AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA | DEPARTMENT OF EDUCATION AND SCIENCE

Planning & Building Unit

GENERAL DESIGN GUIDELINES For POST PRIMARY SCHOOLS

First Edition
February 2004

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1 Introduction

1.1 Introduction

1.1.1 The General Design Guidelines for Post Primary Schools contains information on school design, on room functions, layouts and inter-relationships, and on procedures and costs. It is for issue to school authorities (hereinafter referred to as the Client[1]) and to design teams and is intended for use in the design of new schools and extensions to existing schools.

1.1.2 The general design guidelines should be read in conjunction with the:-
- Schedules of Accommodation
- Design Team Procedures (DTP)
- Department of Education and Science Standard Room Layouts
- Approved cost limits applicable to the project
- Mechanical & Electrical Building Services Guidelines for Post Primary Schools

1.1.3 The above documents are available from the Department of Education and Science.

1.1.4 These guidelines will apply to projects where a decision to commence architectural design and planning has been confirmed in writing by the Planning and Building Unit. They are intended as guidance to assist in the design and proper planning of buildings in response to the educational needs of a particular school.

1.1.5 Where it is proposed to construct a new school these guidelines should be applied in full.

1.1.6 In the case of existing school buildings where an extension, conversion or renovation is proposed, a flexible pragmatic approach will be required. The dimensions and areas herein will apply in full to the new build portion of the project. The dimensions and areas in the existing building will be retained except where the educational needs specify otherwise.

1.1.7 In applying these guidelines to projects, clients and design teams will be obliged to comply in full with the current Design Team Procedures and other guidance issued by the Department.

1.1.8 The scope of the building project will be based on the schedule/s of accommodation agreed between the Client and the Planning and Building Unit.

1.1.9 Detailed architectural design and planning shall not commence until such time as the Department has agreed in writing the educational, architectural, building engineering services and economic parameters of the project.

1.1.10 The appendix – "Current Area Norms" contains a summary of current areas and area limits. **The current areas and area limits apply to new build only** and are net room sizes, i.e. measured from face of wall to face of wall. It is not the Department's intention to increase the size of rooms that were designed in line with the "1984 Room Dimensions and Areas". (Refer also to Section 7 for further details on current areas and area limits.)

[1] In the case of Community and Comprehensive Schools the Minister for Education and Science is the Client, but for the purposes of this document the term "Client" shall also encompass the School Authorities.

1.1.11 The appendix – "1984 Room Dimensions and Areas" contains dimensions and areas as specified in the booklet "Room Layouts – Second Level Schools". These dimensions and areas are centre to centre of walls and are intended for reference only.

1.1.12 For further advice on these or any other matters, please contact:

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2 School Building Requirement Details

2.1 Determination of School Building Requirements

2.1.1 Following a request for accommodation or refurbishment, the Client will be required to make a formal application for accommodation on the form "Application for Capital Funding".

2.1.2 Where such an application includes the provision of additional accommodation, School Planning Section of the Planning and Building Unit determines the projected long-term enrolment for the school. This projected enrolment will be notified to the Client and the Client may be requested to complete an Educational Worksheet.

2.1.3 The Educational Worksheet is designed to enable the Client to specify and quantify its educational requirements in the context of the totality of the school's curricular policy objectives.

2.1.4 The educational requirements are influenced by:

(a) School Development Plan;

(b) Curriculum Policy Objectives;

(c) Projected enrolment;

(d) Type of course (LC, LCVP, LCA, VTC etc.);

(e) Special needs;

(f) Student/Teacher ratio;

(g) Ex Quota Teachers;

(h) Teacher working week;

(i) Length of school week;

(j) Timetabling.

2.1.5 The school's accommodation requirements are determined by the School Planning Section from an analysis of the Educational Worksheet completed by the Client. Using this analysis the School Planning Section will draft a Schedule of Overall Accommodation.

2.1.6 The educational suitability of the existing accommodation is assessed by staff of the School Planning Section and a Schedule of Suggested Future Use of Existing Accommodation is determined.

2.1.7 The deficit of accommodation between the Schedule of Overall Accommodation and the Schedule of Suggested Future Use of Existing Accommodation is called the Schedule of Residual Accommodation.

2.1.8 The above schedules are issued to the Client for comments/acceptance leading to agreed schedule/s between the Client and the School Planning Section.

2.1.9 The Schedule of Overall Accommodation (new school) or the Schedule of Residual Accommodation (extension) is the schedule of areas for the new building works and the total area indicated is the Total Floor Area (area limit) of new building allowed.

2.1.10 The areas of all spaces in the schedules of accommodation are net areas, measured to the internal faces of the enclosing walls and space dividers. 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 walls" and corresponds with the National Standard Building Elements definition.

Procedural Chart for determination of School Building Requirement

	ACTION
Client	Request to Department of Education and Science for additional accommodation.
School Planning Section	Receipt of request from Client for additional accommodation. Issue Application for Capital funding (Form SLE)
Client	Complete form SLE and return to School Planning Section
School Planning Section	Assess need. Issue Educational worksheet (EWS) Form & Long Term Projected Enrolment to Client where applicable
Client	Complete Educational worksheet (EWS) Form and return to School Planning Section
School Planning Section	Analyse Educational worksheet (EWS) and Capital Funding (SLE) Forms. Prepare and issue Schedule of Overall Accommodation to Client.
Client	Comment and Agree: Schedule of Overall Accommodation.
School Planning Section, & Client	Existing Building. - Assessment of Educational Suitability of Existing Accommodation by the School Planning Section.
School Planning Section	Prepare and Issue Schedule of Future Use of Existing Accommodation & Schedule of Residual Accommodation to Client
Client	Comment and agree Schedule of Future Use of Existing Accommodation & Schedule of Residual Accommodation.
School Planning Section	**Finalise & issue agreed Schedules of Accommodation**
School Planning Section	School Planning Section prioritises project and appraises Client of outcome.
School Building Section	Once funding is available, the project is referred to School Building Section for the appointment of a Design Team and commencement of architectural planning. See following Section

2.2 PROJECT PARTICULARS

2.2.1 The general design guidelines, the schedule/s of accommodation and the current design team procedures will be issued to the Client and all members of the design team appointed.

2.2.2 The scope of the building project will be based on the schedule/s of accommodation agreed between the Client and the School Planning Section.

2.2.3 The Design Team Procedures sets out the procedures to be followed by the design team at all stages of the design and construction process. There are 9 Stages, from site assessment through to final account. These procedures are designed to ensure that all-new purpose built accommodation and extensions to existing accommodation are fully designed before tenders are sought.

Appointment of Design Team & commencement of Project	
School Building Section	Advises client on current applicable procedure for appointment of Design Team.
Client	Appoints Design Team in accordance with applicable procedures. *(For Community/Comprehensive Schools this function is carried out by the School Building Section.)*
School Building Section	Issues authorisation to Client to commence architectural planning in accordance with the current Design Team Procedures (DTP). The 9 DTP stages are: *Stage 1. Site Suitability, and Site Report.* *Stage 2. Sketch Scheme.* *Stage 3. Developed Sketch Scheme.* *Stage 4. Detail Design.* *Stage 5. Bills of Quantities.* *Stage 6. Tender Action and Report.* *Stage 7. Post Contract Cost Control.* *Stage 8. Practical Completion and Hand-over of Building.* *Stage 9. Final Account.*

2.2.4 All correspondence and communications to and from the Planning and Building Unit shall be through the designated officer of the administrative section handling the project.

2.2.5 All submissions by design teams, clearly referenced with the appropriate index mark of the Design Team Procedures, shall, at each stage of the project, be made directly to the Client. When the Client is satisfied that the submission complies with the parameters agreed between the Department and the Client for the project it shall be forwarded to the School Building Section.

2.2.6 Approval to proceed from one stage to the next stage of the design team procedures will be issued in writing to the Client by the designated officer of the administrative section of the School Building Section only.

2.2.7 The **Basic Building Cost** (BBC) limit is generally expressed as a cost per m^2 of the Total Floor Area as stated in the schedule/s of accommodation and provides for the cost of the superstructure and the substructure of the building with associated contingencies, preliminaries, insurance and VAT.

2.2.8 The **External Works Allowance** (EWA) is expressed as a % of the BBC.

2.2.9 The BBC and EWA are two distinct cost limits and must not be added together to form an overall cost limit for the purposes of cost planning or for the analysis of tenders.

2.2.10 The School Building Section will determine the BBC, and the EWA. Fees will be determined in accordance with current Department of Education & Science procedures for engaging Design Team Consultants, and must not be separately agreed between the Client and the Design Team.

2.2.11 A Planning and Development Meeting (PDM) may be arranged between the Client, design team members and staff of the School Building Section as outlined in the design team procedures.

3 Plan for Development of School Buildings

3.1 GUIDANCE NOTES

3.1.1 The overall development should maximise the potential of the site in relation to:

(a) Site access, with the main school entrance being visible and easily reachable from the point of access.

(b) Location and orientation of building and PE hall.

(c) Allowance for expansion by way of an extension (at least 33%) to the school.

(d) Location and extent of car parking.

(e) Location and extent of hard play area.

(f) Allowance for the provision of grass playing pitches where site area and configuration permits.

4 Design Philosophy

4.1 GUIDANCE NOTES

4.1.1 To ensure the longevity of these guidelines specific mention of individual standards, which are continuously being updated, has been avoided. All design, materials and workmanship shall comply with the relevant current Irish, European and British standards, as appropriate.

4.1.2 Designers must ensure that all current regulations relating to safety, health and welfare at work are taken into account in the design of building projects.

4.1.3 Although each individual design will vary due to the specific site, the educational philosophy and the ethos of the school, the design team's primary aim must be to provide the quality and character of environment appropriate to the educational aims of the school.

4.1.4 The school should be a suitable place for intellectual, creative, physical and social activity.

4.1.5 The school should be lively and welcoming, a place that the students will make their own with an atmosphere and sense of scale that is not over-powering, impersonal, or institutional.

4.1.6 The planning of the building should be seen not merely as a grouping of rooms listed in the schedule of accommodation but as a complex of spaces permitting the optimum degree of variety in use. The need is for a school that can accommodate that variety of activities.

4.1.7 It is important that the building be flexible and capable of future expansion (at least 33%). The design of the building should allow for future change and the possible addition of further accommodation. The possibility of expansion should be considered when determining the organisation and layout of the building so that it can still operate effectively if a future extension is required.

4.1.8 The different functions of the design team should be integrated, combining architectural planning and design, structural, building engineering services and cost efficiency to create a well designed, cost effective, durable, low maintenance building. It should be possible to repair or replace components of the building such as fittings, finishes and services with minimum disruption and cost when necessary. This is best achieved by all disciplines within the design team working together from the beginning of the project so that the design is a result of collaboration by all the design team members.

4.1.9 All the participants in the design must contribute towards a common and comprehensive view of the long and short-term needs of the school. All must agree at the inception of the project to the integration of the design factors for which they would normally be individually and separately responsible.

4.1.10 This procedure should lead to a balanced distribution of elemental costs within the overall cost target.

5 Security

5.1 GUIDANCE NOTES

5.1.1 The security of the school premises, environment and site is an important part of the safety of students, staff and visitors.

5.1.2 Each school will require different solutions and a security design strategy should be developed with the Client to take account of the school's particular and unique requirements.

5.1.3 An effective security strategy must commence with the design of the site boundary. Issues that must be considered are the need to deny vehicular access, to restrict the avenue of escape and to delay intrusion sufficiently to maximise the possibility of detection. All gates should have anti-lift hinges.

5.1.4 A rumble strip, change of road surface by colour or texture should be incorporated at the road entrance to create a symbolic psychological barrier and reinforce the impression that beyond this barrier is private to the school.

5.1.5 The use of shrubs as an active perimeter should also be considered, as should the use of landscape type trenches to prevent vehicular access. A sterile area should be provided inside the perimeter fence free from all obstructions so that aids to scaling or concealment are not afforded.

5.1.6 Passing natural surveillance is critical in the protection of schools given their long unoccupied hours, landscaping must not impede this form of surveillance and should not create potential hiding places or provide climbing aids.

5.1.7 Footpaths should be designed to suit the school needs, with ease of access in mind, and should follow the most direct routes.

5.1.8 The school should be sited so that it can be viewed from surrounding properties and roadways.

5.1.9 Car parks should be located where they can be viewed from the school.

5.1.10 An effective security strategy should also focus at design stage on the building perimeter. The external façade of the building should be such that unsecured alcoves or covered areas are eliminated. Access to flat roof or low-pitched roofs should be eliminated by appropriate eaves overhangs and recessed or flush-faced gutters.

5.1.11 External doors should be robust and should be capable of withstanding physical assault.

5.1.12 In order to achieve good security, the number of entry points should be minimised. It is important that security measures should not conflict with fire safety and adequate means of escape when the building is occupied.

5.1.13 Audio units should be fitted to the main front entrance and a natural view maintained between the reception office and the front door.

5.1.14 Where external security lighting is provided it should be such that it does not provide a floodlight facility for out of hours playing, congregating etc.

