Report on the Boarding Houses at

CHRIST'S HOSPITAL SCHOOL

Horsham, Sussex

by

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BOARDING HOUSES, CHRIST'S HOSPITAL SCHOOL, HORSHAM, SUSSEX

Christ's Hospital Boarding School is listed grade II. It was built between 1896-1904 to the designs of Aston Webb and Edward Ingress Bell. David Brock is dealing with a listed building case at the school which involves building new accommodation for teaching staff and their families in the grounds. The staff have shown a preference for the being located near the boarding houses where the children board and where residential staff are also currently housed. In order to make sense of the proposals before him, David has requested the assistance of an historian in the HART team to tease out the nature of the original sleeping arrangements and the thinking behind it; and subsequent changes to the planning and architecture of the houses.*

Background History: the competition.

Christ's Hospital School was founded by King Edward VI in 1553, when he signed the Charter of the Royal Hospitals of Christ, Bridewell and St Thomas Apostle[1]. From that date until 1902 the school occupied premises in Newgate Street in the City of London, in a group of buildings ranging from medieval to early nineteenth century in date. Under Wren's direction, Nicholas Hawksmoor designed the Sir John Moore's Writing School built for Christ's Hospital between 1692 and 1695. John Shaw, Surveyor to the Governers of Christ's Hospital, built the great Dining Hall in the 1820s. In 1891 the Charity Commissioners drew up a scheme for the reform of the school's administration and for the removal from the London site which was deemed too cramped and unhealthy. In 1892 the school's own administrative body, the Council Of Almoners, accepted the need for the move and to begin a new healthy chapter in the life of the school by spreading out into the countryside.

A site of over a thousand acres was purchased from the Aylesbury Dairy Company near Horsham in Sussex. A drainage expert, a Mr Roger Fields, was asked to advise on the suitability of the site, and a former pupil or 'Blue', architect Ewan Christian, was also consulted.[2] Ewan Christian had been admitted to the school in 1823 when he was nine years old. He later remembered how at the school in Newgate Street he had been 'buried in bricks and stone and mortar, with no trees, flowers or insects, and never in contact with anyone who cared for country delights.'[3] His zeal for the project was passionate, and he reported to the Council of Almoners that the terrain was eminently suitable for the laying out of the school and playing fields, with an abundance of fresh air, trees and exposure to the sun. Mr Roger Fields concurred, pointing out that the clay soil had good shallow drainage. A Dr Charles Kelly, medical officer of health for West Sussex also praised the 'free exposure to air currents' and the 'open sunny aspect' of the site. A Mr Milner, landscape architect, was appointed by the Council to advise on the layout of the estate. The Council decided to hold a competition for the design of the new buildings, with Ewan Christian as an unpaid assessor

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[1] *The Christ's Hospital Book,* 1953 p.

[2] *The Council of Almoners* Minutes, Vol.30

[3] *Ewan Christian, A Memoir* by J. Standen Adkins, published in the Journal of the R.I.B.A. 30th Sept 1911 p.711

and expert consultant in the architectural matters that would follow from announcing the winner. This Mr Christian seems to have willingly taken on.

The Council of Almoners Minutes, still held at the school, are an immensely useful and important source of information on the progress of the competition and the subsequent building of the school. From these minutes, (particularly Volume 30 which covers the period 1890-1897, and Volume 31, 1898-1904), the details of discussion and decisions affecting the architecture and decoration of the school can be ascertained, and remains a rich seam of research to be tapped. *The Christ's Hospital Book,* published in 1953 to celebrate the quartercentenary of the school, refers to the buildings in passing but no detailed architectural history has yet been published.

For the present purposes, and because time is short, I have eschewed details of the building of the chapel, the dining hall and the school hall, 'Big School', and concentrated on details relating to the layout, erection and alteration of the boarding houses on the north side of 'The Avenue.'

The competition brief

A Building Committee was appointed in 1892, to be chaired by William Vaughan Morgan. Mr Vaughan Morgan had been educated at the school, and subsequently served as a Governor and Almoner. He was to see the building of the school right through from launch of the competition in 1892, to virtual completion of building in 1904. Other members of the commitee who were to be judges in the competition guided by Ewan Christian were: Sir Joseph Savory, Bart., Alderman (Lord Mayor) and M.P., Joseph Diggle, an expert in elementary education and the Reverend William Haig-Brown, an expert in secondary education.

The broad brief for the competing architects was to design dormitories and schools for 700 boys, a preparatory school for 120 boys, a chapel, dining halls, masters' houses, infirmary, sanatorium, and a 'court room'. This last was to be a copy of the existing court room in the school in London, in which to preserve panelling, memorials and paintings. One of between four and six architectural firms were to be selected as the winner after the closing date of 15th December 1892.

By 3rd May 1893 the designs of five architectural practices were to be considered. These were by Messrs Carpenter and Ingelow, T.C. Colcutt, T.G. Jackson, Paley and Austin, Webb and Bell.

The minutes of the meeting of the Building Committee on June 11th 1894 set out in more detail what the judges were looking for in the designs. They wished for :

* 'strict economy and efficiency of design'

* as regarded arrangement, 'healthfulness, light air, warmth, general convenience, economy of management' were of great importance

* as regarded construction, 'good quality materials, safe construction and safety from fire

risks' were important

* on the matter of architectural design the qualities that the commitee were looking for were: 'dignity of proportion, fitness for purpose, simplicity, reality of structure', (practicality?), and 'abstention from all ornamentation likely to lead to costly repair.'

The original scheme prepared by Webb and Bell, 1894

The design submitted by Aston Webb and Edward Ingress Bell were the unanimous choice by the committee because they had best fulfilled the instructions, particularly in the layout, and they had provided the cheapest scheme and 'on the whole the most suited for the hospital's purpose'. The minutes of the meeting concluded with a warm vote of thanks from the committee to Ewan Christian 'who has devoted much time but also placed his valuable experience and knowledge at the disposal of the committee.' (Council Minutes, June 11th 1894 p.303.)

The layout of the school as proposed by Webb and Bell comprised a central core of major buildings placed around a giant quadrangle, with a curved road just north of it, (later called The Avenue), along which eight residential blocks were to be sited, with a preparatory school and an infirmary at either end. South of the quadrangle and aligned with Big School a detached music school was to be sited. This was to be at mid-point between a road running east-west, which terminated in crescent-shaped structures, probably garden buildings. This part of the plan was the last to be finished.

Eight blocks on the north side of The Avenue, four either side of the dining hall and kitchen, were to be the boarding houses. H-shaped in plan, these blocks comprised two 'houses' which accommodated the boys, their masters, assistant masters, maids and servants. The headmaster had a spacious plot with garden on the south side of the road. North of the H blocks was a service road, beyond which were the playing fields, the swimming pool, gym and laundry; and even further away, the sanitorium was to be sited. East of the kitchen and dining hall were four H blocks, the medical officer's house, the infirmary and land designated for junior exercising and senior exercising.

The two outer blocks on each side had married masters houses attached, the two inner blocks on each side did not: the single masters were accommodated within the bar of the H. This arrangement was modified, as we shall see, to provide only one married masters' house attached to the penultimate block. The plan was neatly symmetrical and logical; and it is clear that the narrow spaces between the blocks were to allow air and light to circulate, (a concern that comes up repeatedly in the minutes), and were not intended to be infilled. Another reason for believing this is that the elevations for the boarding houses were also symmetrical and with architectural pretension; they were meant to be seen.

