Use/Physical Education Hall with the controls located in the Control Centre.
- ab. The loop cable shall be surface mounted in suitably sized plastic mini-trunking located at a maximum height of 2.5 m above finished floor level. Under no circumstances should the loop cable be run in steel conduit or in the floor, as the system will not work properly under these conditions. Refer to DoE [TGD-031](#) Amendments to the M&E Building Services Guidelines [TGD-003](#) & ICT Infrastructure Guidelines [TGD-005](#) for Post-primary Schools, Section 26.2 Induction Loop System.
- ac. Light fittings shall be placed where they will not hinder vision and shall also be coordinated with the layout of the mechanical services. The level of lighting shall not be less than 300 lux, measured 1.0m above the floor finish. Suitable lighting for recording performance based assessments should be included.
- ad. Spur outlets shall be provided for the electrical supplies to the basketball scoreboard and shot clocks. These shall be located 6.0m above floor level and controlled by switches placed at convenient positions in the Multi-Use/Physical Education Hall Control Centre.
- ae. Final connection points for electrical supplies to basketball units shall be located at each basketball unit location with control switches located in the PE Teacher Room. The control switches should be located so that it is possible to observe the operation of both basketball units. Refer to DoE [TGD-031](#) Amendments to the M&E Building Services Guidelines [TGD-003](#) & ICT Infrastructure Guidelines [TGD-005](#) for Post-primary Schools, Section 20.1 Multi-Use/Physical Education Hall.
- af. The supply, installation and final electrical connections of basketball units will be the responsibility of the suppliers of PE Equipment and will be carried by them.
- ag. Built-in sound system with wireless connection for multi-use (exams, assemblies, teaching and learning).
- ah. Refer to the [Briefing Notes](#) in the DoE [Equipment Lists & Specifications](#) for halls i.e. 406m<sup>2</sup>, 594m<sup>2</sup>.

## FURNITURE & FITTINGS

- ai. A (semi-transparent) divisional net is required, normally positioned at the centre of the hall. It is preferable to install it under a main roof beam and free of all Mechanical and Electrical services. Refer to Basketball Markings and Dimensions layout drawings below. On each side of this net provide two short throw projectors, fitted in protective surrounds.
- aj. Refer to Basketball Markings and Dimensions and other layout drawings and guidance notes below for Multi-Use/Physical Education Hall court layout markings