5.1.15 Active mechanical and electrical systems should also be considered as outlined in the Department's Mechanical and Electrical Building Services Engineering Guidelines for Post Primary Schools.

6 The Built Environment

6.1 GUIDANCE NOTES

6.1.1 An integrated design approach should provide opportunities for energy efficiency. The design team should be aware that energy efficiency strategies can support each other or can conflict and thus individual measures should not be considered in isolation. The issues to be reviewed by the design team should include site, plan form, orientation, passive ventilation and passive solar strategies and daylighting.

6.1.2 All teaching spaces and habitable rooms should have natural daylight as the primary source of light. Artificial lighting shall be used to supplement the available daylight. Refer also to Mechanical & Electrical Building Services Guidelines for Post Primary Schools.

6.1.3 The geometry and distribution of glazed areas should be carefully designed to provide a high level of natural light while avoiding glare and ensuring a good quality day-lighting distribution in the room with average day-lighting factor in the range of 3.5% to 5.5%. The use of solid panes in the window geometry is to be avoided unless the above standards can be achieved.

6.1.4 All teaching areas (with the exception of the PE Hall), together with administration offices and habitable rooms, should have a horizontal view and a view of the outside environment. Window sill heights should generally be a minimum of 900 mm above finished floor level and window head heights a minimum of 2100 mm above finished floor level for the primary windows in a teaching space.

6.1.5 Thermal Insulation standards should meet or exceed the current Building Regulation standards, but should also be considered in the context of the balance of heat loss and gain so as to minimise the running costs of the school and maintain comfort conditions.

6.1.6 The use of passive energy measures to achieve a comfortable internal environment should be employed where possible. The form of the building should be developed to take account of the need to minimise energy consumption with particular emphasis on maximising the use of natural ventilation and day-light, and minimising heat losses while maintaining comfort conditions.

6.1.7 Ventilation where possible should be natural ventilation by means of permanent wall vents and windows with opening sections. In determining the way in which a room is ventilated the design team should also consider acoustic factors, maintenance factors and running costs. The ventilation area provided through permanent vents (whether in walls or windows) and opening sashes should be designed to suit the class environment having regard to the high levels of occupancy generally and, therefore, will exceed the minimum requirements set out in the Technical Guidance Documents to the Building Regulations.

6.1.8 Higher ventilation rates will be required for some specialist areas such as the home economics room, workshops and science laboratories. Where mechanical ventilation is provided, the installation should be designed to minimise noise in teaching areas.

6.1.9 Toilets and changing areas should be naturally ventilated. Where this is not possible, changing areas and toilets shall be mechanically ventilated. A permanent natural vent to the exterior, either directly or ducted, should be provided in addition to any openable window.

6.1.10 Noise producing and noise sensitive spaces should be so located, designed and detailed as to minimise noise interference between them. A minimum noise reduction of 45 dB is required between teaching spaces, and between teaching spaces and other noise generating areas.

6.1.11 Acoustic privacy and security is needed in areas such as interview rooms where matters of a confidential nature may be discussed. A minimum noise reduction of 40 dB is required.

6.1.12 Materials should be selected and designed so as to ensure that the building and all components of the building are durable and low maintenance. Materials and finishes should be chosen and detailed in a manner to avoid weather staining which would detract from the appearance of the building.

6.1.13 Windows must be of robust construction and comply with relevant Irish and EU standards. All windows must be safe in closed and open positions. Windows should be double glazed, easy to clean and maintain, and have high and low-level opening sashes. Permanent vents in windows should be avoided as the sole means of natural ventilation in a habitable room. Permanent wall vents are preferred. Where permanent vents in windows are unavoidable (e.g. in some refurbishment projects) they should contain baffles for noise, wind and rain.

6.1.14 Window design must ensure that adequate natural ventilation is provided without draughts. To achieve this, opening sections must be provided at the upper part of the window, above the level of the normal occupant zone. Full height side hung opening sections are to be avoided. The position and size of opening window sashes must take ease of operation into account and maintain an adequate level of safety, e.g. sashes opening dangerously over adjacent paths at ground floor level, the use of restrictors where necessary, etc.

6.1.15 Doors of all teaching spaces and pastoral offices must have vision panels.

6.1.16 Central Plant areas should be located so as to provide for economic distribution of services. Heating centre plant room and switch rooms should not be located at the outer extremities of the building or as an annex. The building design in the vicinity of the heating centre plant room should allow for appropriate distribution zones for the primary services to and from the heating centre. The location of the electrical switch room, or any sub-stations, should be taken into account when planning the distribution of services.

6.1.17 Pipe-work, cables and equipment should be easily accessible for maintenance but treated aesthetically and be durable and integrated with the building design.

6.1.18 The School Planning Section will agree a schedule of accommodation with the Client. It will contain an overall area limit to be measured from the internal face of the external walls together with a listing of all spaces and associated dimensions and areas. The overall area limit (total floor area) is inclusive of internal walls and space dividers.

Further Physical Design Parameters are included in the section 'Areas and Area Limits'.

7 Areas and Area Limit

7.1 Area Limit

7.1.1 The "Area Limit" is shown as the Total Floor Area in the Schedule of Accommodation and is the "total of all enclosed space measured to the internal face of the enclosing walls" and corresponds with the National Standard Building Elements definition.

7.2 Areas

7.2.1 Areas and dimensions of spaces are as defined in the schedules and shown in the table below.

7.2.2 All dimensions and areas are to the internal faces of the enclosing walls.

7.2.3 The dimensions and areas in the table below will apply to new buildings and extensions only.

7.2.4 Where refurbishment or re-designation is contemplated in an existing school the existing room dimensions, as built, will apply except where educational requirements dictate otherwise.

7.3 Room Layouts

7.3.1 Shall be in accordance with current Department of Education and Science Room Layouts.

7.3.2 Where a layout is not given, the width to length ratio shall provide comfortable and flexible usage of the space.

7.3.3 See also the section "Furniture and Equipment" in relation to the development of room layouts for PLC and other courses.

7.4 Heights

7.4.1 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.

7.4.2 In larger rooms such as specialist rooms and assembly areas the height should be in proportion to the size and take into account the function and any specialist requirements such as ventilation.

7.4.3 The recommended finished floor to ceiling height is 3.15 m except as follows:

(a) Rooms of area 25 – 50 m^2.	Height = 3.0 m.
(b) Rooms of area less than 25 m^2.	Height = 2.7 m.
(c) PE Hall.	Clear height of 7 m

The above excludes plant rooms.

General Post Primary Teaching Spaces and other Rooms/Spaces

Recommended minimum finished floor to ceiling height:
Areas > 50 m^2 = 3.15 m; Areas 25 - 50 m^2 = 3 m; Areas < 25 m^2 *(excluding Plantrooms)* = 2.7 m.
Minimum clear height for PE Hall = 7 m

Numbers shown ( ) are for the Number of Students to be accommodated in the room.

Type of Space	Students	Measurements	Area
General Classroom	(30)	7 x 7 m	49 m^2
Lecture Rooms (interconnected)	(90)	15.6 x 7 m	109 m^2
Group Room		7 x 4.2 m	29 m^2
Music/Drama Area	(30)	11.4 x 7 m	80 m^2
Learning Support Room and Store		7 x 7 m + 2.4 x 2.4 m	55 m^2
Guidance Suite: (1 classroom + 1 office)		9 x 7 m + 4.8 x 3.2 m	78 m^2
Guidance Suite: (1 classroom + 2 offices + waiting)		9 x 7 m + 2 x 4.8 x 3.2 m + 3 x 2 m	100 m^2
Religion Room, Meditation Area and Chaplain's Office	(30)	7 x 7 m + 7 x 4.2 m + 4.8 x 3.2 m	94 m^2
Mathematics Room	(30)	9 x 7 m	63 m^2
Social Studies Room	(30)	9 x 7 m	63 m^2
Home School Community Liaison: (classroom + office)		7 x 7 m + 4.8 x 3.2 m	64 m^2
Language Room	(30)	9 x 7 m	63 m^2
Multimedia Learning Laboratory	(30)	11.4 x 7 m	80 m^2
Science Laboratory and Preparation Area	(24)	11.4 x 7 m + 7 x 2.9 m	100 m^2
Demonstration Room (tiered)	(48)	9 x 7 m	63 m^2
Art/Craft Room and Store	(30)	14.2 x 7 m	100 m^2
Home Economics Room and Stores	(24)	14.2 x 7 m	100 m^2
Dress Design Room	(24)	11.4 x 7 m	80 m^2
Business/Computer Room	(30)	11.4 x 7 m	80 m^2
Commerce/Computer Room	(30)	9 x 7 m	63 m^2
Word Processing/Keyboard Skills Room	(30)	11.4 x 7 m	80 m^2
Business Studies/Commerce Room	(30)	11.4 x 7 m	80 m^2
Business/Commerce Room	(30)	9 x 7 m	63 m^2
Technical Graphics /Cad Room	(24)	11.4 x 7 m	80 m^2
Construction Studies/Materials Technology (Wood) Room and Store	(24)	14.2 x 9.6 m	136 m^2
Technology Room	(30)	14.2 x 9.6 m	136 m^2
Wood/Technology Machining and Preparation Area		14.2 x 4.6 m	65 m^2
Engineering/Metalwork Room and Store	(24)	14.2 x 9.6 m	136 m^2

General Post Primary Teaching Spaces and other Rooms/Spaces

Recommended minimum finished floor to ceiling height:
Areas > 50 m^2 = 3.15 m; Areas 25 - 50 m^2 = 3 m; Areas < 25 m^2 *(excluding Plantrooms)* = 2.7 m.
Minimum clear height for PE Hall = 7 m

Numbers shown ( ) are for the Number of Students to be accommodated in the room.

Type of Space	Students	Measurements	Area
Library and Ancillary Stores		14.2 x 7 m For 200 – 499 students	100 m^2
		14.2 x 9.6 m For 500 + students	136 m^2
Principal's Office (Adjacent to general Office)		7 x 3.2 m	22 m^2
Deputy Principal's Office		7 x 3.2 m	22 m^2
General Office (Located in View of Main Entrance)		5 x 4 m For less than 500 students	20 m^2
		6 x 5 m For 500 + students	30 m^2
Pastoral Offices. (Number as per schedule)		3.2 x 3.2 m	10 m^2
Staff Room		As in Schedule of Accommodation	
Meeting Room		7 x 4.8 m	34 m^2
First Aid Room		4.8 x 3.2 m	15 m^2
Caretaker's Work Area		4.2 x 3.2 m	13 m^2
Photocopy Room		3 x 2 m	6 m^2
Project Storage		As in Schedule of Accommodation	
General Storage: [Secure, Cleaners and general storage]		For less than 350 students	20 m^2
		For 350 – 699 students	40 m^2
		For 700 + students	60 m^2
General Purpose/Dining Area		As defined in Schedule. Min. 100 m^2	
Kitchenette and Store			25 m^2
Cloaks		As in Schedule of Accommodation	
Lockers (If off corridors, recess by 0.9 m minimum)		As in Schedule of Accommodation	
Toilets (including toilets for staff and physically disabled and sanitary suite). Ratio 1:19; 1 WC per 19; 2 Urinals per 1 WC; 2 WHBs. to 3 WCs/Urinals.		As in Schedule of Accommodation	
Boiler Plant Room.			40 m^2
Electrical Switch Room			10 m^2
Data Communication Centre		2 x 2 m	4 m^2
Social Areas		As in Schedule of Accommodation	
Circulation & Internal Division (Minimum Clear Width of Corridors 2.4 m)		As in Schedule of Accommodation	

P.E. Facilities

Recommended minimum finished floor to ceiling height:
Areas > 50 m^2 = 3.15 m; Areas 25 - 50 m^2 = 3 m; Areas < 25 m^2 = 2.7 m.

Minimum clear height for PE Hall = 7 m

PE Hall	Measurements	Area
(Court Size 24 x 13 m) Allows 1 m at each end line and along one sideline and 1.6 m along second sideline of court.	For 200 – 449 students 26 x 15.6 m	406 m^2
(Court Size 28 x 15 m) Allows 2.5 m along each end line and 1.5 m along each sideline of court.	For 450 + students 33 x 18 m	594 m^2

PE Ancillary - For both sizes of halls		Measurements	Area
Changing rooms		(2 x 32 m^2) = 64 m^2	
Showers	(2 x 4 No. with cubicle dividers)	(2 x 6 m^2) = 12 m^2	
Toilet Cubicles	(opening off Changing Rooms)	(2 x 2 m^2) = 4 m^2	
Toilets	(off main circulation) (1 Male + 1 Female + Universal including shower 5 m^2)	(2 x 2 m^2) + 5 m^2 = 9 m^2	
Control Centre (includes Instructor's facility)		= 9 m^2	
Equipment Store		=20 m^2	
General Store		=18 m^2	136 m^2
Circulation & Internal Division	(including foyer/stairs & space for future lift)		64 m^2
Boiler Plant Room	Standalone PE hall only		10 m^2
Switch Room	Standalone PE hall only (Can be enclosure off circulation)		2 m^2

External Requirement Details

Hard Play Area Overall Size per Court **30 x 17 m** = **510 m²**. Playing Area: **28 x 15 m**.	**Courts per School**	**Area**
for schools less than 250 students	2	1020 m²
for schools with 250 – 349 students	3	1530 m²
for schools with 350 – 499 students	4	2040 m²
for schools with 500 – 799 students	5	2550 m²
for schools with 800 + students	6	3060 m²

Playing Pitches	**Playing Area**
Gaelic Games	**130 – 145 x 80 – 90 m.**
Soccer	**90 – 120 x 45 – 90 m**
Hockey	**91.44 x 54.86 m**
Rugby	**144 x 69 m** (including in-goal area)

External Store, Covered Area and Yard		**Measurements**	**Area**
External Storage		10 x 5 m	50 m²
Covered Area for Construction Studies/Materials Technology (Wood)		6 x 5 m	30 m²
Yard	Enclosing external store, covered area, entrances to Construction Studies/Materials Technology (Wood) Room, Engineering/Metalwork Room, Technology Room and, if practicable, fuel storage and access to Boiler Plant Room. *Area and Dimensions dependant on approved design solution		*50 m² (minimum)

Car Parking
1 per **Full Time Staff** member + **1** per **100** Students (For Guests/Visitors) + Provision for disabled users as outlined in section 10 “Universal Access”.