An elevation for the boarding houses and a plan was published in *The Builder* in 1894, appended. In addition to published drawings, a complete set of drawings for the boarding houses dating from 1896, and 1898-1900, survives in the archives numbered from between 460 and 491, and show the modifications made and implemented. They have not been copied.

The internal arrangement of one of the inner H blocks as shown in the 1894 plan was as follows:

The dormitories, each with thirty beds, were along the vertical legs of the H which terminated at each end in the toilet and washing areas separated by an open passage (these have since been enclosed). In the central horizontal bar the living quarters of the matron, maid, master and assistant master were provided. This was the arrangement on the second and top floors; the ground floor was taken up with day rooms, changing rooms, store rooms etc. with toilets at one end. The masters' entrance was at the front (south elevation).

Drawing Nos 489 and 491 show the accommodation in the 'married masters house in connection with the two end boarding houses' and comprised a toilet, coal store, larder scullery, kitchen, pantry, dining room and drawing room with a bay window, and a study adjacent to a short link to the boys' entrance lobby in the H block. On the second floor were four bedrooms, and a dressing room. The drawings for the roof area indicate slates, boarding and copings. The basement accommodated an entrance to the service subway, a heating chamber, 2 coal cellars and pipe trenches. Drawing No. 574 indicates the original intention for external paving: 'ashlar paving over the subway' and stone paved entrance paths.

A number of elevations for the boarding houses survive dated December 1896, and tie up with discussions recorded in the minutes that show that they were approved in principle. These are drawings numbered 493-501. The front elevation shows an elaborate arrangement of wall, railings, gates and gate piers between the houses. These were not built to reduce costs, as we shall see. Drawing No 493 shows the rear elevation, symmetrically placed window and door openings, with an open arcade on the ground floor. Much of this elevation has since been lost to view with the addition of a two storey extension on this north side in 1965-6.

Drawing No. 500 shows the east elevation, and like the principal elevations, is rigorously symmetrical. Although these drawings show a degree of ornament and pretension intended for the buildings but abandoned when they were actually built due to cost, they clearly show the architects' desire to embue the houses with a sense of classical dignity, lofty proportion and perfect symmetry. The blocks were freestanding and meant to be seen on all sides, except where the married masters' houses were attached.

Alterations to the original scheme.

Despite being commended for cheapness and practicality, the minutes of the council meetings between 1893 and 1903 indicate a severe cutting back of costs when it became apparent that funds for the new building were tight. The Building Committee asked the architects to make modifications to the scheme and reduce costs. Webb and Bell themselves suggested that the scale of the infirmary and sanatorium could be reduced, and that '*arrangements for housing masters might be greatly modified.*'[4] Also, it was agreed that building a separate preparatory school be omitted as numbers of new pupils were falling off. Notwithstanding this it was agreed to keep the communal buildings, (Big School, kitchen and dining hall, and chapel) on

[4] Council Minutes vol. 30, 1894, p.334

a grand scale, as numbers were likely to increase from the estimated 700 boys, in the future. At this time Christ's Hospital Girls School was housed at a purpose-built school in Hertford, ('the first to be built with a dayroom distinct from the dormitories'[5]) and only returned to the Horsham site in recent years.

The Building Committee Minutes for February 6th 1895 summarised the following changes to the original scheme:

* The preparatory school was to be omitted.

* Six boarding houses were to be built each for 100 boys, 'to be erected at the present scale.'

* Masters houses were to comprise a headmasters' house at a cost of £3,000; an assistant master's house at £1,500; 2 assistant masters' houses at £ 1,200 each, and a stewards house for £1,200; all accommodation to be placed 'near the stores and kitchens, not near the main approach.' The medical officer's house to be omitted.

* The sanatorium was to be postponed and the infirmary to be modified to be able to take infectious cases.

* The subway for the use of servants going between the houses and hall, and to house heating and lighting equipment, was to stay, and the covered way connecting all the main school buildings was to be omitted.

* The side aisles and towers on the chapel were to be omitted, but the building erected in such a way as to permit extension at a future date.

* Another alteration was the omission of earth closets at the rear of the boarding houses shown in the original plan, in favour of internal water closets.

Final approval for the boarding houses.

On page 425 of Volume 30 of the Council Minutes, the minutes of the Building Committee meeting of the 5th February 1896 refers to some 32 revised drawings, the ones discussed above, with the following comments:

'The boarding houses for 100 boys each, six in number with sites for two additional ones, are arranged as before, three on either side of the Dining Hall, and are practically on the same lines as the competition plans with slight variations in the fittings where desirable.' The buildings were to be built of red bricks, local stone and green slates, or in some cases lead, and were fireproof throughout.

The chapel, science block and art schools were approved but in a different arrangement (July 1896). The museum and music school were to be postponed. The Charity Commissioners were still concerned about the high costs asked Sir Arthur Blomfield for his opinion; it

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[5] *The Christ's Hospital Book,* p. 342

appears that he satisfied them that it could not be done any cheaper.

The local firm of James Longley and Company of Crawley won the tender to build the first stage of building: setting out the foundations and building to ground level, for a cost of £22,469.

Subsequent modifications

Yet further modifications were made to the boarding houses during 1897. On May 5th a letter was read to the Building Committee from Messrs Webb and Bell, in which they suggested that 'in view of the possible extension of the series of school houses it would be desirable to omit the attached married master's house at the side of the westernmost block, and place it opposite on the south side of the road in order to allow for the future extension of the subway.' This was approved on 10th May 1897; however, a request to add a married master's house to the both outer boarding houses, as well as the one on the other side of the road, was rejected by the Charity Commisssioners who believed it 'not sufficient reason to add to the cost.' (July 28th 1897).

The foundation stone was laid by the Prince of Wales on Founder's Day, 23rd October 1897. That same month, more cost-cutting measures were decided upon by the Building Committee: cheaper bricks, less stone, no turrets . The ornamental gates, piers and railings originally planned between the boarding houses were to be just 'plain iron gates and railings'; slate was to be used as a roofing material instead of lead; iron pipes instead of lead pipes. The masters' houses were all to cost £1, 200 each. Thus the total cost of building the school estimated by Longleys was reduced from an estimated £387, 769 to £294, 243 .

The Building Committee were of the opinion that four years was too long a period for building and wished to see the time reduced to two and half years. By November, a compromise agreement was reached: 'Boarding and masters' houses to be completed within two years and the remainder of the buildings within two and a half years, with the exception of the school hall and chapel and sanatorium; the school hall to be completed within three years, and the chapel and sanatorium within three and a half years.'

By December the exact number of school buildings was finally agreed upon: 6 boarding houses for 100 boys each with adequate staff; one headmaster's house, 5 married masters' houses, 2 of which were to be attached to the boarding house. One steward's house, dining hall, kitchen block, water tower, infirmary, sanitorium school hall and classrooms, chapel. This was approved on December 1st 1897.

Building began soon afterwards and throughout 1898 and 1899. Some delays seem to have ocurred around 1901 and more money saving changes made: November 6th 1901 notes a decision to provide asphalte playgrounds at the backs of the houses instead of grass (less maintenance)., and to lay asphalte instead of gravel paths. Railings between the boarding houses were deemed unnecessary; and the fives courts that had featured behind the houses on the first plan of 1894 were not provided.