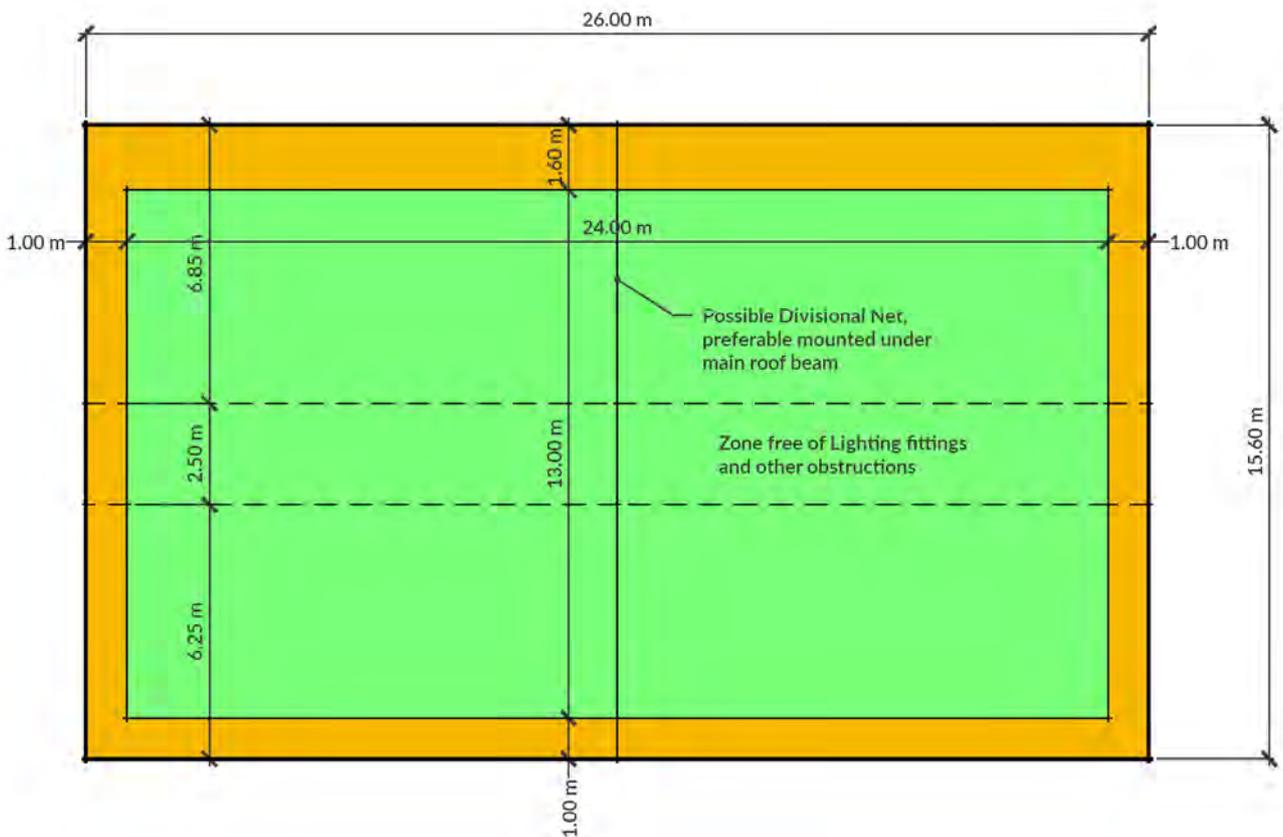
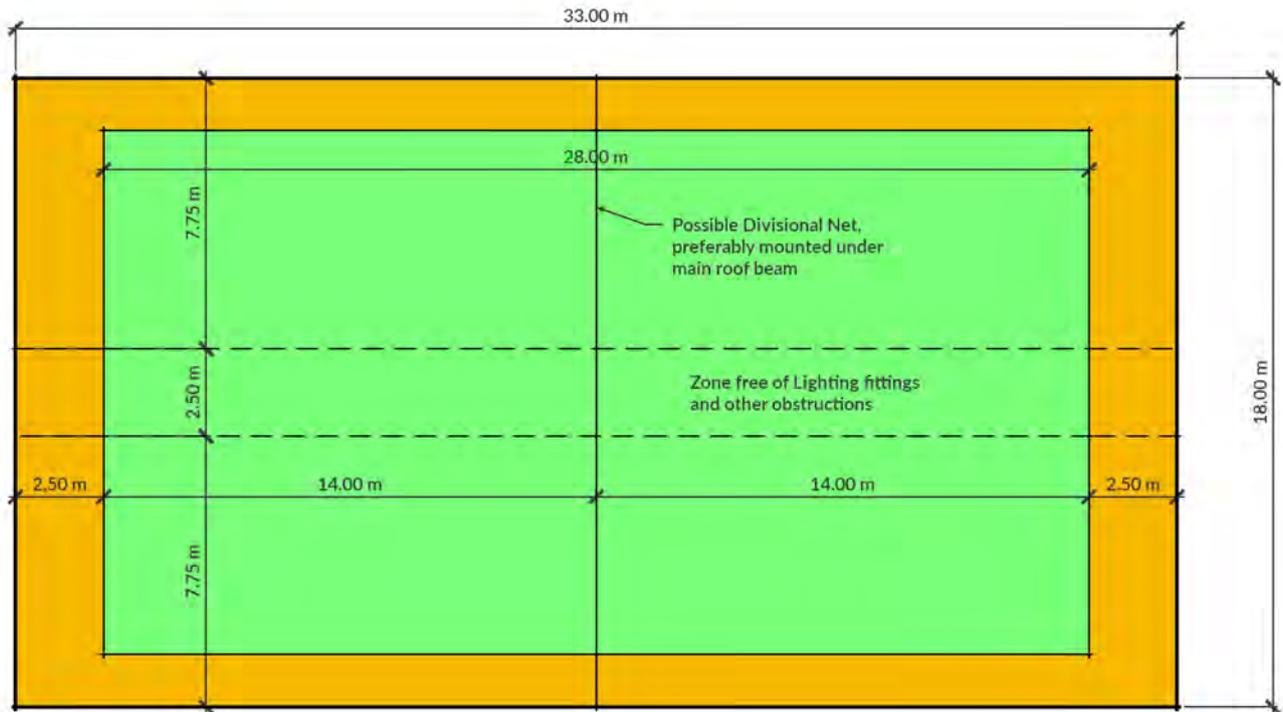
and dimensions.

- ak. For Volleyball/Badminton Posts, wall anchors may be necessary at 2.4 m high on each side of the hall at the centre line.
- al. For 5-a-side Football Goals anchor points are required in the floor or at each gable end, at a low level. Give the option of hockey goals, refer to PBU\_PE594 equipment list.
- am. For Competition Volleyball Posts, at a minimum, floor anchor points are required which will be approximately 150 mm deep for the basic anchor and approximately 400 mm deep for the full international specification. This work can be completed after the main contractor is finished but the mortises should be formed in the sub-floor before the floor covering is laid.
- an. Fitting of ground anchors shall be carried out in conjunction with the flooring contractor using the following guidelines:-
- Where timber floors are laid without careful control of temperature and humidity, then the anchors should not be fitted for many weeks or longer after the floor is laid. Periodic measurements should be taken which monitors movement and anchors should only be fitted after all movements have ceased. Anchors which are finished flush with finished floor levels should only be fitted when the timber floor is considered stable. In all other cases, the anchors should be finished below the level of the timber strip and a stainless steel or brass cover, a minimum of 5 mm thick, used to conceal the anchor.
  - For sprung timber floors with limited movement possible after the floor is laid or for fully or semi-sprung timber floor where uniform temperature and humidity control can be assured, the anchors should be fitted with the floor.
  - Anchors in solid concrete floors should be fitted, where possible, before the final floor covering is laid in order to avoid drilling the slab afterwards and destroying the adhesive bond in the vicinity of the drilled hole.
- ao. For proper co-ordination of court marking and installation of equipment it is essential that the same supplier be chosen for both.
- ap. It will be necessary for the School authority to liaise with both the Architect and the Main Contractor to ensure that the court markings are completed at the correct time.
- aq. For all floor types a compatibility test between floor and line marking paint is required before work commences.
- ar. Six large magnetic white-boards to be provided, to create six learning zones for group work and project tasks. The short throw projectors would face two of these boards.