8 Furniture and Equipment

8.1 Room Layouts

8.1.1 All room layouts, lists of furniture and equipment, and general room data will be available to the design team at the commencement of the design process.

8.1.2 **Standard 2nd Level Curriculum**:
Standard room layouts complete with lists and specifications of fixed and loose furniture, fixed equipment, services and general room data will be made available at the commencement of the design process.

8.1.3 **PLC and other courses**:
Room layouts should be developed in association with the Client, complete with lists of fixed and loose furniture, fixed equipment, services and room data sheets.

8.2 Fixed furniture and associated fittings

8.2.1 Fixed Furniture and associated fittings shall be included in the main building contract as a nominated sub-contract and is identified in the standard room layouts.

8.2.2 A PC sum for the fixed furniture and associated fittings shall be made available by the School Building Section for inclusion in the main contract documents at Stage 1. If necessary this will be updated by the School Building Section at Stage 4/5.

8.2.3 The cost of sanitary fittings, trap, dilution pots, taps and other fittings which are part of special room fittings is covered by the PC sum for fixed furniture and associated fittings.

8.2.4 The cost of supplies, services and wastes to fixed furniture and associated fittings and equipment is covered by the Basic Building Cost limit.

8.2.5 The tender documentation for the fixed furniture and associated fittings should comprise layout drawings, details and specifications. Except for projects of short duration it is generally not necessary to obtain tenders for this sub-contract at the same time as the main contract. It is the design team's responsibility to ensure that tendering is undertaken to meet the main contractor's programme with due allowance for tender approval.

8.2.6 The design team shall seek tenders for the fixed furniture and associated fittings. Tenders shall always be on a fixed price basis.

8.2.7 The tender report shall include an analysis of the tenders received, a copy of the recommended tender and a detailed breakdown of the cost and shall be submitted, through the Client, to the School Building Section for approval

8.2.8 The installation of the fixed furniture and associated fittings shall be complete before the Practical Completion and Hand-over of Building – Stage 8.

8.3 Loose Furniture and Equipment

8.3.1 Loose furniture and equipment is procured directly by the Client in accordance with the School Building Section's procurement procedures. It is, therefore, not the responsibility of the design team and is outside the scope of the building contract.

8.3.2 The school should programme the procurement of loose furniture & equipment to ensure that deliveries occur before completion of the Building Contract, as the building contractor may be required to install some items of equipment.

(Refer also to current Department procedures for Loose Furniture and Equipment.)

9 School Entrances and External Circulation

9.1 GUIDANCE NOTES

9.1.1 The access to the site should be prominent and easy to find, with the school located near to it and clearly visible.

9.1.2 The main entrance is the point of access for all visitors. It should be prominent and easy to find and should reflect the character and atmosphere of the school while remaining in keeping with the size of the building and the nature of the school site.

9.1.3 Some protection from the weather prior to entering the main door should be considered.

9.1.4 The main entrance to the school should be clearly visible for pedestrians entering the site and should be both clearly visible and easily accessible from the car-parking area.

9.1.5 Once in the school the visitor should be able to find the reception areas without difficulty.

9.1.6 Depending on the size and layout of the school, separate entrances for staff may be proposed.

9.1.7 Suitable access routes from drop off points to the entrances should be provided.

9.1.8 If bicycle racks are provided, these should be adjacent to the student entrances.

9.1.9 Where a suitable drop-off point for students from buses and cars is not available within a reasonable distance, provision for a lay-by to facilitate buses and/or cars should be made.

9.1.10 This lay-by should not be located within the schools grounds and arrangements should be made if necessary to cede the appropriate land to the Local Authority.

9.1.11 Provision within the site of turning circles and drop-off points should be avoided.

9.1.12 On-site roads and vehicular access should be kept to a minimum while ensuring ease of parking and access to the main school entrance doors.

10 Universal Access

10.1 GUIDANCE NOTES

10.1.1 The criteria set out in the current publication of the National Disability Authority should be considered in all cases.

10.1.2 All new schools and school extensions should be designed so as to provide access for all.

10.1.3 Persons with varying ranges of physical ability must not be disadvantaged by design limitations.

10.1.4 Full access for the disabled should be provided in all new building works and shall be in accordance with current Building Regulations.

10.1.5 Where small changes of level within the building are unavoidable ramps in accordance with the Building Regulations Guidance Documents and the National Disability Authority guidelines may be permitted.

10.1.6 Where design proposals involve two or more stories, a lift will normally be required unless the same range of accommodation for all building users is available at ground floor level. The position of the lift should be visible from the main entrance.

10.1.7 Provision should be made for disabled access from the access to the school through all routes to all entrances.

10.1.8 At least one sanitary suite suitable for use by disabled persons shall be provided, opening off the main circulation. It shall be wheelchair accessible and shall include a universal access shower base. The floor area should be sufficient to allow for a changing bench and a mobile hoist if required. This should be a multi-user suite available to all.

10.1.9 A similar sanitary suite shall be provided off the foyer of the PE hall.

10.1.10 At least one dedicated car-parking space should be provided for disabled users and the number of reserved spaces shall be in accordance with the Building Regulations and the National Disability Authority guidelines.

11 Description of Spaces

11.1 GUIDANCE NOTES

11.1.1 The school should provide a safe and secure environment for teaching and learning.

11.1.2 The design solution for the school should ensure ease of circulation and orientation for students, staff and visitors.

11.1.3 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.

11.1.4 Schools generally operate a (circa) 42 period week, each of 40 minutes duration. Many schools operate a teacher-based system resulting in the movement of all students every 40 minutes. As a result of this movement careful consideration must be given to circulation, with the GP area and the social areas acting as some relief.

11.1.5 Minimum clear width of corridors shall be 2.4 m.

11.1.6 Lockers and other obstructions must be recessed and must not be included in the 2.4 m width. Lockers shall not be located on ramps. See also Note 11.2.38

11.1.7 The general purpose/dining area should provide a social heart to the school and taken together with associated circulation, it should provide a sense of openness and community within the school while at the same time enhancing general circulation.

11.1.8 Careful consideration should be given to grouping of rooms and, in particular, having some general classrooms near specialist rooms will result in less travel by students at each change of class.

11.1.9 The following rooms/spaces are frequently used by visitors/community and should be located so that it is not necessary to enter the general teaching area used by students:

(a) Principal's Office.

(b) General Office.

(c) GP area.

(d) PE hall.

(e) Meeting Room.

(f) Home School Community Liaison Facility.

(g) First Aid Room.

11.1.10 Provisions for Information and Communications Technology (ICT) should be in accordance with the Department's current version of Information and Communications Technology (ICT) Infrastructure Guidelines for Post Primary Schools.

11.2 Description of Spaces

All teaching spaces should be in accordance with the Department of Education standard room layouts.

11.2.1 **Classrooms** (7 x 7 m = 49 m^2)

(a) General classrooms are used for the teaching of general subjects and the theoretical aspects of specialist subjects.

(b) One or more classrooms should be associated with each of the specialist teaching spaces providing classrooms for subject departments and an interdisciplinary link between related subject areas.

11.2.2 **Lecture Rooms** (15.6 x 7 m = 109 m^2)

These are two large interconnected classrooms capable of seating a total of 60 students. A folding partition should be provided between the two rooms, which must provide reasonable acoustic security (45 dB minimum rating) and include one door.

11.2.3 **Group Room** (7 x 4.2 m = 29 m^2)

This is a small classroom for the teaching of small classes taking different options.

11.2.4 **Music/Drama Room** (11.4 x 7 m = 80 m^2)

(a) The activities that will take place in this area will depend on the emphasis on music and/or drama in the school.

(b) The area should be capable of accommodating a class of 30 students, facilitating choir, instrumental work, drama presentation, etc.

(c) The music/drama room should be an adjoining space to the GP/Dining area. The floor level must be at the same level as all other adjoining spaces. If a stage is required this may be provided by the use of a portable demountable stage.

(d) A folding partition shall be provided between the Music/Drama room and the GP/Dining area, which must provide reasonable acoustic security (45dB minimum rating) between the two spaces. The opening should ideally be located centrally onto the GP/Dining space and the height of the folding door and the room must allow for the height of the stage up to maximum of 750 mm.

11.2.5 **Learning Support Room and Store** (7 x 7 m + 2.4 x 2.4 m = 55 m^2)

The Learning Support Room should be adjacent to or closely associated with one or two general classrooms and it would also be desirable to have the location of the Learning Support Room reasonably close to the Library.

11.2.6 **Guidance Suite** [1 classroom + 1 office] (9 x 7 m + 4.8 x 3.2 m = 78 m^2)

(a) The Guidance Suite should be seen to be separate from administration and should be located off one of the main arteries of student circulation. Preferably, it should be close to the library and conveniently reached from one of the school's entrances.

(b) It should consist of a Guidance Office of 15 m^2 with an associated classroom.

(c) The Guidance Office will also be used when interviewing one or two people and should be designed to create an informal comfortable atmosphere. A high level of acoustic security will be required (40dB minimum rating).

11.2.7 **Guidance Suite** [1 classroom + 2 offices + waiting area]
(9 x 7 m + 2 x 4.8 x 3.2 m + 3 x 2 m = 100 m^2)

(a) The Guidance Suite should be seen to be separate from administration and should be located off one of the main arteries of student circulation. Preferably, it should be close to the library and conveniently reached from one of the school's entrances.

(b) It should consist of 2 Guidance Offices of 15 m^2 with an associated classroom. A waiting area of 6 m^2 should be provided (off general circulation) adjacent to the offices.

(c) Each of the Guidance Offices will also be used when interviewing one or two people and should be designed to create an informal comfortable atmosphere. A high level of acoustic security will be required (40dB minimum rating).

11.2.8 **Religion Room and Meditation Area + Chaplains Office**
(7 x 7 m + 7 x 4.2 m + 4.8 x 3.2 m = 94 m^2)

This area will normally comprise one standard General Classroom of 49 m^2 separated from a smaller meditation area of 30 m^2 by an acoustically secure folding partition (40dB minimum rating). An adjoining chaplain's office of 15 m^2 shall be provided.

11.2.9 **Mathematics Room** (9 x 7 m = 63 m^2)

Although much of the mathematics teaching will be conducted in general classrooms, a special Mathematics Room may be provided.

11.2.10 **Social Studies [History and Geography]** (9 x 7 m = 63 m^2)

(a) Audio visual aids are in frequent use in Social Studies rooms which, together with the relatively high reference demands of history teaching, would suggest the need for easy access to the library from a Social Studies room.

(b) If possible, the Social Studies rooms should also be reasonably close to the Science and Demonstration rooms.

(c) The Geography room shall have south facing eye level windows to facilitate shadow measurements. It should also be provided with blackout blinds.

11.2.11 **Home School Community Liaison [Classroom + Office]**
(7 x 7 m + 4.8 x 3.2 m = 64 m^2)

(a) This facility, if provided, consists of a classroom-sized room and an office.

(b) The design and layout of the classroom should be similar to a standard classroom.

(c) It should be located so that it is not necessary to pass by the teaching areas to reach it (i.e. close to the main or other entrance).

11.2.12 **Language Room** (9 x 7 m = 63 m^2)

(a) The language room, while being equipped to provide specialist teaching/learning language facilities, should not be considered as being a self-sufficient or independent unit on the one hand or the sole language learning/teaching facility on the other.

(b) Portable equipment will be used at the teacher's position.

(c) In general, a language room will be associated with one or more classrooms thus forming a languages suite.

11.2.13 **Multimedia Learning Laboratory** (11.4 x 7 m = 80 m^2)

(a) This room consists of a network of 31 computers. It replaces the language laboratory as the actions of the tape recorder can be simulated by software. The room can be used for all subjects where access to computers is necessary and will only be provided where it is justified by utilisation.

(b) It may be necessary to provide a satellite connection directly to the laboratory or connected to the network at the data communication centre.