The last assembly at Newgate Street was held on 18th April 1902; the site was cleared and parts of the Writing School were transferred to Horsham and incorporated in the elevations of

Big School. By 1903 the six boarding houses, two detached masters' houses and three smaller masters house, lodges and cottages in the grounds had been built. The following year, 1904, the remaining buildings, including the two additional H blocks, were built and Aston Webb was knighted. Webb was in the second year of his term of office as president of the Royal Institute of British Architects. He went on soon afterwards to design the buildings for Birmingham University, which repeated the quadrangle of buildings linked by colonnades, and which was to feature on a yet larger scale in his grandiose competition designs for the setting of the Queen Victoria Memorial in front of Buckingham Palace, 1920. In 1923 Sir Aston Webb, in partnership with his son Maurice Webb, designed the Royal Russell School in Croydon, again using the quadrangle as the central feature of planning. This school scheme was built in phases over many years and never realised the grandeur of the original scheme.[6]

It was at Christ's Hospital that the collegiate plan was best realised in built form; 'the height of the collegiate style for schools' according to school historian Malcolm Seabourne. It was described by *The Builder* in 1894 as 'the best planned large public school in England'. The significance of the planning of Christ's Hospital lies in its emphasis on healthy communal living and learning, specifically in the zoning of the 'business' area and the residential and recreational areas. As such its importance was recognised at the time of its conception by Felix Clay, an architect and specialist in the planning of educational buildings. In his seminal book *Modern School Buildings* (1902 and 1906), Clay held Christ's Hospital up as a supremely successful model. Its influence was felt immediately, for example at Gresham's School, Holt (1902, Chatfeild Clark) and at the contemporary Royal Masonic School, Bushey by Basil Champneys. Clay comments in some detail on the arrangement of the boarding houses at Christ's Hospital, comparing the merits of the various competition entries; the relevant parts from his text are appended to this report.

Conclusion

The dominating characteristics of Webb and Bell's layout of Christ's Hospital school were a compact formality, strong axial planning and symmetry; both in the planning and the designs of the elevations of the individual components of the scheme. The chief ideological concerns in the planning of the boarding houses were the prevention of disease and the spread of fire. Despite the vissicitudes of the details, this marriage of ideology and architectural cohesion remained a consistent feature.

In my view, to build between the houses would go against the grain of the architects' original intention to have light and air circulating around the blocks, and for the elevations to be seen. The proposed new blocks would be overlooked by the cliff-like facades of the boarding houses and spoil the ability to appreciate the side elevations of the houses.

Placing new houses behind the existing blocks and the 1960s extensions would be preferable but would still give a sense of overdevelopment on this part of the site. The houses would take away play space currently used by the scholars, and would be seen by visitors

[6] Historical report on the Royal Russell School by Roger Bowdler, English Heritage H.A.R.T team, CRO 71.

approaching from the north. There are other considerations related to the impact of new building here: the proximity of the trees and the presence of the underground subway. (Until recently the subway was used by the boys to reach other buildings in inclement weather; I am not sure how much it is used nowadays).

Other options should be considered such as infilling along the south side of the Avenue, or around the edge of the site, or even on part of the playing fields. This would have less impact on an already intensively developed area, but would have to be balanced against other needs.

Susie Barson
November 1999

Sources

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The Christ's Hospital Book Hamish Hamilton, 1953

Council of Almoners Minutes, Volumes 30 and 31

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Nov 2 1895 with 'bird's eye' perspective by A.N.Prentice.

The British Architect Dec 19 1902 p.433 and p.441

The Architectural Review 1902-3

Malcolm Seabourne and Roy Lowe *The English School and its Architecture and Organisation, Vol.II 1870-1970*

Felix Clay *Modern School Buildings* Batsford, London 1902, 1906. See chapter 9 on Boarding Schools.

or places used in connexion therewith. (2) The lighting, ventilation (including air-space) cleansing, drainage, and water supply of such premises. (3) The provision and situation of water-closets and urinals in connexion with bakehouses. (4) The prohibition of the use of the bakehouses for other purposes than the preparation of food. (5) The use of any room adjoining or opening into any bakehouse. (6) The conduct of the business and the prevention of the contamination upon the premises of any articles of food prepared in any bakehouse or of any materials to be used in the preparation of food. (7) The mode of making application for licence to use any premises as a bakehouse. We also consider that—(*a*) No premises should be used as bakehouses which are not licensed by the Council, and that a licence should be operative for a period of five years, Power being however given to the Council to suspend any licence for contravention of the regulations. (*b*) That all bakehouses which are occupied for the first time after these regulations come into force should before such bakehouses are occupied, be made to comply with all the regulations. (*c*) That bakehouses which are occupied before the by-laws come into force should be exempt for a period of five years from the regulations as far as these will require structural alterations other than those now required under existing law, but that after this period they should be required to comply with all the regulations. We may point out that the Government has introduced a Bill for amending the Factory and Worshop Acts, and this seems to afford an opportunity for amending the law relating to bakehouses.

We recommend—

'That the Council do endorse the views expressed in this report, and give instructions for a copy of this report and of the medical officer's report to be sent to the President of the Local Government Board, with a request that he will take steps to obtain an amendment of the law relating to bakehouses in the manner here proposed.'"

The consideration of the report was adjourned for a week.

The Council adjourned at twenty minutes past eight.

Illustrations.

PLANS OF CHRIST'S HOSPITAL SCHOOLS.

WE give this week the large general plan of Messrs. Webb and Bell's design for the new Christ's Hospital Schools at Horsham, which has been selected for execution; the plan and end elevation of the central hall and its adjoining class-rooms, and the plans of one of the boarding-houses.

We noticed the principal points evidently aimed at in the planning, in the general review of the designs in our last issue, and the architects entirely confirm the accuracy of our general exposition of the leading ideas of their plan. The only points on which we need add a word are as to the ventilation of the dormitories, and subterranean passage shown in the basement plan of the boarding-house. The ventilation of the dormitories is effected by means of flues in the walls connected by trunks in the roof to a ventilator on the ridge containing a small steam coil. The ventilators are placed on the annexes in order to avoid the possibility of the air from the annexes being drawn into the wards, the current being the other way.

The servants' subway is necessary because the servants from each house have to make their way to the central dining-hall several times a day in all weathers. The suggestion arose from this of a covered way for the boys above ground, connecting the boarding-houses with the dining-hall, so that both boys and servants can reach it under cover, but by entirely separated corridors.

We may add here the architects' statement of the reasoning which led them to the adoption of the principle of planning carried out in their design, extracted from the draft report which they have kindly sent us:—

"In dealing with such a problem as the one now before us, one's first impulse is towards a reproduction, with modifications, of the traditional type of our university towns. The leading features of our great Mediæval seats of learning are familiar to all. The well-guarded entrance gateway for security and discipline, the enclosed 'quad,' with hall and chapel master's house, cloistered walks and students' rooms, with further similar 'quads' beyond, round which are ranged libraries, museums, and such like—these present a complete embodiment of the requirements of a great school, all in proper order and due sequence. For security and control, for convenience of daily work and for economy of administration, the Mediæval plan does not admit of improvement.

But investigations into the conditions of healthy The enclosed 'quad' with its four dead angles, makes for the partial exclusion of sunlight and the stagnation of air; whereas an abundance of sunlight and the free movement of air about and around a building, are now universally regarded as amongst the first requisites of health. So that the ideal arrangement from a sanitary point of view—and sanitary considerations must rule in this case—is not to be sought in the compactness and concentration of the Mediæval plan, but rather in its opposite, dispersion and segregation. If, however, this principle be pushed to extremes, the result would be, in the case of so large an establishment as Christ's Hospital, a practically unworkable plan. The true solution appears to lie in a division of the scheme into two sections, the residential portion and the working portion, and to treat each portion on its merits.