## EQUIPMENT LIST

- as. Refer to the DoE [Equipment Lists & Specifications](#) for Multi-Use/Physical Education Halls i.e. 406m<sup>2</sup>, 954m<sup>2</sup>.

Basketball Court layout markings and dimensions in metres:

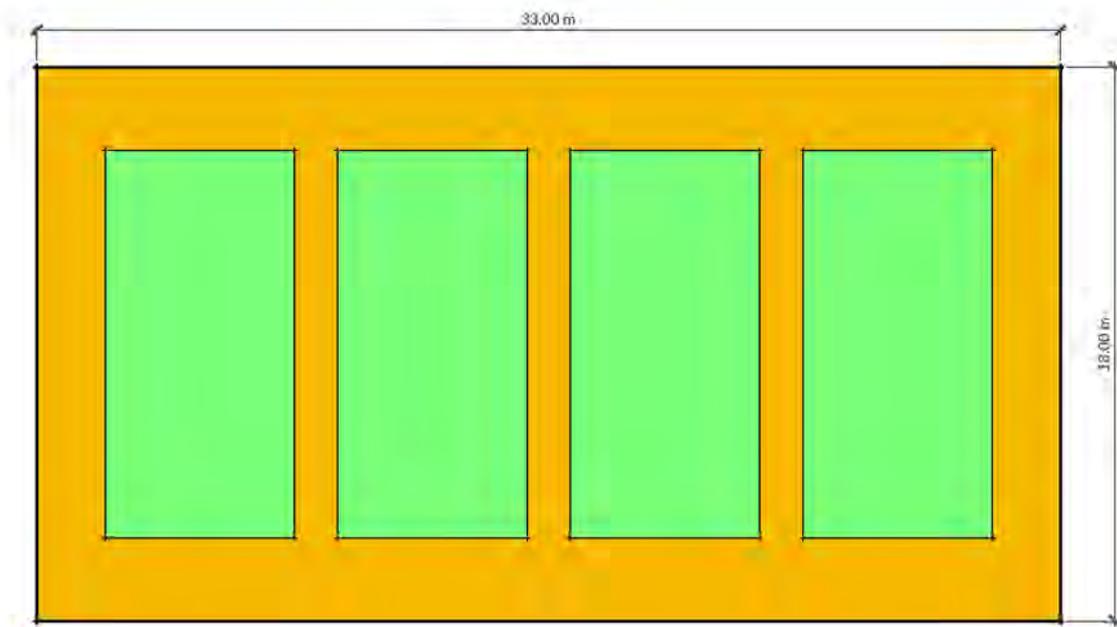


Multi-Use/Physical Education Hall	406m <sup>2</sup>	594m <sup>2</sup>
Court Size (m x m)	24x13	28x15
Distance between each end line and end wall (m)	1.0	1.5
Distance between one side-line and one side wall (m)	1.0	1.5
Distance between second side-line and second side wall (m)	1.6	2.5
Minimum height of ceiling or lowest obstruction (m)	7.0	7.0

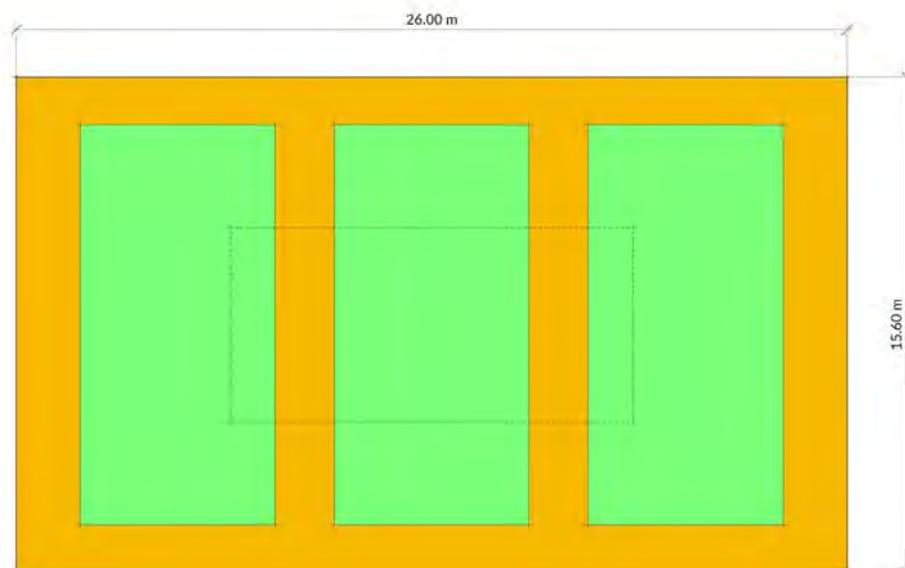
Note;

