

INTERMEDIATE SCHOOL

AND

HOSTEL FOR GIRLS,

TO BE ERECTED AT

COWBRIDGE, GLAMORGANSHIRE.

Notes Explanatory of the Design.

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INTERMEDIATE SCHOOL AND HOSTEL FOR GIRLS.

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DESCRIPTIVE NOTES TO ACCOMPANY THE
DESIGN FOR THE ABOVE.

1. THE DRAWINGS:—

1. Block Plan and Sanitary details.
2. Basement, Ground Floor, First Floor, Attic and Roof plans. Section on line G H through Heating Chamber.
3. Five sections through various parts of the building, showing construction.
4. Four elevations.

The above are drawn to a scale of 8 ft. to 1 in.

5. Details of Class Room gables, windows, etc., with full size of coping and window-jambs.
6. Details of Roof, Dormers, Dormitories, etc., of Hostel.

The two latter drawings are drawn to a scale of 2 ft. to 1 in.

The drawings are interspersed with notes which fully describe character of the work.

2. THE ACCOMMODATION.

After several consultations at which several sketch plans were discussed, and having in view the section under the head "School Buildings" of the draft scheme of the Charity Commissioners, and having also in view the money to be

expended, the following accommodation is proposed and fully illustrated by the drawings :—

3. SCHOOL.

1. MAIN ENTRANCE, 5 ft. 6 in. wide.
2. CLOAKROOM AND LAVATORY, 16 ft. 6 in. by 11 ft. 6 in., fitted with 4 wash-hand basins, and cloak and hat pegs.

[Over this is a Cistern Room, described under "Water Storage."]

3. ASSEMBLY ROOM, 33 ft. by 19 ft., fitted with a book cupboard.

From this room entrances to the other Class Rooms are found in accordance with the "Central Hall" planning of the Education Department.

It is proposed that, when necessary, a Class of 20 or 30 may be held in the Hall Room in the position shown.

A curtain or other arrangement for dividing off the room is not considered necessary, as the size is not over large, and it may be well warmed by the fire-place, and by, if necessary, a coil from the heating chamber.

4. CLASS ROOM, 18 ft. by 15 ft. 6 in., planned for 24 scholars using dual desks, and fitted with a book cupboard.

5. A PROFESSOR'S ROOM, where balances for laboratory work may be kept. A draught closet is arranged for use either from this room or the laboratory. A cupboard for balances is fitted here, and a table resting on solid masonry for delicate experiments.

[A Cistern Room is formed in the roof over this room. See No. 5.]

6. PHYSICAL LABORATORY, 22 ft. by 18 ft., arranged for six elementary and four advanced students. Flues will be constructed to carry the fumes from the four draught closets fitted in the tables to the large flue provided for this purpose in the chimney stack.

A recess for evaporation chambers and a sand-bath are shown.

Sinks. Drains of watertight stoneware will be constructed to drain the porcelain sinks fitted on

the chemical tables. These drains will empty on to a large waste receiver outside connected with the drainage system.

The room is lighted from above as well as from two of its sides.

7. **COOKERY CLASS ROOM**, 20 ft. by 18 ft. This room is lighted by three windows on one side as well as a skylight ; is to be fitted with a 4 ft. 6 in. cookery range and a cupboard.

The entrance to this room is not provided, as in the other class rooms, from the Assembly Room, but from the general entrance. It can also be approached by a separate entrance from the playground through the scullery.

This room is planned so that the room may be used, if so required, as a Class Room for a Cookery Centre, as suggested in Rule 17 (Building Rules) of the Education Code, 1894.

8. **SCULLERY AND LAUNDRY**. This room is primarily a Scullery, but it may be used as a Laundry until a detached one is built. It is fitted with a sink, drying board, copper, oven, and fire-place, the latter being fitted with an ordinary cottage grate, so that, if it be desired, cooking with ordinary cottage fittings and utensils may be taught.

[Over this room is a Cistern and Box Room in connection with the Hostel. See No. 5.]

Here it should be noted that the floor of the Hostel for economical reasons is one foot lower than that of the School. The floor of the Scullery is placed on the Hostel level so that it may be used in conjunction with both the School and Hostel.

It will also be noted that the grouping of the Cookery Class Room, the Scullery, and Hostel Kitchen is designed for obvious economy in traffic and general usefulness of these rooms for both the School and Hostel.

9. **HEATING CHAMBER, COAL AND WOOD CELLAR**, with places for boot and knife cleaning, 17 ft. 6 in. by 10 ft.

This room is to be fitted with one of Haden's (of Trowbridge) upright boilers for the purpose of

heating the Dormitories, and, if necessary, a coil could be arranged in the Assembly Room.