Accordingly, in the plan now submitted, the residential portion has been extended along a southern frontage, the blocks separated by ample interspaces, and the working portion has been gathered up in the centre and disposed about a cloistered 'quad,' where the hall, chapel, and schools are, with sufficient intervals between each, placed.

By this arrangement something of the architectural effect of the Mediæval treatment is retained, and with it the scholastic stamp. The working portion of the hospital is brought to a focus, and the time of the working-day is economised, whilst the residential portion is dispersed."

SCULPTURE AT THE ROYAL ACADEMY.

THE two circular bas-reliefs by Mr. F. E. E. Schenck, which are in the Lecture-room at the Royal Academy, and are illustrated in this number, require no description beyond the hints furnished by the quotations appended to them in the catalogue, and printed under the titles on our plates. The lines appended to the figure representing Night are from Joanna Baillie, the others from Byron.

The bas-reliefs, which are of very fine sculptural character, are, at present, in plaster only. It is to be hoped the sculptor will be commissioned to give them more permanent form in marble.

LONDON AND MIDDLESEX ARCHÆOLOGICAL SOCIETY.

A CONVERSAZIONE of this Society was held on the 12th inst., at the Innholders' Hall, College-street, Dowgate-hill, by permission of the Master, Wardens, and Court of Assistants of the Innholders' Company. Dr. Edwin Freshfield, President of the Society, was in the chair, and opened the proceedings by calling attention to the many beautiful objects of interest exhibited to the meeting, among them being some photographs of the crypt of St. Laurence Pountney, recently destroyed. This crypt was illustrated and described in a letter by Mr. W. H. Nash, in the *Builder* of April 28 last. Dr. Freshfield greatly deplored this destruction, and said it seemed as though they must destroy everything that was old in the City of London. The churches were also being destroyed, and it seemed as though St. Ethelburga's, Bishopsgate-street, was doomed. He hoped they would all do their best to prevent such vandalism from taking place. Some people asked, what did it matter if they had union of benefices provided it was stipulated the churches should be preserved. But he would have them remember what had occurred in the past. The same sort of thing was said about St. Antholin's, which was removed all the same.

Mr. J. Douglass Mathews then read a paper on "Historical Notices of the Worshipful Company of Innholders, with Remarks on their Hall and Pictures." The first reference that he found relating to a Society of Innholders was contained in the "Memorials of London Life, and was a petition from the hostelries of London to the Mayor and Aldermen in the first year of King Edward III.'s reign in 1327. In 1473 a petition was presented to the Lord Mayor praying that the craft be called "Innholders" instead of "Hostlers." In 1509 an application was made for a charter, and in 1514 King Henry VIII. granted a patent or licence, which was exhibited to the meeting. A second charter was granted by Charles II. in 1663 reciting the charter of Henry VIII. In February, 1685, another charter was granted on the surrender of that of Charles II. A grant of arms was made in 1634. There appeared to be no particulars of the Com- [illegible] present hall, and that in 1659 [illegible] Wardens were directed to view [illegible] the hall, and see what defaults [illegible] ration. The first entry in the [illegible] Fire relating to the Hall was [illegible] when a draft of the building [illegible] ordered, and a fortnight [illegible] Wardens were directed to [illegible] the Hall and report. In January [illegible] ordered that the ground or site [illegible] and the foundations laid. [illegible] have been no contract, but the [illegible] were employed and paid from [illegible] instalments a total sum of 1,2[illegible]*l*. [illegible] a sum of 700*l*. was expended. It [illegible] to note that the present general [illegible] altogether to blame for builders' extra[illegible] case the total cost was very far [illegible] original estimate. The Hall was [illegible] in 1882, but fortunately without [illegible] fering with its effect, which really [illegible] same to-day as it did 200 years [illegible] to the minutes, in former times, [illegible] quently sat down to dine with the [illegible]

Mr. Philip Norman, F.S.A., next [illegible] on "Famous London Inns," and [illegible] to a large collection of engravings [illegible] exhibited on the platform, all col[illegible] by himself. There were dra[illegible] Tabard," "White Hart," [illegible] "King's Head," &c. in Southwark [illegible] Pindar" (now in South Kensington [illegible] "Old Cheshire Cheese," Fleet-street [illegible] other ancient hostelries of London [illegible] described.

Mr. S. Hope next described [illegible] E. H. Freshfield the plate, which [illegible]

After the votes of thanks [illegible] speakers, and to the Inn[illegible] and chairman, the meeting [illegible] numerously attended, proce[illegible] various objects of interest [illegible]

COMPETITION[illegible]

CRICKET PAVILION, BEDFO[illegible] of the competition for a cric[illegible] Bedford has just been made k[illegible] cessful competitor was Mr. [illegible] A.R.I.B.A., of 13, Bond-street, [illegible]

Correspondence[illegible]

To the Editor of THE BUI[illegible]

SEWER AND DRAIN VENT[illegible]

SIR,—In your issue of the [illegible] to the experiments made by [illegible] which showed that, with neither [illegible] three-gallon flush was a [illegible] ceptor entirely cleared of solid [illegible] concludes that this result was cau[illegible] of the interceptor. In my opinion [illegible] is in no way responsible for this [illegible] this is shown, as pointed out by [illegible] that the six-inch drain-pipe [illegible] The real cause must be looked [illegible] but in the pipe, and, to my mind [illegible] prove most conclusively what I [illegible] that a 6-in. pipe is much too [illegible] ments been carried out with [illegible] confident that both the pipe a[illegible] been cleared by a three-gallon [illegible] drain pipe is of sufficient [illegible] possible rainfall, the smaller [illegible] limit, the better. It is my expe[illegible] ordinary purposes a 4-in. pipe [illegible] have myself with perfect success [illegible] with a 4-in. drain, which will [illegible] largest possible rainfall from [illegible] frontage by a depth of 150 ft. [illegible] Mr. Read that the intercep[illegible] be omitted, nor is it part [illegible] duty to ventilate the sewer, [illegible] the local authorities. Though [illegible] jection to unnecessary traps [illegible] fittings as receptacles for [illegible] interceptor as absolutely [illegible] the house side of the trap, I [illegible] free and unobstructed passage [illegible] air, open at both ends.