The basketball goals shall be ceiling mounted and electrically operated. The backboards shall be made of suitable transparent material. One scoreboard and 2 shot clocks shall be provided.

**594m<sup>2</sup> MULTI-USE / PHYSICAL EDUCATION HALL**



**406m<sup>2</sup> MULTI-USE / PHYSICAL EDUCATION HALL** (Note: Courts offset in hall by 0.6m)



Badminton Courts layout markings and dimensions in metres (594 m<sup>2</sup> Hall):

	Leisure	National Competition
Number of courts	4 across hall	Alternate courts
Court size (m x m)	13.4 x 6.1	13.4 x 6.1
Wall from baseline (m)	2.3	-
Wall from side-lines (m)	2.2	-
Between parallel courts (m)	1.4	-

Badminton Courts layout markings and dimensions in metres (406 m<sup>2</sup> Hall):

	Leisure	National Competition
Number of courts	3 across hall	Lengthwise centred in hall
Court size (m x m)	12.6 x 6.1	13.4 x 6.1
Wall from baseline (m)	1.5	6.3 centred
Wall from side-lines (m)	2.0	4.75 centred
Between parallel courts (m)	1.85	N/A

### SUMMARY PLAYING COURT SIZES

- at. The following is provided for information purposes only so that the School authority can decide on the games that can be played safely within the provision of the PE facilities.
- au. The following sizes are the overall playing sizes including run-offs, but not including provision for spectators.
- av. All court sizes are International except where otherwise stated.

Sport	Hall Size (m x m)	Court Size (m x m)	Clear Height (m)
Basketball	33 x 18 (min.)	28 x 15	7.0
Volleyball	24 x 15 (recreational)	18 x 9	7.0
Football	25 x 15 (recreational)	25~42 x 15~25	7.0
Badminton	18 x 10.5	13.4 x 6.1	9.1
Hockey	40~50 x 22.2~26.2	36~44 x 18~22	7.6
Netball	34.5 x 18.25	30.5 x 15.25	7.6
Tennis	39 x 20.73	23.77 x 10.97	9.0

## 10.2 P.E. EQUIPMENT & GENERAL STORES

### P.E. EQUIPMENT STORE

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Varies	40	2.7

### GENERAL STORE

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Varies	20	2.7

## DESIGN CONSIDERATIONS

- a. The PE Store should be provided directly off the Multi-Use/Physical Education Hall for the storage of PE equipment and furniture. The room should be rectangular in shape with no recesses. The depth of the store should not exceed 4.0 m. To maximise shelving, no windows should be provided. The appropriate brackets, shelving, and marked space for trolleys and mats, should be provided in accordance with the PE equipment list.
- b. The PE Store doors should be located to minimise circulation and maximise storage and should be flush to the walls of the hall to minimise injury risk. Normally the doors should not be directly behind goals. The opening width of this store should be adequate to allow the transfer of large pieces of equipment in and out of the store without difficulty. The PE Store should be secure and lockable.
- c. A General Store(s) shall be provided for the storage of furniture, exam furniture, etc. It should be easy to transport furniture to and from the Multi-Use/P.E. Hall to this storage area.
- d. The Cleaner’s Store area will contain cleaning chemicals and therefore must be separated from general storage and not used for storing furniture, equipment, etc. It should be easily accessible from the Multi-Use/Physical Education Hall foyer, and located off circulation.
- e. The P.E. Equipment Store and the general store must not be combined

## FINISHES

- f. Floor finishes should be consistent with the room use. Subject to Health & Safety considerations and manufacturer’s recommendations a sealed concrete floor may be suitable.
- g. No ceilings are required.