(c) The room should be designed north facing to provide a high level of natural light without glare or solar gain and should have a high level of natural ventilation.

(d) Special consideration should also be given to the need for security in this room.

(e) The room should be designed to take account of the internal heat gain from users and equipment thus eliminating the need for mechanical ventilation and cooling (e.g. use of exposed structure to absorb heat).

11.2.14 **Science Labs and Preparation area** (11.4 x 7 m + 7 x 2.9 m = 100 m^2)

(a) A science laboratory should be equipped to enable 24 students to follow courses of a general science character, and should be connected to a preparation area.

(b) The preparation area, 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.

(c) A secure chemical store without windows should be provided with good permanent natural ventilation.

(d) Fume cupboards should also be provided in accordance with room layouts, relevant Irish, European and British Standards and the Department's Mechanical and Electrical Building Services Engineering Guidelines for Post Primary Schools.

(e) Blackout facilities should be provided in at least one of the Science laboratories.

(f) To facilitate window box experiments and shadow measurements at least one of the laboratories shall have south facing eye level windows.

11.2.15 **Demonstration Room** (9 x 7 m = 63 m^2)

(a) The demonstration room should be tiered to provide seating for 48 students. Due to the high occupancy good ventilation to this room is essential.

(b) The demonstration room should be linked to one science preparation area to facilitate preparation of demonstration material and ease of transfer of prepared material/equipment to the demonstration room. This room may also be required for other subjects requiring demonstration facilities.

(c) Blackout facilities shall be provided in this room.

11.2.16 **Arts and Crafts Room** (14.2 x 7 m = 100 m^2, includes store)

(a) Art/Craft rooms should preferably be located at ground floor level. Where the location of this room on an upper floor is unavoidable, it must be possible to remove and replace the kiln without removing windows etc. and without the use of a crane.

(b) The overall area allocated may be treated as a space designed to accommodate students in a variety of activities, some wet, others dry.

(c) Art/Crafts Rooms should have windows that provide a view of the external landscape and where possible should have direct access to the outside.

(d) The Art/Craft rooms should have a durable non-slip floor covering.

(e) Storage, screening and display space may be provided within the area by means of moveable furniture units.

(f) Consideration may be given to the display of artwork so that it is visible from the main circulation.

(g) One section will be required to house a kiln with associated drying racks and trough. Where two or more Art Rooms are provided, only one kiln is required.

(h) A typical weight of the kiln is 400 kg and typical plan dimensions are 900x700 mm. A suitable supporting floor is required. A clear door opening of 900 mm is required for the delivery of the kiln.

11.2.17 **Home Economics Room and Stores** (14.2 x 7 m = 100 m^2)
Dress Design Room and Store (11.4 x 7 m = 80 m^2; includes store)

(a) The Home Economics rooms and Dress Design rooms should be located near to each other. The Home Economics rooms should if possible be located close to the Science rooms and the Arts and Crafts rooms.

(b) The Home Economics rooms should have a durable non-slip floor covering.

(c) The Dress Design room should **not** have carpet floor covering.

(d) A reasonable level of mechanical ventilation is required for the Home Economics rooms. This ventilation should be quiet in operation.

11.2.18 **Business/Computer Room/Word Processing Room** (11.4 x 7 m = 80 m^2)
Commerce/Computer Room (9 x 7 m = 63 m^2)

(a) These rooms are intended for ICT (Information and Communications Technology) studies. They will have a network of 31 Personal Computers. These teaching spaces should be reasonably close to each other to facilitate interchange of equipment.

(b) These rooms may be used by post primary students during the day and by adults for evening classes. Some consideration should therefore be given to the location of this suite having regard to its possible use after normal school hours.

(c) These rooms should be designed north facing to provide a high level of natural light without glare or solar gain and should have a high level of natural ventilation.

(d) Special consideration should also be given to the need for security in these rooms.

(e) The rooms should be designed to take account of the internal heat gain from users and equipment thus eliminating the need for mechanical ventilation and cooling (e.g. use of exposed structure to absorb heat).

11.2.19 **Business Studies/Commerce Room** (11.4 x 7 m = 80 m^2)
Business/Commerce Room (9 x 7 m = 63 m^2)

These rooms are intended for specialist applications in the teaching of Business Studies. Although much of the teaching in these subjects will be conducted in general classrooms, a specialist room for these subjects may be provided.

11.2.20 **Technical Graphics/CAD Room** (11.4 x 7 m = 80 m^2)

(a) This Room should be located within reasonable proximity to the Construction Studies, Engineering and Technology rooms to facilitate interchange of drawing equipment within these areas.

(b) It will be equipped with a number of networked points for Computer Aided Design (CAD) applications.

11.2.21 **Construction Studies/Material Technology (Wood) Room**. (14.2 x 9.6 m = 136 m^2)

(a) This room is used for the teaching of Construction Studies at Leaving Certificate Level and for Materials Technology (Wood) at Junior Certificate level.

(b) This space should be located on the ground floor and designed to accommodate 24 students.

(c) This room is an area of high noise emission and it is therefore necessary to ensure that either it is located away from noise sensitive teaching spaces such as the Library or classrooms, or that adequate acoustic insulation is provided.

(d) Access for the delivery of wood and machinery via the Preparation area is required, and the Construction Studies/Wood Technology Room should be located so as to facilitate such deliveries and be directly accessible from the enclosed yard.

(e) It should have direct access to the Wood/Technology Machining and Preparation area and also a direct view to the Preparation area by means of a glazed viewing panel.

(f) Dust extraction requirements for this room shall be in accordance with the Department's current guidelines and circulars on Dust Extraction.

11.2.22 **Technology Room** (14.2 x 9.6 m = 136 m^2)

(a) This space should be designed to accommodate 30 students. It should be located on the Ground Floor and be directly accessible from the enclosed yard.

(b) This area is an area of high noise emission and it is therefore necessary to ensure that either it is located away from noise sensitive teaching spaces such as the Library or classrooms, or that adequate acoustic insulation is provided.

(c) Access for the delivery of materials and machinery via the Preparation area is required, and the Technology room should be located so as to facilitate such deliveries.

(d) The Technology room should have direct access to the Woodwork/Technology Machining and Preparation area with a direct view from the Preparation area to the room by means of a glazed viewing panel.

(e) Dust extraction requirements for this room shall be in accordance with the Department's current guidelines and circulars on Dust Extraction.

11.2.23 **Wood/Technology Machining and Preparation Area** (14.2 x 4.6 m = 65 m^2)

(a) A single preparation area should be located between Construction Studies Room and the Technology room with direct access to both rooms. Where there are two Construction Studies rooms the preparation area should be located between the two.

(b) This area should be located on the ground floor with direct access to the outside so as to facilitate the delivery of materials and machinery.

(c) Dust extraction requirements for this room shall be in accordance with the Department's current guidelines and circulars on Dust Extraction.

11.2.24 **Engineering /Metalwork Room** (14.2 x 9.6 m =136 m^2; includes store)

(a) This room is used for the teaching of Engineering at Leaving Certificate level and Metalwork at Junior Certificate level.

(b) It should be designed to accommodate 24 students. It should be located on the Ground Floor and be directly accessible from the outside.

(c) This room is an area of high noise emission and it is therefore necessary to ensure that it is located away from noise sensitive teaching spaces such as the Library or classrooms, or that adequate acoustic insulation is provided.

(d) Mechanical extraction is required from the hot metal area.

11.2.25 **Library** (For 200 – 499 students: 14.2 x 7 m = 100 m^2; includes stores)
(For 500 + students: 14.2 x 9.6 m = 136 m^2; includes stores)

(a) The Library is one of the most important areas in the school and 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.

(b) It is a dual-purpose resource area and teaching space and should be glazed onto the circulation area to provide informal supervision.

(c) The Library should include two stores - a bookstore and a secure store for the audio-visual equipment - as per the standard layouts.

11.2.26 **Principal's and Deputy Principal's Office** (7 x 3.2 m = 22 m^2)

(a) The Principal's Office should be located beside the general office with easy access to that office. It should also have a separate access door to the main circulation.

(b) Access to the Principal's Office for visitors should be regulated by the general office/administrative staff.

(c) The Principal's Office and the Deputy Principal's Office are multifunctional and should be capable of being used as an office; an interview room; a meeting room; and a study.

(d) It may be used for meetings with parents. The office should be comfortable and private with good sound insulation.

(e) The Deputy Principal's Office may be located near the General Office, but consideration should be given to locating it elsewhere in the school to facilitate school supervision. The Client's preference should be considered in this regard.

11.2.27 **General Office, Reception and Waiting Area**
(For less than 500 students: office 5 x 4 m = 20 m^2)
(For more than 500 students: office 6 x 5 m = 30 m^2)

(a) The General Office should be located near the main entrance and easily visible from the entrance doors. There should be a clear line of vision to the main entrance from the office. See also Section 5

(b) The General Office should be located beside the Principal's Office with easy access to that office.

(c) It should have a counter or hatch opening directly to the Entrance Foyer for queries from visitors or students.

(d) The counter or hatch 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.

(e) A waiting area off the main circulation and adjacent to the General Office should be provided.

11.2.28 **Pastoral Offices** (3.2 x 3.2 m = 10 m^2)

(a) Pastoral Offices have multiple uses. They may serve as rooms for "Year-Heads" or school tutors, and may be used for student or parent interviews.

(b) Pastoral Offices should be located off main circulation or social areas in the school.

(c) The wall between the social area and the Pastoral Office should be glazed for better integration with the social area.

11.2.29 **Staff Accommodation** (area as defined in the schedule of accommodation)

(a) The staff room can be an integrated social and work area. The separation of the areas can be achieved by appropriate arrangement of furniture. An area for computers should be integrated with the normal work area.

(b) Access to kitchenette facilities is required.

(c) Lockers when provided should not be intrusive.

11.2.30 **Meeting Room** (7 x 4.8 m = 34 m^2)

(a) A meeting room, where provided, should be located near the administrative area and may be used by Boards of Management, staff, parent groups or students. The room should be comfortable and welcoming and furnished accordingly.

(b) It should be located so that it is not necessary to pass by the teaching areas to reach it.

11.2.31 **First Aid Room** (4.8 x 3.2 m = 15 m^2)

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 control and supervision.

11.2.32 **The Caretaker's Work Area** (4.2 x 3.2 m = 13 m^2)

The caretaker's work area should be located within the school but with good access to the outside. It should be located near the external store.

11.2.33 **Photocopy Room** (3 x 2 m = 6 m^2)

The photocopier should be located near the General Office and easily accessible from it. It should also be easily accessible by staff and authorised students.

11.2.34 **Project Storage** (area as defined in the schedule of accommodation).

This store is for the storage of examination projects. It should be designed as a secure store. If possible it should be located near to the practical subjects teaching areas, e.g. Art/Craft, Technology, Engineering & Construction Studies.

11.2.35 **General Storage** (area as defined in the schedule of accommodation)
(Under 350 students: 20 m^2); (350 - 699 students: 40 m^2); (700 + students: 60 m^2)

(a) This should include a secure store, cleaner's store(s) and general storage.

(b) In larger schools it may be necessary to distribute storage in different locations.

11.2.36 **General Purpose/Dining Area and Kitchenette**
(area as defined in the schedule of accommodation).

(a) The General Purpose/Dining Area should provide the social heart of the school. It should provide a sense of openness within the school, enhancing general circulation. This area should not be separated from the general circulation.

(b) The General Purpose/Dining area, besides providing a dining area, may also be used by both school and community for social events such as plays or school assemblies. It should have easy access from the main entrance and it should be possible to isolate from the rest of the school a zone including the GP Room, associated toilets and entrance area and all necessary building services within these spaces.

(c) The kitchenette is used to prepare and dispense light refreshments and should be equipped with a cooker, a water boiler, a fridge, a dish-washer and a suitable sink. It should be divided from the general purpose dining area by a counter not less than 3 m long, fitted with a roller shutter. The kitchenette should be located so as to allow orderly queuing and minimise congestion. It may also have a small store attached.

(d) The Music/Drama room may be used as an overflow for the dining area and the floor covering should be suitable for this purpose.

11.2.37 **Cloaks/Lockers** (area as defined in the schedule of accommodation)

(a) Cloaks and locker areas should be located and designed in such a way as to avoid circulation congestion. Cloaks and lockers should not be located on ramps.

(b) Cloaks and locker areas should be located near the main student exits. If cloakrooms or locker rooms are provided they should be easily supervised and should each have a separate entrance and exit opening in order to avoid congestion.

(c) Consideration may be given to locating the cloaks and lockers within general social/circulation to provide more generous locker spaces.

(d) If lockers are located in the circulation area, space should be allowed for the lockers for ease of access to the lockers, and to allow some congregation without blocking circulation. A recess of 0.9 m is suggested.

11.2.38 **Toilets** (area as defined in the schedule of accommodation)

(a) Toilets should be so located in the school as to minimise unnecessary circulation, and in areas that can be easily supervised.

(b) WCs/Urinals should be provided in the ratio of 1:19 for staff & pupils. The ratio of Urinals to WCs in male toilets shouldn't exceed 2:1. Wash-hand basins should be provided in the ratio of 2 WHBs to 3 WCs or urinals.