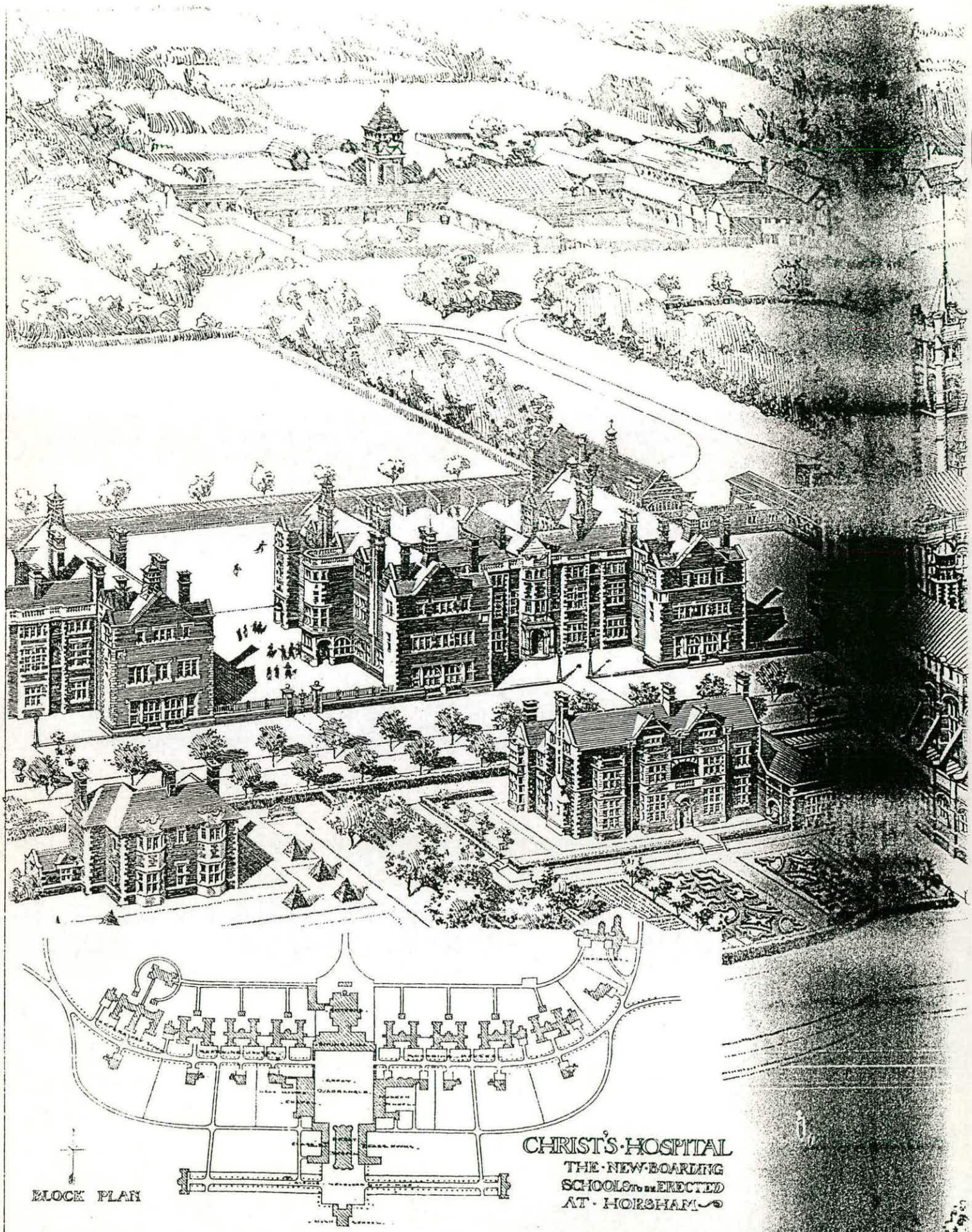
I am much pleased to see Mr. [illegible] because I agree with him, but [illegible] endeavour to improve upon the [illegible] of us are far too apt to take [illegible] and do just as the sanitary [illegible] to our great detriment. [illegible]

I should like to add to this [illegible] against the manner in which [illegible] out by [illegible]

PHOTO-LITHO. SPRAGUE & Co 4 & 5 EAST HARDING STREET, FETTER LANE, E.C.

SELECTED DESIGN FOR CHRIST'S HOSPITAL SCHOOLS.—Messrs. Aston Webb & E. Ingress Bell, Architects.

A BLOCK OF TWO HOUSES.



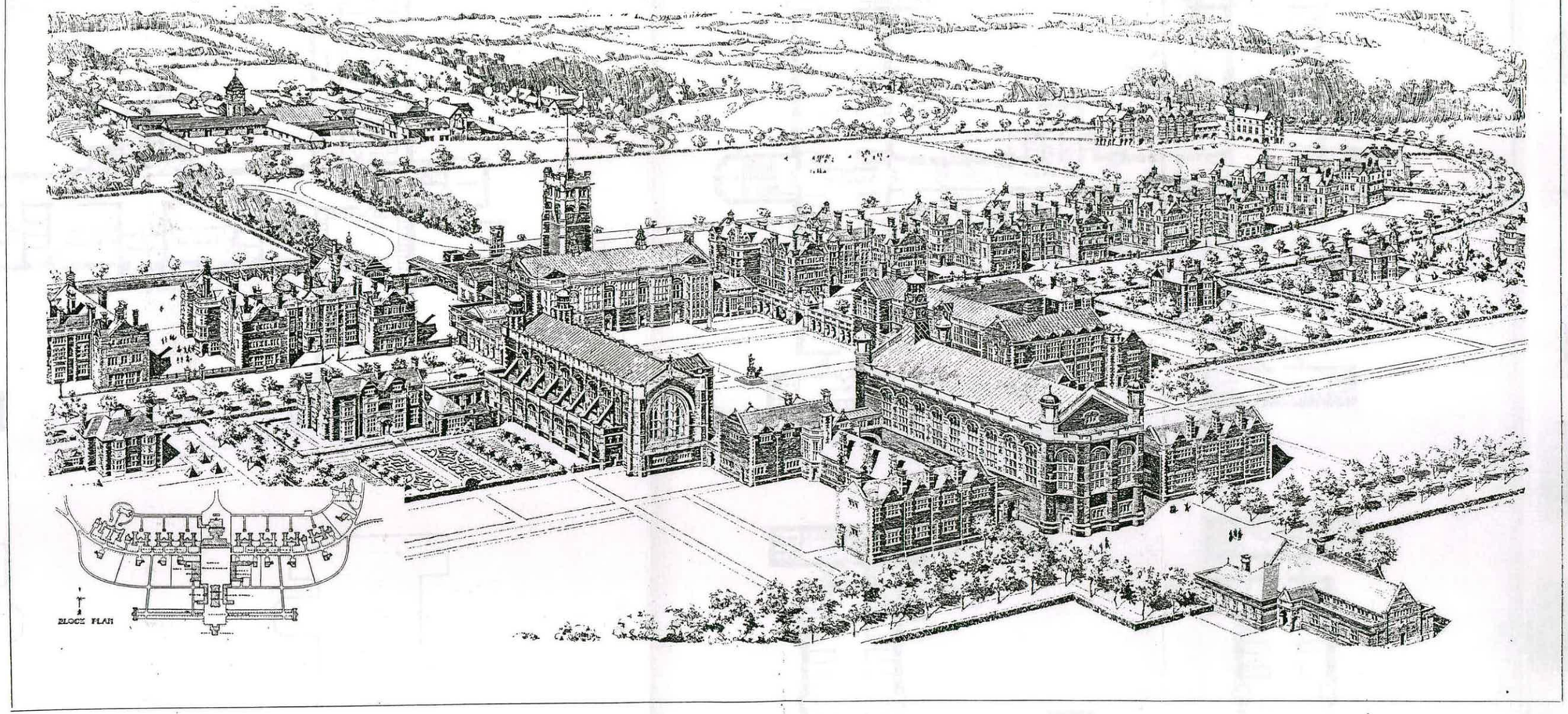
DETAIL

Aerial View of the Design for the New Christ's Hospital Schools

Messrs Aston Webb & Ingress Bell, Architects

Shows a boarding house and block plan

The Builder Nov 2, 1895.



191. NEW BUILDINGS FOR CHRIST'S HOSPITAL, HORSHAM.

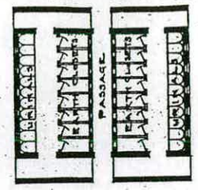
Sir Aston Webb & Mr Ingress Bell, Architects.