### 10.3 MULTI-USE/P.E. HALL CONTROL ROOM (incl. P.E. TEACHER’S FACILITY)

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Varies	12	2.4

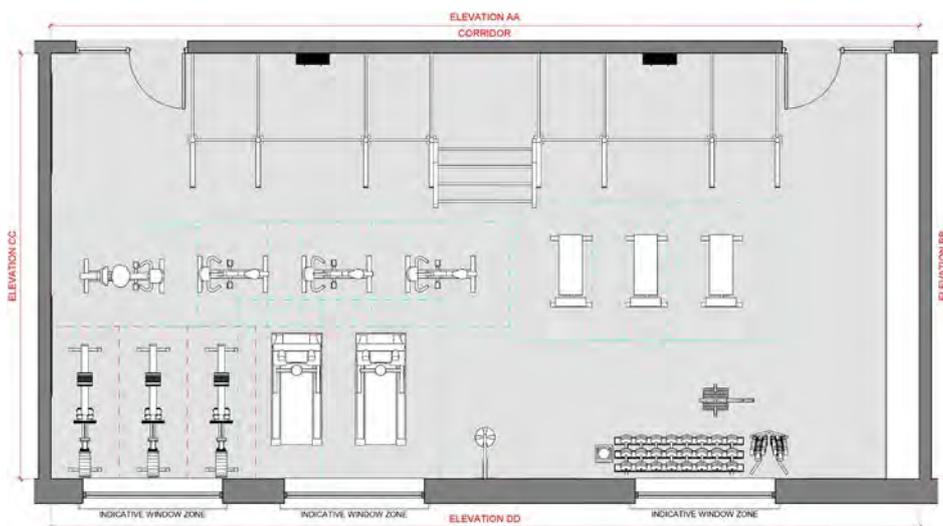
## DESIGN CONSIDERATIONS

- a. The Multi-Use/Physical Education Hall Control Room will be the main control and supervisory point for everyone entering and using the Multi-Use facility. It will also be used as an office base for the PE teacher.
- b. It must be located off the Multi-Use/Physical Education Hall foyer entrance area.
- c. The Multi-Use/Physical Education Hall Control Room must have a direct view by means of a glazed panel to the Multi-Use/Physical Education Hall. Ideally it should also directly overview the Physical Education Lab. Where practicable it should also have a view along the circulation routes by means of glazed viewing panels.
- d. The PE Teacher’s dedicated changing facility with level Universal Access shower, WC and WHB should be located close by to the Control Room.

- e. Floor finishes should be anti-static carpet, sheet flooring or other equal materials consistent with the room use.

### MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING

- f. The control switches for the basketball units should be located so that it is possible to observe the operation of both basketball units.
- g. The Multi-Use/Physical Education Hall Induction Loop System controls shall be located in the PE Store on a suitable shelf.
- h. Local controls for the mechanical services in the hall and ancillary accommodation may be located in an appropriate ancillary space.



### 10.4 PHYSICAL EDUCATION LAB

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	11.4 x 11.4	130	3.15

#### DESIGN CONSIDERATIONS

- a. The Physical Education Lab should be located within easy reach of the Multi-Use/Physical Education Hall and Changing Rooms, ideally on the same ground level to support teaching, learning and assessment in Physical Education, and to encourage participation and use by all.
- b. As the Physical Education Lab may be used outside school hours, the location and access should facilitate controlled access while the school and/or Multi-Use Hall are closed. The use of the space outside school hours would be suitable for educational purposes, such as coaching courses.
- c. Quality of environment for users engaged in exercise routines would benefit from external views and natural daylighting. The Physical Education Lab is focused on learning through physical activity and should not be located on a balcony, as spectator viewing is not a key consideration.
- d. Natural ventilation should be provided via openable windows. Mechanical ventilation should not be necessary.

- e. Safe Operation Zones for fitness machines shall be provided as outlined on the DoE indicative room layout drawing No. 18.
- f. It should be possible to remove or install equipment without hoists or the removal of windows.

**MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING**

- g. A Drinking Water Service shall be provided located in the circulation area, with outlet capable of allowing water bottles to be filled. An adjacent 13 Amp small power outlet shall be provided to allow the future provision of ‘chilled water’.
- h. Allow for the installation of an overhead projector in line with the learning wall (right hand side of room below), outlined in the room layout below.

**10.5 CHANGING ROOMS AND SHOWERS**

**CHANGING ROOMS AND SHOWERS**

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Varies	40	2.7

**TOILET CUBICLES (OPENING OFF CHANGING ROOMS)**

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	2 no @ 2m <sup>2</sup>	4.0	2.7

**DESIGN CONSIDERATIONS**

- a. The Changing Rooms and Showers should have access from the playing fields and outdoor physical education spaces, as well as from circulation within the school, and each of the Changing Rooms should be capable of comfortably seating 30 people.
- b. As the community may use the Multi-Use/Physical Education Hall in the evenings, the Changing Rooms should be capable of being used as either male or female changing rooms. 4 No. showers with cubicle dividers should be provided opening directly off each Changing Room. Careful placement of mirrors should avoid reflected vision into cubicles.
- c. One directly accessible WC should be provided in each changing area (opening directly off the Changing Room without having to pass through the foyer).
- d. The layout of the changing areas, WCs and showers should be designed to minimise the likelihood of vandalism and/or bullying. Solid cubicles would be preferred.
- e. Refer to Section 6.2 Sanitary Facilities above and DoE [SDG-02-06](#) Guidelines and Standards for Sanitary Facilities in Post-primary Schools for information on WCs and Toilet/Shower for Assisted User. (These facilities should open directly off main circulation.)
- f. Where overall layout permits, natural ventilation via openable high-level obscure windows should be available in the changing areas.