(c) Toilet provision should be made for each floor and in a multi-storey building should have a stacked configuration.

(d) At least one sanitary suite suitable for use by disabled persons shall be provided, opening off the main circulation. It shall be wheelchair accessible and shall include a universal access shower base. The floor area should be sufficient to allow for a changing bench and mobile hoist if required. This should be a multi-user suite available to all.

(e) Where extensive accommodation is provided at upper floor levels, consideration should be given to providing universal access WC facilities on each of those floors.

(f) As the school may be used in the evenings for community use, access to some toilet facilities within a restricted area without allowing access to the full school is required.

(g) Design of sanitary fittings and their fixings should be robust and appropriate to the school environment.

11.2.39 **Boiler Plant Room** (40 m^2)

The boiler plant room should be located so as to provide for economic distribution of services. It should not be located at the outer extremities of the building or as an annex. Rooms should be square/rectangular with no alcoves or recesses.

11.2.40 **Electrical Switch Room** (10 m^2)

(a) The electrical switch room houses the main switchboard and should be located so as to provide for economic distribution of services. It should not be located at the outer extremities of the building or as an annex.

(b) The electrical sub-distribution boards should not protrude into circulation or other similar spaces and should not be located either within the teaching space or an associated store.

11.2.41 **Data Communication Centre** (2 x 2 m = 4 m^2 x full ceiling height)

(a) A dedicated Data Communication Centre (DCC) shall be provided, size 2 m x 2 m x full ceiling height. The DCC shall be suitably located off the circulation area or in a general store and shall be ventilated with air inlets at low level and air outlets at high level opening to the corridor or to the store. Ventilation to the outside is generally not required. The DCC should not have any windows.

(b) The DCC should, as far as practicable, be situated in the main building where the Principal's and General offices are located and should be within the 90 m cable run of both offices. This location should, as far as practicable, be such that the cable run (actual cable length) to all network points is within the limit of 90 m. Where this is not possible an Intermediate Distribution Facility (IDF) shall be provided as detailed below.

(c) An Intermediate Distribution Facility (IDF) shall be provided where the cable runs from the DCC would exceed 90 m. The IDF will be mounted at high level in a suitable position such as a store (not a teaching or habitable space).

(d) For further information refer to the Department's ICT Guidelines and ICT Equipment List.

11.2.42 **Social Areas** (area as defined in the schedule of accommodation)

Social areas provide for social dialogue and relaxation for students. The design should combine the use of the social area with circulation to avoid congestion.

11.2.43 **Circulation & Internal Division** (area as defined in the schedule of accommodation)

(a) The design solution for the school should ensure ease of circulation and orientation for students, staff and visitors.

(b) 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. Consideration should also be given to easing areas of possible circulation congestion by using the GP area and the social areas.

(c) Minimum clear width of corridors shall be 2.4 m. Lockers and other obstructions must be recessed and must not be included in the 2.4 m width. See also Cloaks & Lockers

12 Physical Education Hall and PE Ancillary

12.1 Aims of Physical Education

12.1.1 Enhancement of the student's sense of self through the development of skilful and creative performance of practical activities.

12.1.2 Development of the student's understanding of physical activity and awareness of the links between physical education and other curricular areas.

12.1.3 Motivation of the student to choose a lifestyle that is active, healthy and meaningful.

12.1.4 The personal enrichment of the student by developing personal and social skills and encouraging positive attitudes and values in her/his interaction with others.

12.1.5 To contribute to the physical well being of the student through a programme aimed at the development of a level of fitness.

12.1.6 To develop appropriate motor skills enabling the student to participate in everyday life situations and in recreational, sporting and creative activities.

12.1.7 To provide opportunities to acquire knowledge in relation to the following:

- Games and Athletics
- Gymnastics
- Dance
- Health and Fitness.

12.1.8 Skills development can take place in the PE hall, on Hard Play Area or on Grass.

12.1.9 A well structured games programme will take account of the games which are indigenous to the area and should also include variety of opportunity as outlined in the Physical Education Syllabi.

12.1.10 To assist the Client on the games that can be selected, data on court sizes and appropriate safety zones are detailed later in Section 14, Summary of Playing Court Sizes.

12.2 Physical Education Hall

12.2.1 The PE Hall is a teaching area that caters for the teaching and learning of appropriate PE skills. It may also be used occasionally as an examination hall or for functions requiring a large assembly area.

12.2.2 The PE Hall should be physically integrated with the main school building where feasible but should also be capable of being isolated from the rest of the school to facilitate after-school use. Mechanical and Electrical services should be designed and zoned to facilitate such separation.

12.2.3 The PE Hall should have a minimum height in accordance with its proposed function. Normally a clear height of 7 m will be specified.

12.2.4 Care should be taken to ensure that nothing projects from the walls that would prove hazardous while the hall is in use.

12.2.5 All arrises / external angles should have a minimum radius of 10 mm.

12.3 Physical Education Ancillary

12.3.1 A foyer must be provided as the main entrance to the PE facility.

12.3.2 A PE store should be provided directly off the PE hall for the storage of PE equipment. 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.

12.3.3 The PE Ancillary area should have access from the playing fields and hard play area as well as from circulation within the school and each of the Changing Rooms should be capable of comfortably seating 30 people.

12.3.4 As the community may use the PE hall in the evenings, the changing rooms should be capable of being used as either male or female changing rooms. Not less than 4 showers with cubicles should be provided in each changing room.

12.3.5 4 No. showers with cubicle dividers should be provided opening directly off each Changing Room. A single toilet cubicle should also be provided opening directly off each of the Changing Rooms.

12.3.6 Two separate WCs and one sanitary suite suitable for use by disabled persons should be provided off the foyer and should be accessible from the general circulation and not directly from the changing areas. The sanitary suite suitable for use by disabled persons shall be wheelchair accessible and shall include a universal access shower base. The floor area should be sufficient to allow for a changing bench and mobile hoist if required. This should be a multi-user suite available to all.

12.3.7 A general store(s) including a cleaner's area shall be provided for the storage of furniture etc.

12.3.8 The control centre shall be provided off the foyer and directly on entry from the main circulation of the school. This room shall be the main control and supervisory point for all entering and using the PE facility. It shall be used as a base for the PE Instructor. It shall also be associated with a reception counter and shall have a direct view by means of a glazed panel to the PE hall. Quick and easy access is also required to the PE Hall.

12.3.9 A balcony shall be provided over the ancillary area. The structural design of the balcony floor should allow for a wide variety of possible uses.

12.3.10 A full height partition shall be provided between balcony and PE hall with glazed panels for eye level viewing of the playing area.

12.3.11 Provision should be made in the design for the future installation of a platform type lift if universal access to the balcony is not otherwise available (e.g. where the PE Hall is integrated into a two storey school).

Schedule of Accommodation for a 406 m² PE Hall [200-449 students.]		
No. of Spaces	**Type of Space and Measurements**	**Area**
	PE Hall	
1	26 x 15.6 m **(Court Size 24 x 13 m; clear height 7 m)** Allows 1 m at each end line of court, 1 m along one sideline and 1.6 m along second sideline of court.	406 m²
	PE Ancillary (minimum floor to ceiling height 3 m)	
2	Changing rooms (32 m² each)	64 m²
2	Showers (4 Nº. showers, total 6 m², off each Changing Room)	12 m²
2	Toilet Cubicle opening directly off Changing Rooms (2 m² each)	4 m²
3	Toilets off main circulation (Male 2 m², Female 2 m², Universal Access 5 m²)	9 m²
1	Office/Instructor's Room	9 m²
1	Equipment Store	20 m²
1	General Store(s)	18 m²
	Circulation (including foyer and stairs) & Internal Division	64 m²
	Sub-Total (Excluding Boiler & Switch Room)	**606 m²**
	Boiler Plant Room (stand alone PE hall)	10 m²
	Switch Room (stand alone PE hall)	2 m²

Schedule of Accommodation for a 594 m² PE Hall [450 students and above]		
No. of Spaces	**Type of Space and Measurements**	**Area**
	PE Hall	
1	33.0 x 18.0 m **(Court Size 24 x 13 m; clear height 7 m)** Allows 2.5 m along each end line and 1.5 m along each sideline of court	594 m²
	PE Ancillary (minimum floor to ceiling height 3 m)	
2	Changing rooms (32 m² each)	64 m²
2	Showers (4 Nº. showers, total 6 m², off each Changing Room)	12 m²
2	Toilet Cubicle opening directly off Changing Rooms (2 m² each)	4 m²
3	Toilets off main circulation (Male 2 m², Female 2 m², Universal Access 5 m²)	9 m²
1	Office/Instructor's Room	9 m²
1	Equipment Store	20 m²
1	General Store(s)	18 m²
	Circulation (including foyer and stairs) + Internal Division	64 m²
	Sub-Total (Excluding Boiler & Switch Room)	**794 m²**
	Boiler Plant Room (stand alone PE hall)	10 m²
	Switch Room (stand alone PE hall)	2 m²

Note: The above schedules apply to both integrated halls and stand alone halls.

12.4 Guidance Notes

12.4.1 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.

12.4.2 All Mechanical and Electrical services and other fittings shall be free of sharp edges. All Mechanical and Electrical services from finished floor level to a minimum of 2.25 m above finished floor level shall be flush mounted (i.e. recessed).

12.4.3 Electrical switchgear shall be mounted in a dedicated area and shall not be installed in the PE Hall, the Control Centre or the Equipment Store.

12.4.4 Light fittings shall be placed where they will not hinder vision. The level of lighting shall not be less than 400 lux, measured 1.5 m above the playing court.

12.4.5 All surfaces shall be capable of withstanding heavy impact.

12.4.6 All surfaces shall be non-abrasive for a height of 2.25 m above finished floor level.

12.4.7 Walls shall provide adequate support for basketball units, with the loads as specified hereunder.

12.4.8 Ledges should be avoided or where unavoidable shall be sloped.

12.4.9 Viewing windows must be of safety glass, without projections and located so as to minimise glare.

12.4.10 Sharp and potentially dangerous corners should be avoided in the activity zone.

12.4.11 Ceiling structures shall be capable of supporting the loads specified for the equipment.

12.4.12 Doors and jambs should be brought flush with adjacent wall surfaces. Rebound panels should be fitted above and below the panic bolts to protect players' shoulders and heads from striking exposed doorframes.

12.4.13 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 bullnose brick.

12.4.14 Door furniture should be flush or recessed.

12.4.15 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.

12.4.16 Structural Drawings of roof must be available to PE supplier.

12.4.17 Co-ordination between PE equipment supplier and main contractor is essential in order to ensure that provision is made in the building contract for services connections and/or structural fixings, where these are required.

12.4.18 Equipment loads are as follows:

(a) 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.

(b) 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.

(c) European Standard EN 1270 applies. *

(d) If wall mounted 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.

(* Where standards are quoted the most recent and up to date must be applied.)

12.4.19 As a matter of policy the Department of Education & Science does not promote or encourage the use of climbing walls or similar artificial climbing structures within PE 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 Client wish to install such a facility, the Client must enter into separate appropriate arrangements with the design team. The Department of Education & Science 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.

12.5 Electrical Services Required

12.5.1 A dedicated single phase 220V, 50 Hz supply is required for the main scoreboard, shot clocks and ceiling mounted basketball units, controlled by a switch placed at a convenient position in the instructor's office.

12.5.2 For the basketball units, provide 2 No. 65 x 65 x 50 mm boxes for the mounting of the motor controllers provided by the PE equipment supplier. Connect a supply from the switch in the instructor's office and terminate in both boxes. These boxes should be positioned so that it is possible to observe the operation of both basketball units.

12.5.3 Provide a four core plus earth cable from the above boxes to roof level for both ceiling mounted units.

12.5.4 Each motor for the units has a rating typically not exceeding 250 W.

12.5.5 A 3 Amp fused spur outlet is required for the main scoreboard and a shot clock at one end and a second 3 Amp fused spur outlet for the shot clock at the opposite end. Heights of spur units to be 6 m.