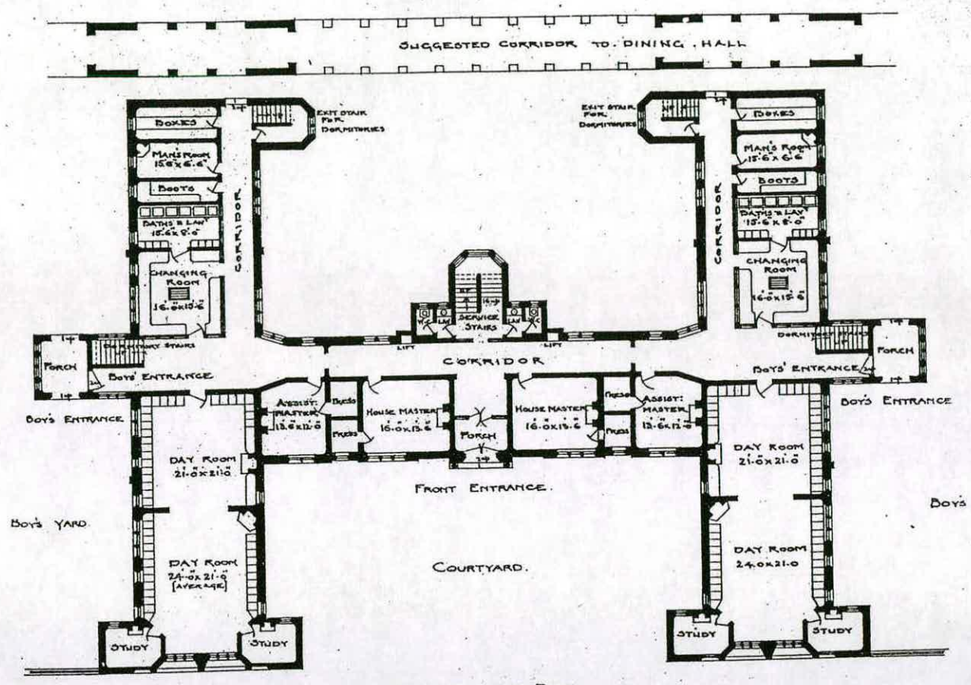
The Builder June 23 1894

— CHRIST'S HOSPITAL —

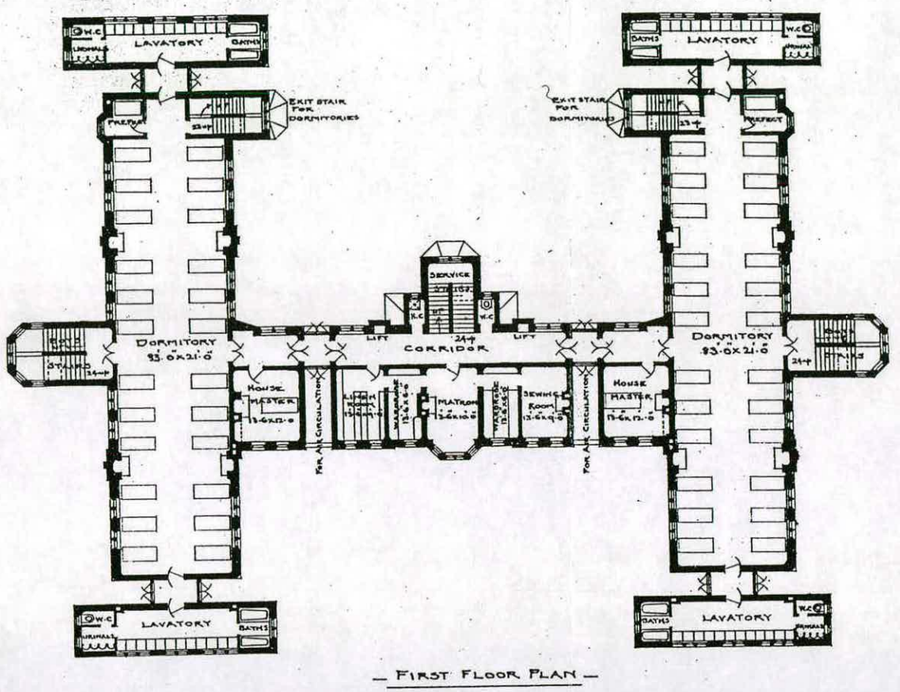
— DESIGN FOR NEW BOARDING SCHOOLS AT HORSHAM —

SCALE OF 0 5 10 20 30 40 50 FEET

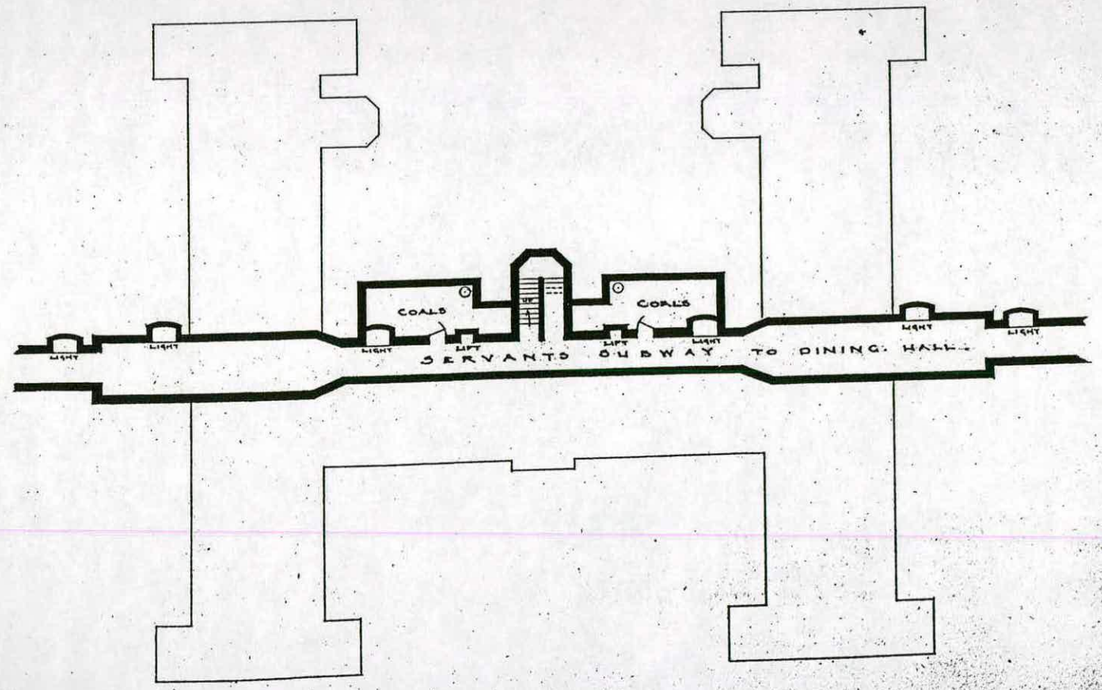




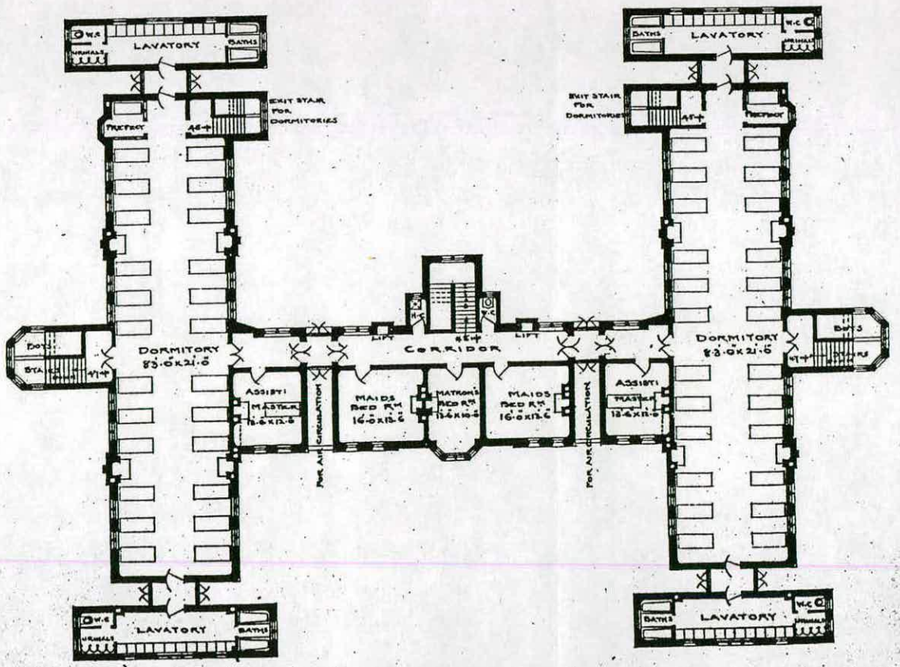
— GROUND FLOOR PLAN —



— FIRST FLOOR PLAN —



— BASEMENT PLAN —



— SECOND FLOOR PLAN —

Extract from Felix Clay: Modern School Buildings, 1906

of Education it is stated that the first true Preparatory School was probably that founded by Lieutenant Malden in 1837. The large increase in the number of these schools in recent years and the keen competition has resulted in the building of very fully and efficiently equipped schools; and since their success is usually judged by the number of pupils who win scholarships at the Public Schools, the teaching has to be kept up to a high standard, but with a strong tendency to cramming and specialisation. Some of the large Secondary Schools have Preparatory Schools attached to them, the boys of the two schools being kept separate. In these cases the boys at the Preparatory Schools get the advantage of the use at certain times of the school gymnasium, swimming-baths, &c., which cannot always be supplied by the ordinary Private School, though it is remarkable how very completely some Private Schools are provided with expensive additions of this kind.

The central block of a large Boarding School offers naturally much the same problems in regard to planning as that of a large Day School—that is, as far as the educational requirements are considered. It often happens, of course, that a school begins as a Day School, and eventually, by the growth of residential accommodation in connection with it, becomes a Boarding School. In other cases a small Boarding School becomes the nucleus of a large one, and, remaining as the central block of the school, is still distinguished by some particular name, such as the School House. In the case of the rebuilding of a large school on a new site, as for example the recent moving of Christ's Hospital School from London to Horsham, it becomes possible to treat the whole scheme systematically instead of the somewhat haphazard way in which our older schools have grown up. Various arrangements providing for the more economical working of the school then become possible, such as the provision of a central dining-hall and kitchen for the whole school, the supply of heating for all the buildings from one centre, &c. The arrangements of the large Boarding Schools in this country and the accommodation they provide show so great a variety in so many different forms that it is an almost impossible task to find any points where they can in any way be divided into classes. There are schools to suit every rank of social life, with fees varying from an inclusive charge of £30 or £40 a year up to £150 or £200.

Modern School Bldgs

of the old quadrangular arrangement, on the lines of the old colleges and other mediæval seats of learning, with an entrance gateway, the hall, chapel, and other rooms grouped round one or two quadrangles; or, on the other hand, the school may be more or less broken up into separate blocks. At first sight the former plan seems much the more attractive. It offers splendid opportunities for architectural effect; it has all the force of tradition behind it; and there is also little doubt that it offers the easiest solution of the best way to secure a compact plan—a school that shall be easy to supervise and economical in working. In spite, however, of the many and great advantages of such a method of planning a large school, it has in recent years met with less favour, the reasons against it being based on the questions of health. There is, it is argued, in such an arrangement bound to be a considerable portion where the air is to a large degree stagnant, and upon which the sun cannot have fair play. Where the quadrangle is of great size, as in the case of a large school, and the buildings not very high, this objection would probably not be a very strong one; but at the same time, where buildings are arranged more or less symmetrically on the sides of a square, it is hardly possible to provide a suitable aspect for all the rooms. Another point in this connection should be noted, that while the quadrangular arrangement is perhaps suitable for the