- g. Mechanical extract ventilation is required in the actual shower areas.

**SPECIAL REQUIREMENTS**

- h. Design Team members must use the appropriate materials to ensure durability, safety and a hygienic environment. Design of sanitary fittings and their fixings should be robust and appropriate to the school environment.
- i. The windows should be at high-level with obscure glass, and when opened should not provide a view into the shower area.

**FINISHES**

- j. Floor finishes should be tiled or other / water resistant non-slip flooring especially when wet, and consistent with room use. Refer to “Table 1” earlier in this document.
- k. Walls should be resistant to wear, and easily cleaned. The wall finish must be durable and water resistant consistent with room use.
- l. The ceiling and any exposed Mechanical & Electrical pipes, conduit of equipment must be moisture resistant consistent with room use.

**MECHANICAL & ELECTRICAL BUILDING SERVICES ENGINEERING**

- m. Mechanical extract ventilation shall be provided over the shower areas.
- n. Heating in changing areas shall be by suitably sized low-level pipe coils. Radiators should be avoided.

**FITTED FURNITURE**

- o. Changing benches and coat hooks for 30 pupils in each changing room.

**10.6 MULTI-USE/PHYSICAL EDUCATION HALL CIRCULATION AND INTERNAL DIVISIONS**

Layout Number	Depth x Width (m)	Area (m <sup>2</sup> )	Min. clear height (m)
N/A	Varies	75	2.7

**CIRCULATION/ INTERNAL DIVISIONS**

- a. The overall Circulation/Internal Divisions area includes the foyer. The design solution should ensure ease of circulation between the Multi-Use / P.E. Hall and the changing areas, and should ensure that the changing areas can be accessed without passing through the Multi-Use/Physical Education Hall first.
- b. A Drinking Water Service shall be provided in the Foyer, with outlet capable of allowing water bottles to be filled. An adjacent 13 Amp small power outlet shall be provided to allow the future provision of ‘chilled water’.
- c. The opportunity to locate the General Purpose Area adjacent to Multi-Use/Physical Education Hall and utilise as a spectator or spill-out/foyer type area to facilitate the entry and dispersal of large numbers of people for functions, might be considered.

## 11. EXTERNAL FACILITIES

### 11.1 SITE

- a. The Design Team should make the maximum use of the site provided which should be reflected in their design proposal. The layout should be designed to minimise the need to dispose of excavated material off-site. Refer also to DoE [TGD-020](#) General Design Guide for Schools (Primary & Post Primary), Section 7.0 Construction & Demolition Waste Management.
- b. The site constitutes the building, playing fields, any agreed supplementary area, and access which should be designed to ease the management of the school. Sites should generally be of regular shape, reasonably level, have good road frontage, be without obstruction and have reasonable space for developing a set-down/pick-up area.
- c. In assessing site suitability, the location and adequacy of public utilities, which include, Electricity, Foul & Surface Water drains Mains Water, Natural Gas, Telecom, and the cost of connecting into them, shall be taken into account.

### 11.2 LANDSCAPING

- a. Provision should be made for the preparation and landscaping of the area around the school and between the school and the site entrance.
- b. Such landscaping should be simple, cost effective and easy to maintain. The Design Team should consider the natural paths and routes through the site to the school entrances in determining the appropriate location and the extent of paths provided. Large areas of hard landscaping should be avoided.
- c. Design Teams should consider the design of landscaping elements to promote more imaginative play and complement the teaching environment in their design proposals. External space for planting, weather recording, sundials etc., should all be explored.
- d. An allowance for planting of trees and shrubs should be made. Such shrubs and trees should help define the site boundaries and external circulation routes, and should be hardy, durable and low maintenance.
- e. The locations of trees and shrubs close to the building should be carefully planned so as not to interfere with average daylight levels in teaching spaces and offices as they grow and mature. They should also be chosen and located to avoid compromising any CCTV system which may be required to monitor the external elevations of the building.
- f. In a new school site, the cost of the main entrance gates and front boundary treatment is included in the External Works Allowance.
- g. The provision of other boundary fencing and walls DoE not form part of the External Works Allowance. Where for security reasons, boundary protection is required, the cost should be minimised, subject to the suitability of the boundary treatment for the location. If such boundary protection is still required, the nature, cost and scope of the works should be indicated at the earliest stage and a submission made to the

DoE justifying the additional cost of such works.

- h. Consultation with PE Department for integration of orienteering controls into the landscaping to support teaching and learning in orienteering and other subject areas, such as a maths or science trail. Consideration should be given to an Irish Heart Foundation “Sli na Slainte” walkway during landscaping.

### 11.3 TRAFFIC MANAGEMENT

- a. Refer to DoE [TGD-020](#) General Design Guide for Schools (Primary & Post Primary), Section 10 External Circulation.