10. and 11. FUTURE ADDITIONS. Space is left here for enlarging the School at some future period. One of the rooms here suggested may be a Music Room, and the other a Class Room for 24 scholars similar to No. 4.

4. THE HOSTEL.

GROUND FLOOR :—

12. ENTRANCE, with Lavatory, Cloak Room, and E. C.
13. HALL STAIRCASE, and Cupboard, and Corridor.
14. MATRON'S ROOM, 16 ft. by 12 ft.
15. DINING AND SITTING ROOM, 20 ft. by 16 ft.
16. KITCHEN, 16 ft. by 12 ft. 6 in.
17. STORE, 7 ft. by 4 ft., fitted with shelves.

FIRST FLOOR :—

18. Landings and Corridors.
19. Servants' Bedroom, 12 ft. 6 in. by 9 ft. This room is entered from the third quarter-space landing, and is two feet lower than the general first floor.

[Over this room is a Cistern Room. See No. 5.]

20. Matron's Bedroom, 11 ft. 3 in. by 9 ft. (average). The projecting window is arranged to slightly enlarge the area of this room.
21. BATH ROOM, fitted with an enamelled iron bath and strong gun-metal fittings, lead safe pipes and trap. The waste from this will be carried down to a waste receiver, shown on drawings, and the waste pipe (2 in.) will be carried to a suitable height for ventilation.
22. EIGHT DORMITORIES, each 8 ft. 6 in. by 6 ft. 3 in., this gives nearly the same area as the Dormitories in Milton Mount School for Ministers' Daughters, the size of those being 9 ft. 6 in. by 5 ft. 6 in.
23. LINEN ROOM, fitted with shelves. A hot water coil is arranged at the back of this room for the double purpose of heating the landing and keeping the linen aired. A grating communicates the heat from the coil into the room.

An iron step-ladder gives access from this room to the Cistern Room above the Servants' Room, also, by means of a short passage and steps, to the lead flat over staircase.

24. Housemaid's Closet. This will be fitted with a Doulton's No. 34 slop and wash-up sink with hot and cold water valves. A 3 in. lead, trapped and ventilated pipe will carry the slops from this sink to a receiver below.

5. WATER STORAGE.

There being no public water supply it is proposed to store the rain water in large galvanised iron cisterns of strong make by G. A. Harvey or other approved maker.

The space over the School Lavatory and Cloak-room being the larger, it is proposed to place here 3 cisterns, one of which, to contain about 200 gallons will have fitted to it Dr. Pringle's automatic rain water purifying apparatus which is simple and inexpensive. The two other cisterns will contain 800 gallons between them into which the rain water will pass through the purifying cistern. There will thus be a store of clean water which may be drawn off in the Lavatory and in the Scullery.

A 600 gallon cistern will be placed over the Professor's room.

Two cisterns containing together 500 gallons will be placed over the Scullery.

One to contain about 800 gallons over the servant's bedroom in the Hostel. This cistern will be the main supply to the heating apparatus and to the hot water boilers at the back of the Kitchen and Scullery fireplaces.

There will be altogether a storage of 2,900 gallons.

In case of failure of rain water in a very long dry season it is suggested that a Well be sunk; it is believed water may be found at a distance of 20 or from that to 25 ft. The Well should have a good force pump attached thereto, so that water may be sent to the highest cistern. It is not proposed to include the Well in the present contract.

6. EARTH CLOSETS.

There being no proper system of drainage, a carefully constructed and worked system of earth closets is deemed to be the best.

One earth closet is provided for the Hostel. It has two windows for ventilation, and the tank is removable from the outside; a fresh supply of earth can also be placed in the hopper through the window just over the same.

The closets for the general use of the school, as shown in the block plan, are grouped together at a distance from the school buildings. Three closets are provided for the scholars and one for the teachers. A small room of the same size as a closet is provided for the storage of dry sifted earth.

It is suggested that an arrangement may be made with a neighbouring farmer to empty the earth closets week by week; a space for use as a cartway is reserved.

7. DRAINAGE.

This is shown on the block plan. All rain-water and waste pipes will be adjusted to empty into trapped gullies or waste-receivers; these in turn will be connected with the drains running to the waste-water tank to be built where shown. The tank will have an overflow which may be connected with the natural drainage of the field, but it is not anticipated that this will be much, if at all, in use, as it is suggested that the water may be pumped out and used for irrigation by a farmer.

All pipes are to be of Doulton's best quality and set in cement.