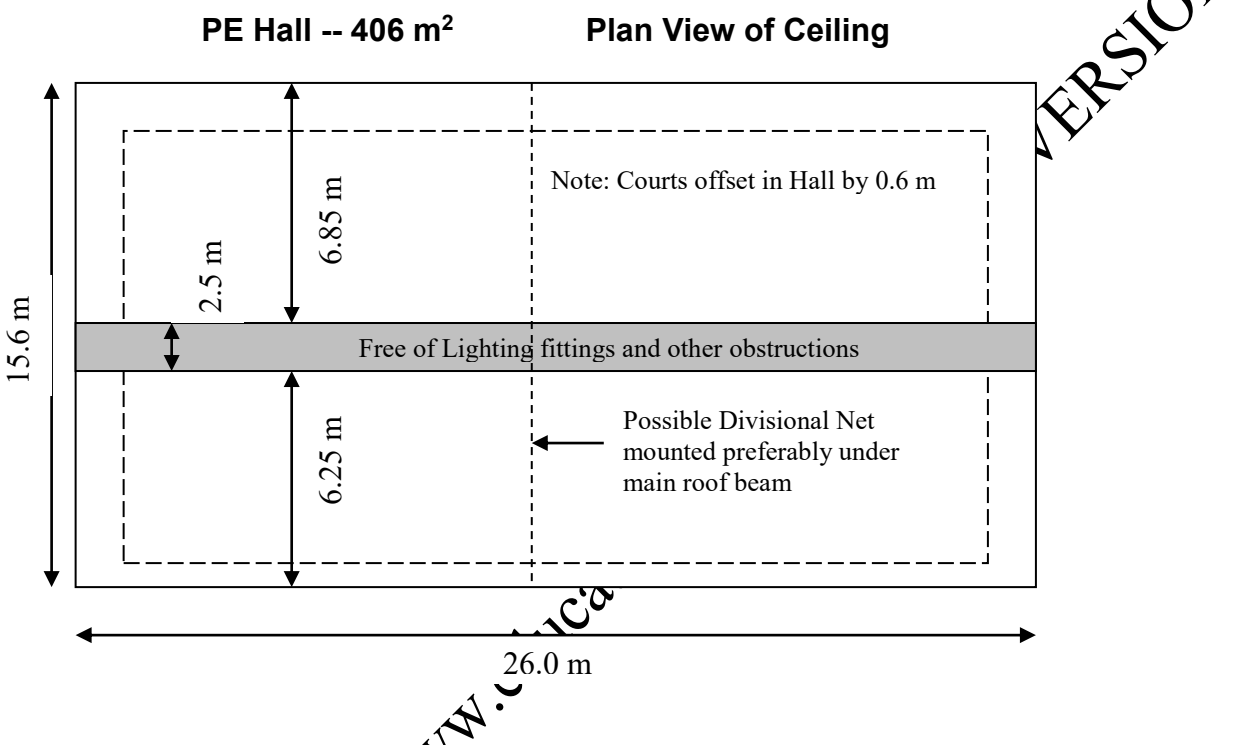
Final connections from the spur outlets to the scoreboard and shot clocks, together with the supply, fitting, connections and commissioning of the controllers and the connections to both motors, will be carried out by the PE equipment supplier (see sample layout).

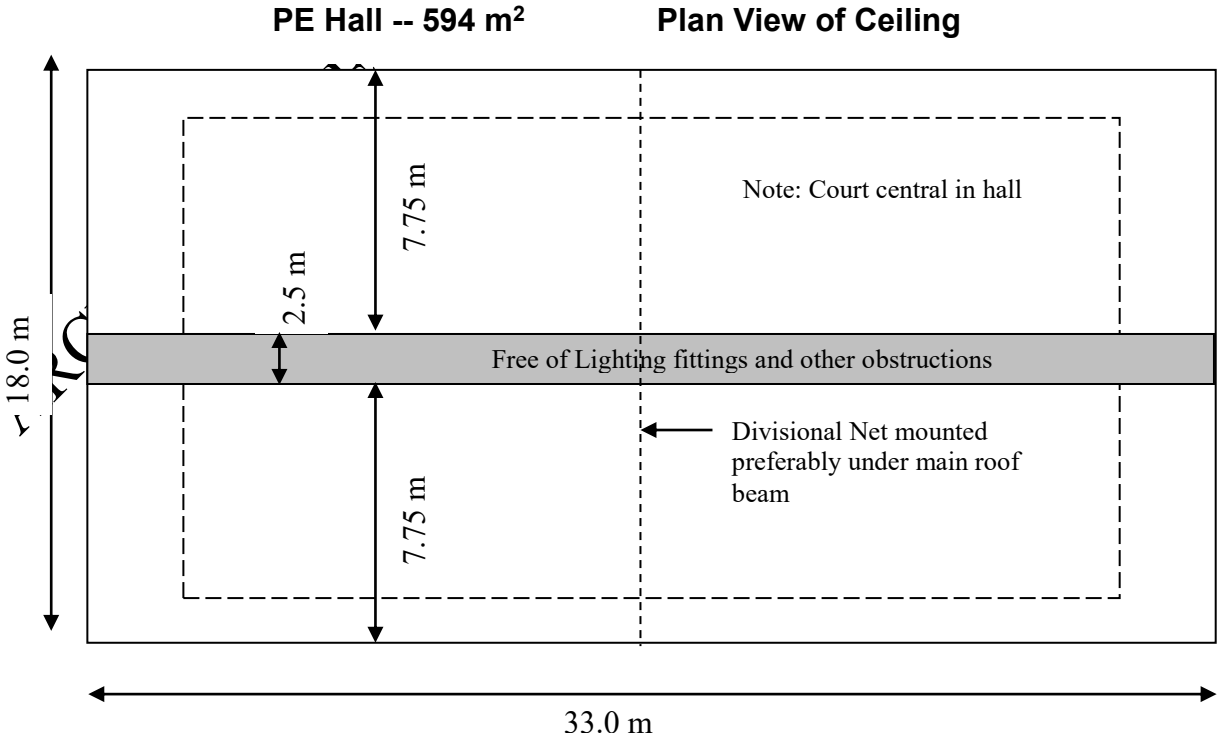
12.6 Divisional Net

12.6.1 This item is usually 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. See diagram overleaf.

12.7 Basketball Units

12.7.1 A zone free of all Mechanical and Electrical services and other fittings shall be provided so as to allow the units to fold flat in the UP position. See diagrams below.





12.8 Fitting of Ground Anchors

12.8.1 Fitting of ground anchors shall be carried out in conjunction with the flooring contractor using the following guidelines:-

(a) Timber floors generally:
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 the finished floor level 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.

(b) Fully sprung timber floor laid on 2 layers of 18 mm plywood:
Anchors are fitted with the floor as there is limited movement possible after the floor is laid (will generally require local funding).

(c) Fully or semi-sprung timber floor:
Where uniform temperature and humidity control can be assured, the anchors shall be fitted with the floor.

(d) Solid floors:
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.

(e) Volleyball/Badminton Posts:
Wall anchors are necessary at 2.4m high at each side of the hall at the centre line.

(f) 5-a-side Football Goals:
Anchor points in the floor or at each gable end at a low level are required for these goals.

(g) Competition Volleyball Posts:
At a minimum, floor anchor points 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.

12.9 Indoor Line Marking

12.9.1 For proper co-ordination of court marking and installation of equipment it is essential that the same supplier be chosen for both.

12.9.2 The court markings should be complete before the final sealing coats are applied to the floor. The Client should tender and select a PE supplier in sufficient time for this to be achieved.

12.9.3 It will be necessary for the Client to liaise with both the architect and the main contractor to ensure that the court markings are completed at the correct time.

12.9.4 For all floor types a compatibility test between floor and line marking paint is required before work commences.

12.10 Equipment List – 406 m² PE Hall

(Note: This is outside the scope of the building contract and is for information purposes only for Designers)

List of Equipment for Hall for 406 m² PE Hall	
Quantity	**Description**
20	Flame Retardant Gymnastic Mat
1or 2	Mat Trolley
2	Flame Retardant Landing Module
1	Reuther, or equivalent, Springboard
10	Wooden Balance Bench.
1	Vaulting Box Type B with Wheeling device
1	Trampette with Coverall Pads
1	High Jump Stand and 2 Circular Laths
4	Table Tennis Tables
2	Ceiling Mounted Basketball Unit – Electrically Operated
1	Electronic scoreboard
2	Shot clocks
2 Pairs	Wall Mounted Practice Basketball Unit
1 set	Volleyball/Badminton Posts and Net. Recreational Standard
3 sets	Badminton Posts and Nets
1 set	5-a-side Football Goals and Nets
1 set	Divisional Net complete with Hanging Bag
	Line marking for courts specified above

12.11 Court Layouts – 406 m² PE Hall [26 m x 15.6 m.]

12.11.1 Basketball Court

(a) Court Size: 24 m x 13 m.

(b) Distance between each end line and end wall: 1 m.

(c) Distance between one sideline and one side wall: 1 m.

(d) Distance between second sideline and second side wall: 1.6 m.

(e) The height of the ceiling or the lowest obstruction shall be at least 7.00 m.

(f) The playing floor shall be made of sprung maple or other suitable material.

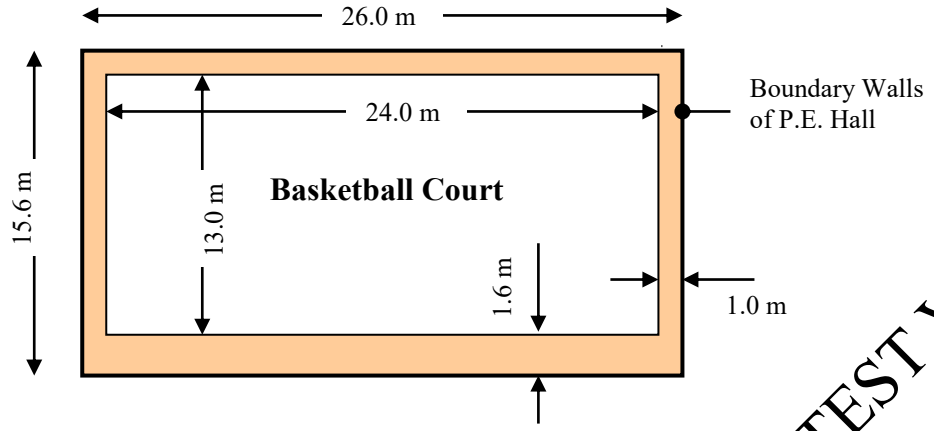
(g) The playing surface shall be uniformly and adequately lit. The light fittings shall be placed where they will not hinder the players' vision.

(h) The level of lighting shall not be less than 400 lux measured 1.5 m above the playing court.

(i) The basketball goals shall be ceiling mounted and electrically operated.

(j) The backboards shall be made of suitable transparent material.

(k) One scoreboard and 2 shot clocks shall be provided.



12.11.2 Badminton Courts - Leisure [3 Courts across hall]

(a) Court Size: 12.6 m x 6.1 m.

(b) Wall from base-line: 1.5 m.

(c) Wall from sideline: 1.0 m.

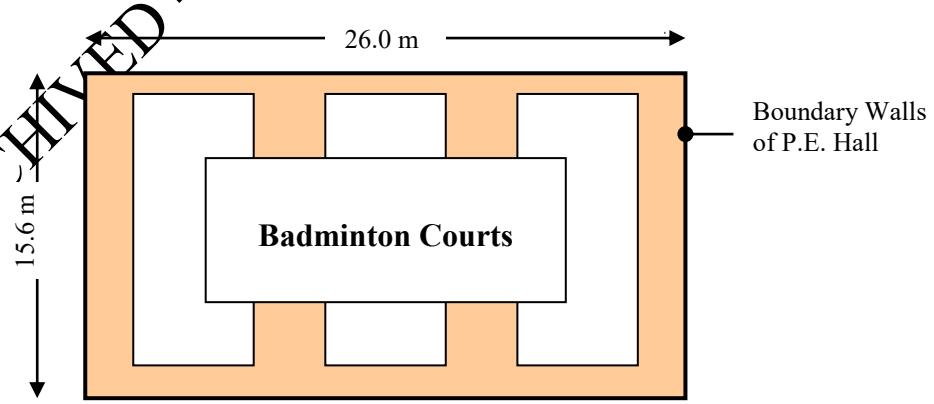
(d) Between parallel courts: 1.85 m.

12.11.3 Badminton Courts - National Competition [One court length-ways on hall]

(a) Court Size: 13.4 m x 6.1 m.

(b) Wall from base-line: 6.3 m.

(c) Wall from sideline: 4.75 m.



12.13 Equipment List – 594 m² PE Hall

(Note: This is outside the scope of the building contract and is for information purposes only for Designers)

List of Equipment for Hall for 594 m² PE Hall	
Quantity	**Description**
20	Flame Retardant Gymnastic Mat
1 or 2	Mat Trolley
2	Flame Retardant Landing Module
1	Reuther, or equivalent, Springboard
10	Wooden Balance Bench
1	Vaulting Box Type B with Wheeling device
1	Trampette with Coverall Pads
1	High Jump Stand and 2 Circular Laths
4	Table Tennis Tables
2	Ceiling Mounted Basketball Unit – Electrically Operated
1	Electronic scoreboard
2	Shot clocks
2 Pairs	Wall Mounted Practice Basketball Unit
1 set	Competition Volleyball Posts
1 set	Netball Posts and Net
4 sets	Badminton Posts and Nets
1 set	5-a-side Football Goals and Nets
1 set	Hockey Goals and Nets
1 set	Divisional Net complete with Hanging Bag
	Line marking for courts specified above

12.13 Court Layouts - 594 m² PE Hall [33 m x 18 m.]

12.13.1 Basketball Courts

(a) Court Size: 28 m x 15 m.

(b) Distance between each end line and end wall: 2.5 m.

(c) Distance between each sideline and side wall: 1.5 m.

(d) The height of the ceiling or the lowest obstruction shall be at least 7.00 m.

(e) The playing floor shall be of sprung maple or other suitable material.