### 11.4 BICYCLES

- a. The use of bicycles is encouraged and secure and covered cycle parking facilities must be provided. Numbers in accordance with Planning Permission Conditions. Bicycle racks these should be adjacent to the student entrances and overlooked for security.
- b. Refer to DoE [TGD-020](#) General Design Guide for Schools (Primary & Post Primary), Section 10 External Circulation.

### 11.5 CAR PARKING

- a. Refer to DoE [TGD-020](#) General Design Guide for Schools (Primary & Post Primary); Section 10 External Circulation for guidance on Car-parking & Set-down/Pick up areas.
- b. Provision of car parking should be as per schedule of accommodation and subject to policy of Local Authority Development Plans, particularly in urban areas.
- c. At least two designated car-parking space to be provided for disabled users (i.e. holders of disabled parking permit) from the allocated number and the total number of such spaces should be in accordance with the Building Regulations and the National Disability Authority guidelines.
- d. Car parking should be designed to utilise as far as possible existing site access roads or in a new school the access road to the main entrance. Spaces should be designed in a cost-effective manner.
- e. Car parking should be located adjacent to the staff and visitor entrances to the school. If a separate staff entrance is provided, the location of this access should be convenient to the car park. Separate car parking for staff and visitors are not recommended.
- f. The design team shall identify an area within the proposed car parking allocation which will facilitate electric vehicle charging at a future date. This area should be located as near as possible to the school building electrical switch room in order to minimise electrical power runs. It should also serve, if possible, a universal parking bay. The principle of design will be based on a local mini pillar at the car bays with localised wiring to future chargers.

The design shall include, 1 dual outlet charger located so that it can be used from a standard parking bay and from an accessible bay. Ducting (only) locally from the

mini pillar to cover a further 1 in 5 of parking bays, to facilitate the future installation of additional charging posts. Infrastructure for electrical vehicles shall fully comply with the DoE design guidelines, in particular [TG Design Note 2020 01](#).

- g. The external site lighting installation shall be zoned as outlined below to allow flexibility in its operation and also to conserve energy.
- Amenity lighting to pathways, around the perimeter of the building and at entrance doors.
  - Car park lighting.
  - Security Lighting.

## 11.6 EXTERNAL STORE, COVERED AREA AND YARD

### EXTERNAL STORE (10m x 5m = 50m<sup>2</sup>)

- a. An External Store should be provided adjacent to the practical subject rooms and accessible from within the schoolyard. This store should be provided with lighting, natural ventilation, and low level shed heating to keep moisture content of the timber stored within, below 19%.

### COVERED AREA (6m x 5m = 30m<sup>2</sup>)

- b. Where a Construction Studies & Wood Technology Room is to be provided, a Covered Area in the enclosed yard adjacent to this shall also be provided. An external tap should be provided close to this area, for use with wet trades such as block laying, plastering, etc.

### BIN STORE

- c. A walled in and covered secure bin store should be provided.

### YARD

- d. An enclosed and lockable Yard shall be provided. The area is dependent on the approved design solution, with a minimum area of 50 m<sup>2</sup>. The yard should be paved in durable concrete bays to permit use as base for student block/brickwork projects. Drainage of this yard to be carefully considered including the requirement for silt-traps.
- e. Where practicable this shall enclose the external entrances to:
- Construction Studies & Wood Technology Room.
  - Technology Room.
  - Engineering Room.
- f. If practicable, any fuel storage shall be located in the enclosed yard and the Boiler house should be accessed from it.
- g. Minimisation of external vehicular circulation should be a consideration in locating the enclosed yard.