8. VENTILATION.

SCHOOL. Each room is to have a foul air extraction flue running alongside the smoke flues, these will be fitted with Arnott valves at the intake, and with ordinary galvanised iron gratings at the outlets for horizontal draught (see tops of chimneys in drawings)

In the ridge of the Assembly Room there will be fitted 4 of Caddick's ventilating tiles, and two fresh air inlets will be arranged in the walls.

The Class Rooms will have similar fresh air inlets and a large portion of each window will be made to open.

HOSTEL. As in the School each room will have a ventilating flue and Arnott valve.

The passages and corridors can be well ventilated by the windows provided.

It will be noted that care has been taken to provide a window at each end of the dormitory corridor. The sections

in lines AA and GG show the north window of this corridor, which does not appear in the first floor plan because of its being over the door to box and cistern room.

The separate windows of the dormitories themselves afford good cross ventilation, and as the partitions of the dormitory cubicles are kept down to 7 ft., there is generally ample ventilation provided, and the heating apparatus will keep up the temperature in the cold season.

9. HEATING.

The Heating Chamber will be provided with an upright boiler capable of heating, with 2 in. pipes, 15,000 cubic feet of space, or about 300 feet of 2 in. pipe.

Should it at any time be thought desirable to heat the School generally, a second boiler can easily be added, the Chamber being large enough, and placed in a suitable position.

10. MATERIALS.

The materials are generally described in the drawings, but the following particulars are given here:—

1. MORTAR. Is to be composed of aberthaw lime, mixed with an equal portion of sharp sand or furnace ashes. Plenty is to be used to thoroughly bed the stone and fill the interstices.
2. STONE. Walling stone to be procured from the lime stone quarry above the West Gate in the Llantwit Road, Cowbridge.
3. QUALITY OF WORK. It is to be as described, good hammer polled work, using the punch on the beds occasionally when a bed is too rough. The bonding is plainly indicated in the details Nos. 5 and 6. Good, sound walls, such as have stood in the locality for hundreds of years can be built in this way.

The work now being done at the Young Men's Institute at Cowbridge is of the stone and style of work intended.

4. DRESSINGS. The plain dressings and quoins are to be of local stone, punched as required and shown in the drawings.
5. MONK'S PARK STONE. This stone, from a carefully selected bed, is to be used for plinths, strings,

sills, heads, stone windows, front door-jambes, and chimney heads, and a few other small items shown in the drawings.

6. PAVING to be of Llantrisant or other local pennant stone.
7. TILES. For Hall, etc., to be of Ruabon make, 4 in. by 4 in. by $\frac{1}{2}$ in., set in cement on concrete.
8. SLATES to be thick Velinheli, 20 in. by 10 in.
9. TIMBER to be of the best yellow deal, or that which is locally known as red deal. It must be good and well seasoned.
10. THE WORK GENERALLY. This is to be uniformly good and sound. Ample drawings and full size details in explanation of the work will be supplied, together with a full descriptive specification. Good work will be demanded, and no excuse will be allowed for tendering any other.

11. ESTIMATE OF COST.

1. From experience of work of exactly the same character in the neighbourhood, the cost of these buildings should not amount to more than 5*d.* per cubic foot.

The measurements being taken from the tops of the footings to the middle of the heights of the roofs, at this price the estimates work out as given below:—

	CUBIC FEET.	RATE.	COST.		
			£	s.	d.
School (including Heating Chamber)	63,945	5 <i>d.</i>	1,332	3	9
Earth Closets, Drains, etc.			95	0	0
Total for School ...			£1,427	3	9
Hostel	40,574	5 <i>d.</i>	845	5	10
Total for the whole of the Buildings ...			£2,272	9	7

The above sum is exclusive of architect's commission and cost of quantities.

The total exceeds by £72 9*s.* 7*d.* the sum reserved for this work, *i.e.*, £1,400 *os.* 0*d.* for the School, and £800 *os.* 0*d.* for the Hostel. As the mini-

mum accommodation is provided, excepting the accommodation in the Assembly Room, it would not be well to reduce the accommodation.

It is quite possible that on further examination of the soil by digging the trenches for the foundation, that the concrete under the whole of the walls may be omitted.

The site being close to the railway station, in fact, alongside the railway, the cost of cartage of materials coming by rail will be altogether omitted as the railway waggons could discharge their goods directly on to the site, this, and the plain though substantial character of the building may cause the estimates to come out, eventually, below the figures named herein.

Whatever modification which may be hereafter suggested to lessen the cost it can best be arranged after the receipt of tenders with the priced quantities as a basis.

2. The foregoing notes accompany the drawings as conveying a general idea of the scheme other than could be obtained from a perusal of the detailed specification which is in preparation.

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Architect.

February 5th, 1895.