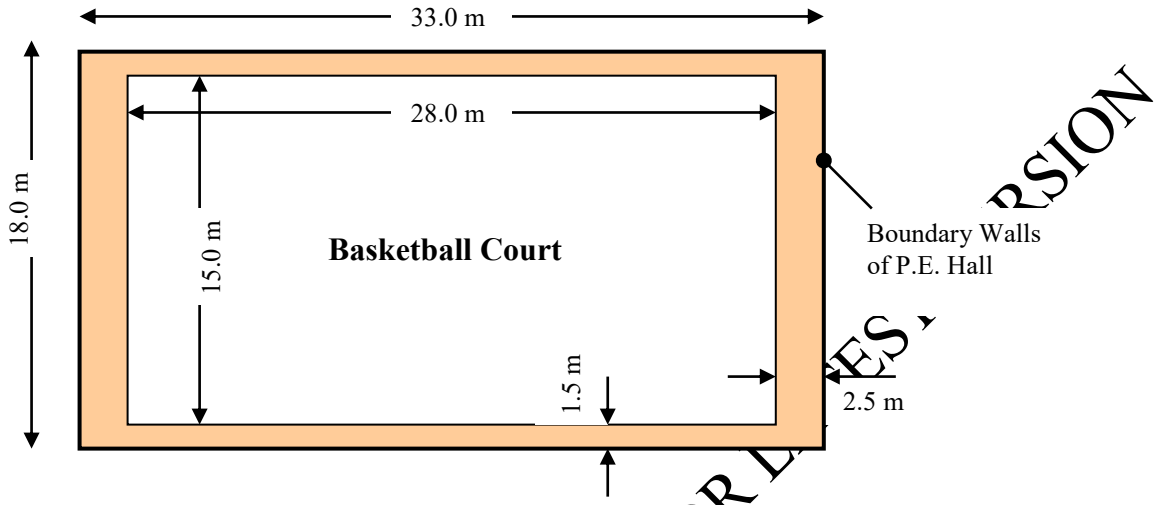
(f) The playing surface shall be uniformly and adequately lit. The light fittings shall be placed where they will not hinder the players' vision.

(g) The level of lighting shall not be less than 400 lux measured 1.5 m above the playing court.

(h) The basketball goals shall be ceiling mounted and electrically operated.

(i) The backboards shall be made of suitable transparent material.

(j) One scoreboard and 2 shot clocks shall be provided.



12.11.4 Badminton Courts [Court Size: 13.4 m x 6.1 m]

(a) Number of Courts: 4.

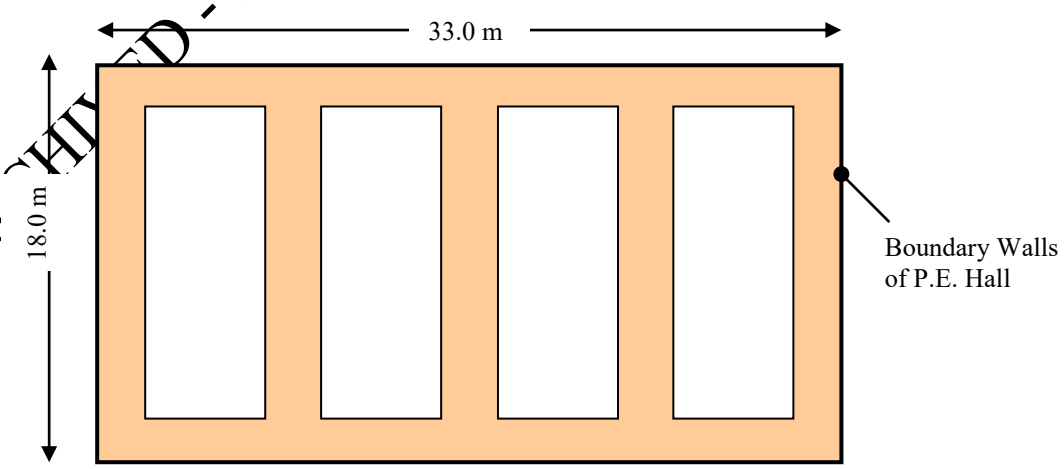
(b) Wall from base-line: 2.3 m.

(c) Wall from sideline: 2.2 m.

(d) Between parallel courts: 1.4 m.

(e) Simultaneous Play:

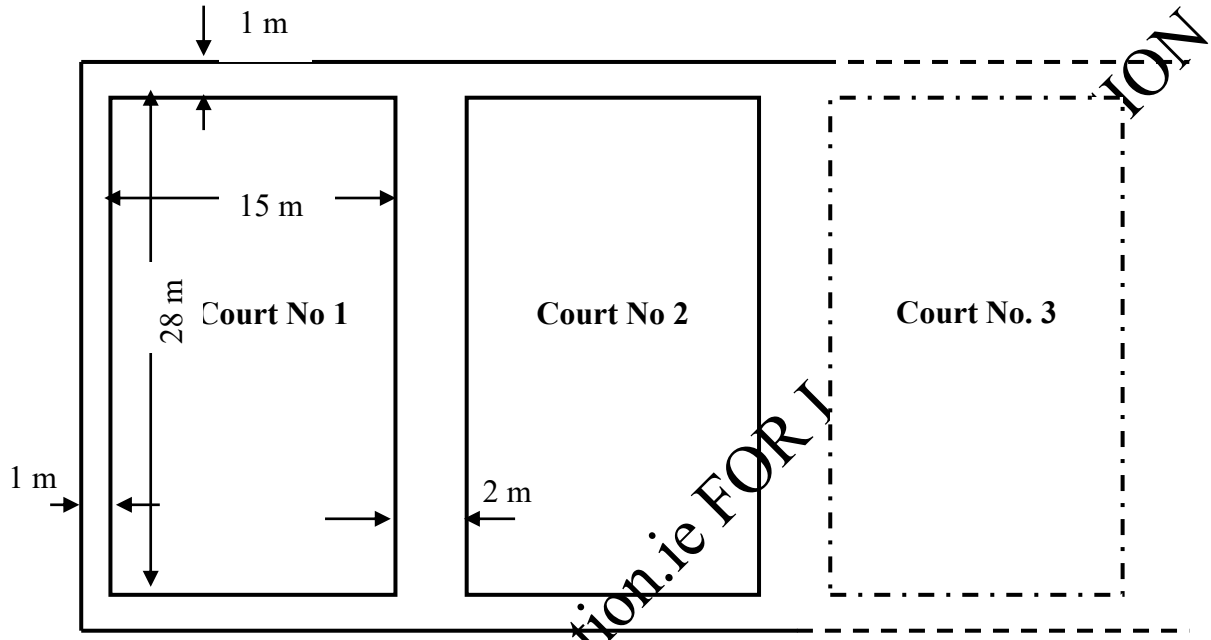
- Leisure: All four Courts
- National Competition: Alternate Court



13 External Requirement Details

NOTE: All works described in this section are covered by the External Works Allowance (EWA).

13.1 Outdoor Hard Play Area – Basketball Courts



Overall area per Court 510 m² 30 x 17 m [Playing Size 28 x 15 m]

13.1.1 Adequate surface water drainage shall be provided from all hard play areas without compromising the safety of the user during play.

13.1.2 In providing such drainage, consideration must be given to the possibility of some games being played across the basketball courts. See section on "Summary of Playing Court Sizes".

13.1.3 In an existing school, the existing hard courts should be retained where possible. If additional courts are required, the cost of these courts should be assigned to the External Works Allowance.

13.1.4 The hard courts should be located adjacent to the external vehicular circulation and also to the changing rooms associated with the PE facility.

13.1.5 A 2.5 m high plastic coated chain link fence around the courts, with lockable access gates should be provided.

13.1.6 Access from the changing rooms to external play facilities should be possible without going through the PE hall or the school.

13.1.7 A 150 mm duct with draw wire should be provided to allow for possible future services to hard play areas from the nearest internal services position (e.g. plant room/switch room/store, etc.).

13.1.8 Number of Courts:

Hard Play Area	Courts per School	Area
for schools less than 250 students	2	1020 m^2
for schools with 250 – 349 students	3	1530 m^2
for schools with 350 – 499 students	4	2040 m^2
for schools with 500 – 799 students	5	2550 m^2
for schools with 800 + students	6	3060 m^2

If site restrictions apply, the following areas and dimensions may be considered but it is essential that the proportionality be maintained.

Area	Overall Area of court	Playing Size
448 m^2	**28 x 16 m**	**26 x 14 m**
390 m^2	**26 x 15 m**	**24 x 13 m**

13.2 Playing Pitches

13.2.1 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.

13.2.2 An All-in Grant, on application, may be considered subject to a maximum lump sum which will be determined from time to time.

13.2.3 Access from the changing rooms to the pitch should be possible without going through the PE Hall or the school.

13.2.4 The following data on sizes of playing areas are given for information purposes.

(a)	Gaelic Games	Playing Area	130 – 145 x 80 – 90 m
(b)	Hockey	Playing Area	91.44 x 54.86 m
(c)	Soccer	Playing Area	90 – 120 x 45 – 90 m
(d)	Rugby	Playing area	100 x 69 m
		In-goal	69 x 22 m
		Overall	144 x 69 m

Note: An Appropriate Safety Zone around the playing area for each game should be allowed.

13.3 Landscaping and Shrub Planting

13.3.1 Provision should be made for the preparation and landscaping of the area around the school and between the school and the site entrance.

13.3.2 Such landscaping should be simple, cost effective and easy to maintain.

13.3.3 The design team should consider the natural paths and routes through the site to the school entrances in determining the appropriate location and extent of paths provided.

13.3.4 Large areas of hard landscaping should be avoided.

13.3.5 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.

13.4 Bicycles

13.4.1 Provision of parking for bicycles, if deemed appropriate, should be located adjacent to the student entrances.

13.5 Car-parking

13.5.1 Provision of car parking should be allowed in the ratio of one space per full time staff member plus one Visitor/Parent car space per 100 students.

13.5.2 At least one additional designated car parking space should be provided for disabled users (i.e. holders of disabled permit) and the total number of such spaces should be in accordance with the Building Regulations and the National Disability Authority guidelines.

13.5.3 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.

13.5.4 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 parks for staff and visitors are not recommended.

13.6 External Store, Covered Area and Yard

13.6.1 External Store (10 x 5 m = 50 m^2)

(a) An external store should be provided adjacent to the practical subject rooms.

(b) This store should be provided with lighting and natural ventilation.

13.6.2 Covered Area (6 x 5 m = 30 m^2)

(a) Where a Construction Studies Room is provided, an adjacent covered area shall be provided.

13.6.3 Yard (area dependent on approved design solution, minimum area 50 m^2)

(a) An enclosed yard shall be provided. Where practicable this shall enclose the external entrances to:

- Construction Studies/Material Technology (Wood) Room
- Technology Room
- Engineering /Metalwork Room.

(b) If practicable, fuel storage shall be located in the enclosed yard and the boiler plant room shall be accessed from the enclosed yard.

(c) Minimisation of external vehicular circulation should be a consideration in locating the enclosed yard.

13.7 Entrance Gates and Boundary

13.7.1 In a new school site, the cost of the main entrance gates and front boundary treatment is included in the External Works Allowance.

13.7.2 The provision of other boundary fencing and walls does not form part of the External Works Allowance.

13.7.3 Where boundary protection is required for security reasons, the cost should be minimised, subject to the suitability of the boundary treatment for the location.

13.7.4 Should such boundary protection be required, the nature, cost and scope of the works should be indicated at Stage 2 and a submission made justifying the additional cost of such works.

14 Summary of Playing Court Sizes

14.1 International Court Sizes (except where otherwise stated)

14.1.1 The following is provided for informational purposes so that the Client can decide on the games that can be played safely within the Provision of the PE facilities.