purpose of a college where there have to be a great number of staircases with small sets consisting of two or three rooms, it is not as well adapted for a school where boys are housed in blocks of 50 or 100. This point has been shown well in the recent competition for the new buildings for Christ's Hospital, recently completed at Horsham, in which case the winning design—that sent in by Sir Aston Webb & Mr Ingress Bell—is arranged on the system of separating the residential portion into separate blocks, while the school (or educational) buildings are combined into one quadrangular block. This particular scheme, whether considered from the point of view of health and sanitary science or from that of the easy and economical working of the school, has met the difficulty of providing for the large numbers most successfully. It is interesting to compare with it the competition design of Messrs Carpenter & Ingelow, illustrated in Fig. 193, who have planned their building on the quadrangular method, in which style of school planning they have had much experience. Their plan too serves as an excellent example of what can be done in that method of planning a school. A third design, in which the buildings are arranged in an irregular group, is also illustrated—the design submitted by Messrs Paley & Austin. These three

plans have been illustrated together in Figs. 192-194 in order to show comparatively three different methods of dealing with a similar problem, in each one of which the scheme is treated from an entirely different point of view. The new schools at Horsham for Christ's Hospital are, I suppose, the largest school buildings that have been built in this country all at one time, so that the question could be treated as a whole and the entire scheme put in working order at once. The problem set before the five firms of architects who had been asked to compete was no easy one. There were to be boarding-houses to take 700 boys in addition to the Preparatory School, each house to be so arranged that no dormitory or day-room should have more than 25 boys in it. All the dining arrangements were to be in the central hall. No meals of any kind were to be provided in the houses, either for boys, servants, or masters. In the educational part the class-rooms were to be in connection with the school hall, which was to be sufficiently large to take the whole school. The Preparatory School was to be kept separate from the rest of the school, but so arranged that the boys in it could make use of the central dining-hall. There were of course to be also included—Science and music schools, a gymnasium, chapel, &c.

The block plans of the three designs are shown overleaf. The lowest one, Fig. 194—that of Sir Aston Webb & Mr Ingress Bell—shows the building as it is now built. A better idea of it will be gained from the bird's-eye view, Fig. 191. This plan offers a very ingenious and satisfactory solution of the question. The underlying idea of the scheme was to divide the school into two sections—that is, the residential portion and the working portion. In this way, by treating the educational or working buildings as one block, arranged on the quadrangular system, it is possible to so group the buildings that they shall be compact, easily supervised, and economically worked. By breaking up the residential block it has been possible to secure not only a free circulation of air, but a position for every boarding-house in the aspect considered most desirable. The block plan and bird's-eye view together show very clearly the connection between the boarding-houses and the rest of the school. The residential blocks run east and west from the large block of buildings containing the great dining-hall and kitchens, the whole line curving slightly backwards. One of the houses is illustrated and described below.* Underneath all the school buildings, cloisters, and boarding-houses runs a subterranean passage sufficiently large to admit of a

* See page 230.

man walking upright. In this are carried all the hot-water and other pipes, wires, &c., so that inspection and repairs can be made easily. The heating is all done from a station situated at some distance from the school buildings, calorifiers being placed where required. The whole building has been very carefully arranged with everything that can be devised to ensure healthy and sanitary conditions.