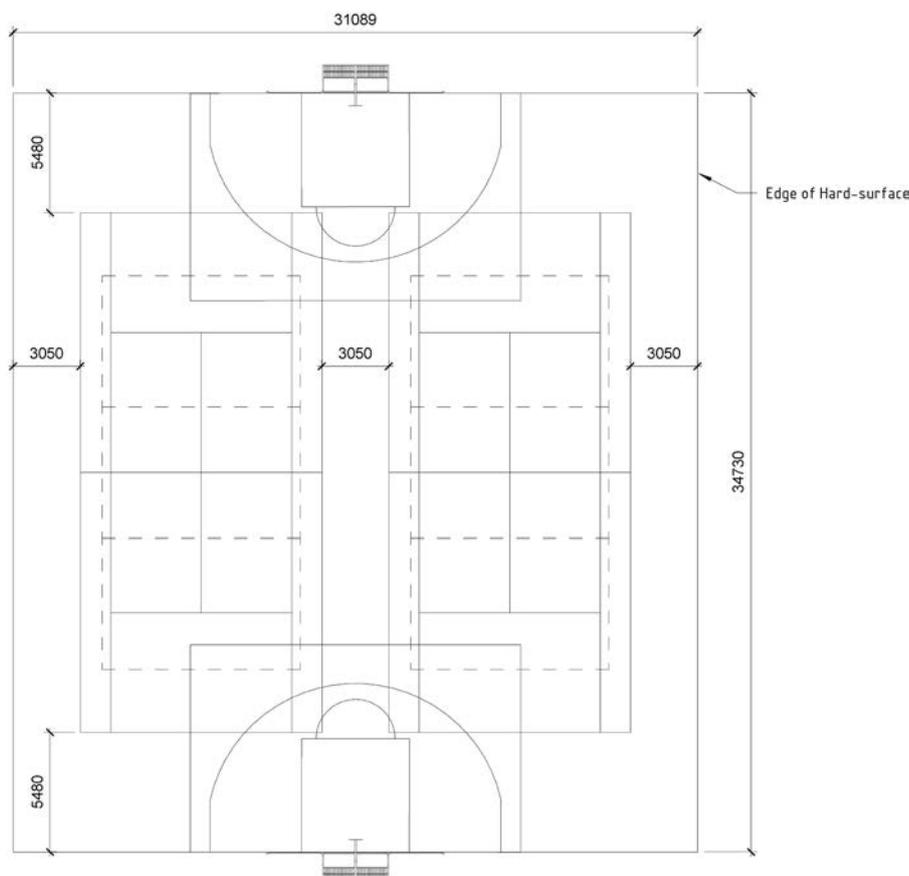
## 11.7 PHYSICAL EDUCATION EXTERNAL FACILITIES

- a. On restricted urban sites alternative solutions may be necessary subject to agreement of Planning & Building Unit.

b. The total area of hardstanding for each range of number of pupils is given below:

Pupils	Total Area (m <sup>2</sup> )
Less than 250	1080
250 ~ 349	1530
350 ~ 499	2040
500 ~ 799	2550
800 +	3060

- c. Within the area of hardstanding should be placed the maximum number of tennis courts as possible (i.e. for schools with less than 250 pupils, the hardstanding area is 1080 sq.m, and this will allow for two tennis courts).
- d. Lines marking a volleyball court should be provided within the area of each tennis court. The lines of each sport must be clearly distinguishable from each other. The use of different colour lines, being the preferred option.
- e. With every two tennis courts provided, two Multi-use Games Area (MUGA) units should also be provided. A proposed layout of two tennis courts, with volleyball courts, and two MUGA units is shown below.



**2 Possible Layout (2 Tennis & 2 MUGA)**  
1 : 200

f. MUGA equipment to be provided should consist of a 3m high basket-ball hoop, a ball retaining fence, and a goal that is suitable for Futsal Soccer / Hockey / and IHF

Handball. An image of a suitable MUGA design is shown below.



- g. The hardstand areas should be properly graded, drained and appropriately lined. Adequate surface water drainage shall be provided from all hard play areas without compromising the safety of the user during play. In providing such drainage, consideration must be given to the possibility of some games being played across the surfaces.
- h. In an existing school, the existing hard courts should be retained where possible. If additional courts are required to provide the total specified in the Schedule of Overall Accommodation, the cost of these courts should be assigned to the External Works Allowance.
- i. Where possible, sprinting lanes should also be marked across the playing courts. These should be as long as possible. The marked lines of the sprinting lanes should be clearly distinguishable from the tennis / volleyball / basketball lines.
- j. Laying out a variety of courts within a single multi-use games area makes supervision easier and extends the range of games. The location of the hard play area should be considered in the context of future expansion of the school in order to eliminate future disruption, nugatory expenditure, and rebuilding at a later stage.
- k. The hard courts should be located adjacent to the external vehicular circulation and also to the changing rooms associated with the PE facility. Access from the Changing Rooms to external play facilities should be possible without going through the Multi-Use/Physical Education Hall or the school.
- l. Hard-play areas may also be designed to cater for occasional use as overflow car parking and should be located adjacent to the external vehicular circulation. A 2.5 m high paladin type plastic coated chain link fence around the courts for ball arrest, with lockable access gates should be provided.
- m. A 150mm duct with draw wire should be provided to allow for possible future floodlighting to hard play areas from the nearest internal electrical services position

(e.g. Boiler house/Switch Room/Store, etc.).

## 11.8 PLAYING PITCHES

- a. Where site area and configuration permits, an area should be reserved suitable for use as a practice playing field. The levelling and preparation of this area is not covered by any of the cost limits. Costs to be agreed with Planning & Building Unit at Stage 1 of the project.
- b. Access from the changing rooms to the pitch should be possible without going through the Multi-Use/Physical Education Hall or the school.
- c. The following data on sizes of playing areas are given for information purposes. (An Appropriate Safety Zone around the playing area for each game should be allowed.)

### PLAYING PITCHES (not part of schedule – for information only)

Playing Pitches	Playing Area (m <sup>2</sup> )
Gaelic Games	130~145 x 80~90
Soccer	90~120 x 45~90
Hockey	91.44 x 54.86
Rugby	144 x 69 (Playing + in-goal area)