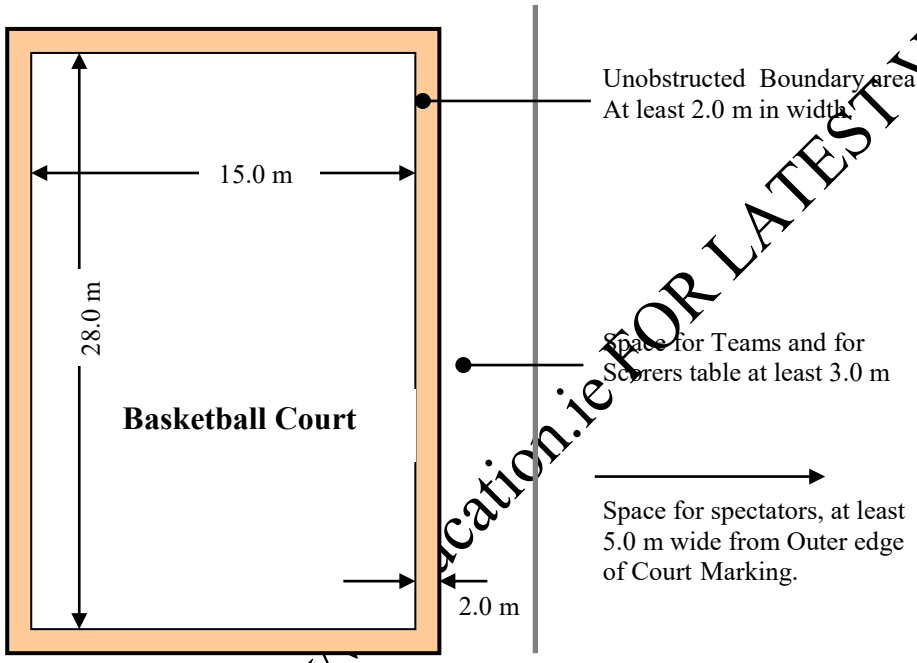
Sport	Hall Size (without provision for officials or spectators)	Court Size	Clear Height
Basketball	32 x 19 m	28 x 15 m	7 m
Volleyball National	26 x 17 m	18 x 9 m	7 m
Football National	31 - 48 x 21 - 31 m	25 - 42 x 15 - 25 m	7 m
Badminton	18 x 10.5 m	13.4 x 6.1 m	9.1 m
Hockey	42 - 50 x 22.2 - 26.2 m	36 - 44 x 18 - 22 m	7.6 m
Netball	33.5 x 18.5 m	30.5 x 15.25 m	7.6 m
Tennis	39 x 20.73 m	23.77 x 10.97 m	9 m
Football International	44 - 48 x 24 - 28 m	38 - 42 x 18 - 22 m	7 m
Handball	42 x 24 m	40 x 20 m	9 m
Handball Olympic	45 x 25 m	40 x 20 m	12.5 m
Volleyball International	40 x 25 m	18 x 9 m	12.5 m

14.2 Sports Arenas – Full International Standards

Note: The following information is given for the guidance of any Client wishing to provide at its own expense an upgraded PE Facility to full International Standards.

14.2.1 Basketball

- Federation Internationale De Basketball (FIBA) Requirements. (International Basketball Federation)
- Court dimensions and other requirements:



(a) The height of the ceiling or the lowest obstruction shall be at least 7.0 m.

(b) The playing floor shall be made of wood.

(c) The playing surface shall be uniformly and adequately lighted. The light units shall be placed where they will not hinder vision.

(d) The level of lighting shall not be less than 1500 lux measured 1.5 m above the playing court.

(e) The basketball goals shall be FIBA approved and floor mounted.

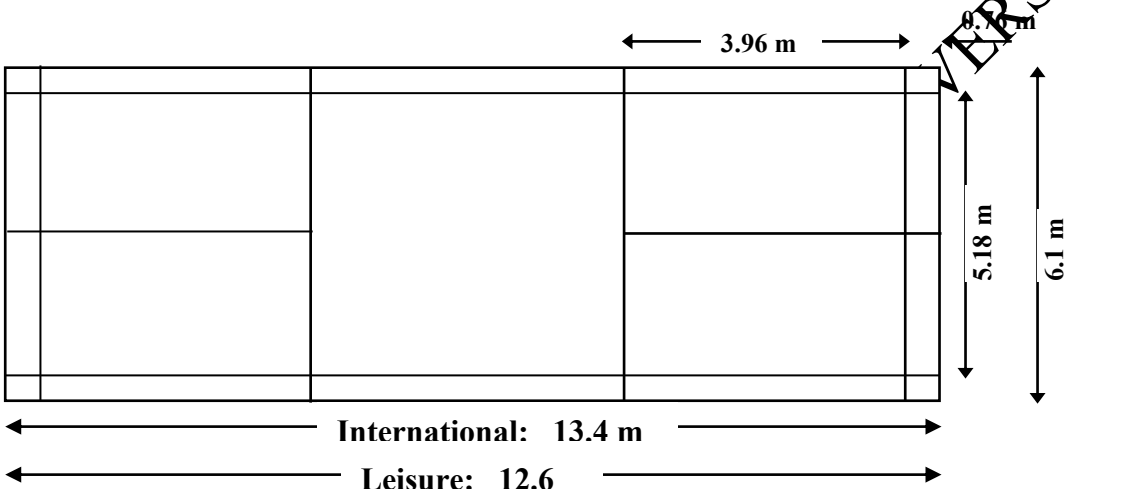
(f) The backboards shall be made of suitable transparent material (preferably tempered glass).

(g) Two scoreboards shall be provided - one on each end wall.

14.2.2 Badminton

(a) Playing Area:

- Length 13.4 m
- Width 6.1 m
- Wall from base-line 2.3 m
- Wall from sideline 2.2 m
- Between parallel courts 2 m (min)
- Minimum clear height [over whole length of court] 9.1 m



(b) Overall areas (minimum dimensions):

- For one court 18 x 10.5 m
- For a parallel pair 18 x 18.6 m
- For each additional parallel court 18 x 8.1 m

14.2.3 Netball

(a) Playing Area:

- Length 30.5 m
- Width 15.25 m
- Space at side lines 1.5 m min
- Space behind goal-lines 1.5 m min
- Space for officials and teams 1.5 m
- Clear Height 7.6 m

(b) Overall Area:

- Minimum hall dimensions without provision for officials, teams or spectators 33.5 x 18.5 m

14.2.4 Volleyball

(a) Playing Area:

▪ Length	18 m	
▪ Width	9 m	
▪ Back-line clear space	8 m	(2 m National)
▪ Side-line clear space	5 m	(2 m National)
▪ Officials space	3 m	(2 m National)
▪ Clear height	12.5 m	(7 m National)

(b) Overall Area:

Minimum hall dimensions [without provision for officials, teams or spectators]	40 x 25 m	International
	26 x 17 m	National

14.2.5 Tennis

(a) Playing Area:

▪ Length	23.77 m
▪ Width	10.97 m
▪ Minimum run-back	6.4 m
▪ Minimum side-run	3.66 m
▪ Unobstructed height over net	9 m

(b) Overall Area:

▪ Overall area per court	39 x 20.73 m

14.2.6 Five-a-Side Football

(a) Playing Area:

▪ Length	38 - 42 m (25 - 42 m National)
▪ Width	18 - 22 m (15 - 25 m National)
▪ Goal-line margin	3 m
▪ Side-line margin	3 m
▪ Clear height	7 m

(b) Overall area:

▪ International	44 - 48 m x 24 - 28 m
▪ National	31 - 48 m x 21 - 31 m

15 Appendix A – Current Area Norms

Area Norms.				
I. Teaching Spaces. Number & type to be based on Educational Worksheet requirements.				
II. General Purpose/Dining Area.		**0.3 m²** per pupil. Minimum **100 m².**		Kitchenette & store **25 m²**.
III. PE Halls		PE Ancillary:	Changing, showers, etc.	Total **84 m²**.
594 m². 33 x 18 m **450 Pupils +**	**406 m².** 26 x 15.6 m **200 – 449 Pupils.**	Equipment store **20 m²**.	General store **18 m²**.	
		Toilets, including sanitary suite for disabled, **9 m²**		
		Circulation (foyer/stairs) + internal divisions **60 m²**		
		Control centre **9 m²**	Boiler & plant – Stand alone Hall **14 m²**.	
IV. Hard Play Area. Overall size per court: **30 x 17 m – 510 m²**. Playing area: **28 x 15 m**.				
Courts per School.				
2 for schools less than **250 pupils**. **1020 m².**			**5** for schools with **500 – 799 pupils**. **2550 m²**.	
3 for schools with **250 – 349 pupils**. **1530 m².**			**6** for schools with **800 + pupils**. **3060 m²**.	
4 for schools with **350 – 499 pupils**. **2040 m²**.				
V. Playing Pitches.				
Gaelic Games. Playing area: **130 – 145 x 80 – 90 m.**			Soccer. Playing area: **90 – 120 x 45 – 90 m**.	
Hockey. Playing area: **91.44 x 54.86 m**			Rugby. Playing + in-goal area: **144 x 69 m**.	
VI. Administration.				
General Office.	**20 m²**. For **less** than **500 Pupils**.		Pastoral. **10 m²**.	Meeting room. **34 m²**.
	30 m². For **500 Pupils +.**		Photocopy room. **6 m²**	First Aid room **15 m²**.
Principal & Deputy Principal. Each office **22 m²**.			Caretaker's work area. **13 m².**	
VII. Staff.				
Staff Room. **3.3 m²** per teacher including **2/3** social & **1/3** work area.				
Staff Toilets. Ratio of **1:19** out of total toilet allocation. One staff toilet, at least, to have shower.				
VIII. Storage.				
Project storage. To be determined as part of Educational Requirements.				
General Storage.	**60 m²**. For **700 Pupils +.**		**40 m²**.	**For 350 – 699 Pupils**.
	20 m². For less than **350 Pupils**.			
IX. Toilets. **20 m²**. Per 100 pupils & staff to include disabled person's sanitary suite with shower. For small area allocation increase to a maximum of **25 m²**. Ratio **1:19** For staff and for pupils; 1 wc per 19; 2 urinals per 1 wc; 2 whbs to 3 wcs/urinals. Disabled person's sanitary suite with shower may also act as staff shower.				
X. Cloaks/Lockers.	**Cloaks:** **7 m²** per **100 Pupils.**		**Lockers:** **7 m²** per **100 Pupils.**	
XI. Social/Circulation. **Minimum clear width of corridors 2.4 m.**				
Social Areas; Circulation and Internal Division:				
Social areas. **3%**			Circulation. **15%**	
Internal Division. **6%** excluding area of PE Facility. Note. The area for internal division of the PE facility is shown in **(III)** above.				
XII. Boiler and Plant Room 40 m²			**Main Electrical Switchgear Room 10 m²**	
XIII. External:	External store. **50 m²**; **10 x 5 m**.		Covered area for Construction Studies. **30 m²**; **6x5 m**.	
Car Parking. **1** per **full time staff** member + **1** per **100** pupils (For guests/visitors.) + **1** for the disabled.				
XIII. Data Communication Centre. 2x2 m - 4 m².				

The area limit is shown as **Total Floor Area** in the schedule of accommodation and is the "Total of all enclosed space measured to the internal face of the enclosing walls" which corresponds with the National Standard Building Elements Definition.

The average Space Norm is 7.5 m² per pupil excluding PE provision.

See also Section 7 Room Dimensions & Areas for areas & dimensions of General Post Primary Teaching and other Spaces.

16 Appendix B – 1984 Room Layout Dimensions

The following Table is for reference purposes only, and is intended as a guide where re-designations are contemplated. It is intended that the room sizes in an existing school will be retained except where educational needs require otherwise.

For new buildings and for extensions the areas and dimensions shown in Section 7 under "Areas and Area Limit" shall be used.

Room Layouts – Second Level Schools Published by the Department of Education and Science, 1984			
Type of Space	Measurements **(Centre to Centre of Walls)**	**Area**	1984 Room Layouts **Layout No.**
Lecture Rooms (interconnected)	15.6 x 7.2 m	112 m^2	1.1 and 1.2
Mathematics Room	7.8 x 7.2 m	56 m^2	2
Demonstration Room (tiered)	7.2 x 7.2 m	52 m^2	3
Library	9.6 x 7.2 m	69 m^2	4.1
Library	12 x 7.2 m	84 m^2	4.2
Library	13.2 x 7.2 m	95 m^2	4.3
Library	14.4 x 10.2 m	147 m^2	4.4
Language Laboratory	7.8 x 7.2 m	56 m^2	5.1
Language Laboratory Recording Studio	4.8 x 3.6 m	17 m^2	5.2
History	8.4 x 7.2 m	60 m^2	6
Geography	8.4 x 7.2 m	60 m^2	7
Social Studies Project Area	7.2 x 4.8 m	35 m^2	8
Science – General	10.2 x 7.2 m	74 m^2	9
Science – Physics	10.2 x 7.2 m	74 m^2	10
Science Ancillary – One Room	7.2 x 2.4 m	17 m^2	11.1
Science Ancillary – Two Rooms	14.4 x 2.4 m	34 m^2	11.2
Junior Woodwork	14.4 x 7.2 m	104 m^2	12
Junior Metalwork	14.4 x 8.4 m	121 m^2	13
Senior Metalwork	14.4 x 9.6 m	138 m^2	14
Building Construction	14.4 x 12.6 m	181 m^2	15
Mechanical Drawing	9 x 7.2 m	65 m^2	16
Arts and Crafts	14.4 x 7.2 m	104 m^2	17.1
Arts and Crafts	14.4 x 14.4 m	208 m^2	17.2
Home Economics with Flatlet	13.8 x 7.2 m	100 m^2	18.1
Home Economics	12 x 7.2 m	86 m^2	18.2
Dress Design	9.6 x 7.2 m	69 m^2	19
Commerce and Business Machines	11.4 x 7.2 m	82 m^2	20
Audio Typing	9 x 7.2 m	65 m^2	21
Commerce/Typing	9 x 7.2 m	65 m^2	22
Music and Drama	15 x 7.2 m	108 m^2	23
General Classroom	7.2 x 6.6 m	47.5 m^2	24
Remedial Room and Store	7.2 x 6.6 + 2.4 x 2.4 m	54 m^2	25
Alternative Science Room	10.2 x 7.2 m	74 m^2	27