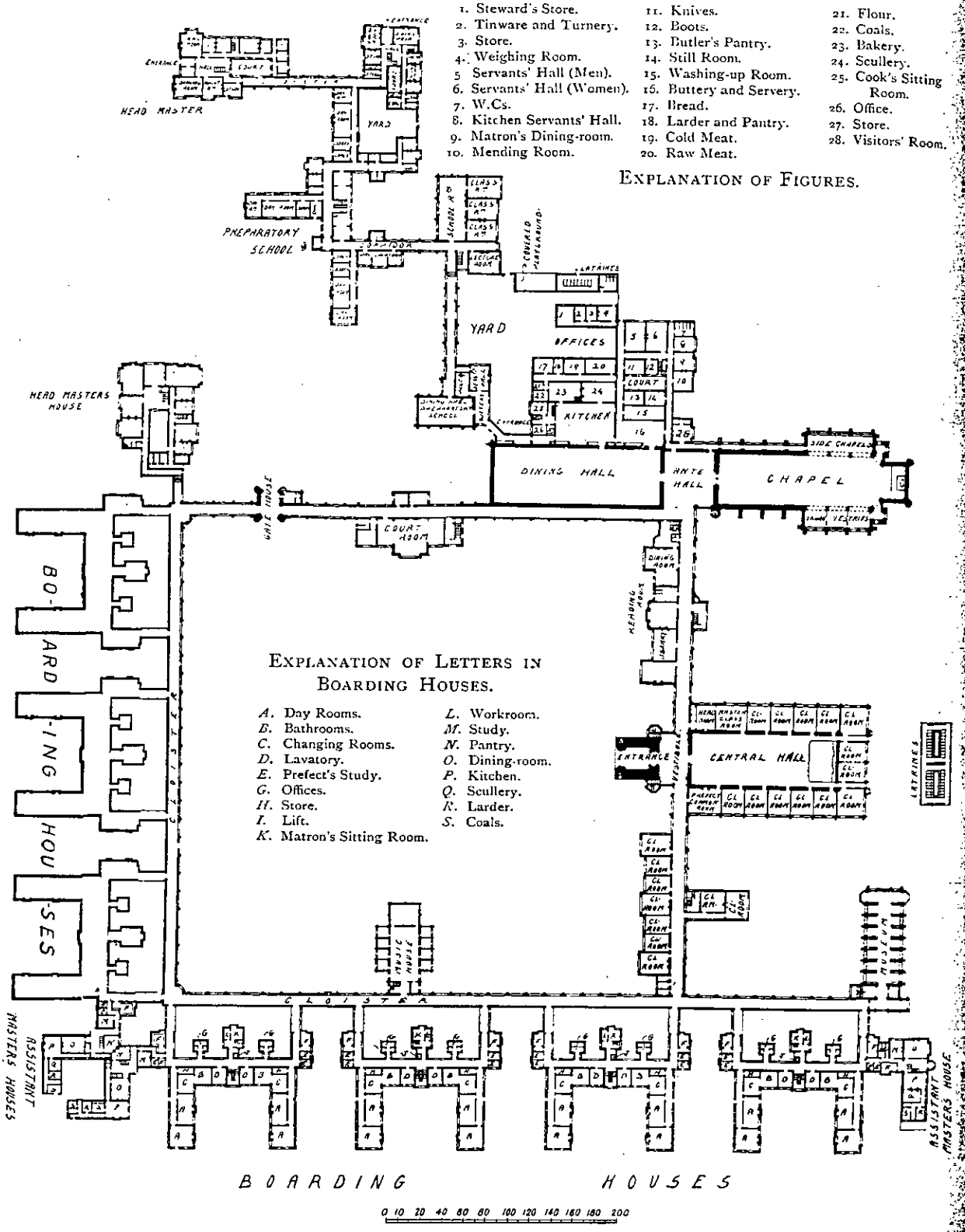
The second plan shows the design submitted by Messrs Carpenter & Ingelow, which is a remarkable example of the adaptation of quadrangular system of planning to the needs of a large school. The scheme will be better understood by reference to the larger plan in Fig. 195. The general idea of the arrangement places the boys' boarding-houses on the south and west sides; on the east, the great hall with its class-rooms, the museum and chapel; to the north, the dining-halls, kitchens, and offices, behind these being placed the Preparatory School. All the buildings are connected by the main cloister, so that it is possible to get from any one part of the buildings to any other under cover, while the houses being joined to this covered way by a short passage, it is possible to completely cut off any one of the houses if necessary. The boarding-houses are arranged in blocks of two, each block accommodating 50 boys.

The third design illustrated—that of Messrs Paley & Austin—is not arranged on any exactly symmetrical plan. There is a large court facing south enclosed on three sides by a cloister, bounded on the east by the chapel, science schools, and museum; on the west by the music school and one of the boarding-houses. Entering the school through the clock tower, the educational part, *i.e.*, the school hall, class-rooms, and library, lies on the left or east, while to the right is the residential portion, the Preparatory School being placed on the same side, but farther west. The covered cloister, 15 ft. wide round the great court, enables access to be gained to and from all parts of the school buildings under cover. From each of the boarding-houses, one of which is illustrated below,* leads a corridor of two floors to the main buildings—for school servants below, and for the boys above. The question of aspect has been treated rather curiously in this design, for of the six boarding-houses three face south, the other three being arranged to face due north—an aspect which, although defended on some grounds for class-rooms, cannot be considered satisfactory for residential houses.

The Royal Masonic Institution for Boys, Bushey.—As a further example of the general scheme of a large plan there is illustrated the

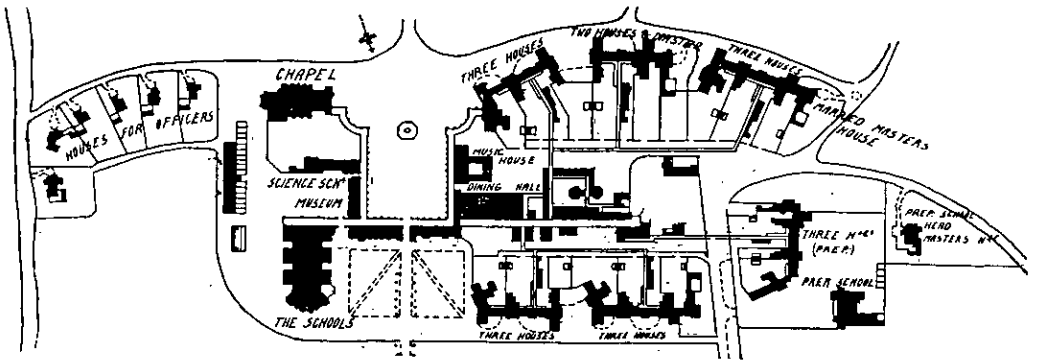
* See page 231.

Modern School Bldgs



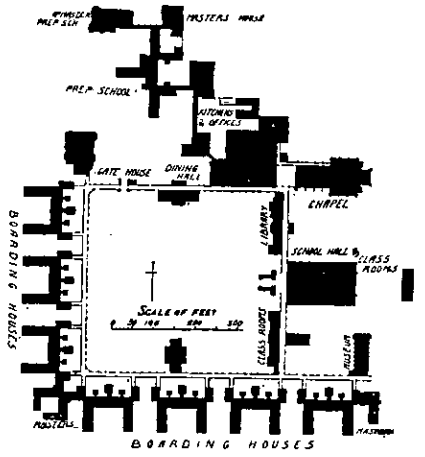
195. COMPETITION DESIGN FOR CHRIST'S HOSPITAL.

Carpenter & Ingelow, Architects.



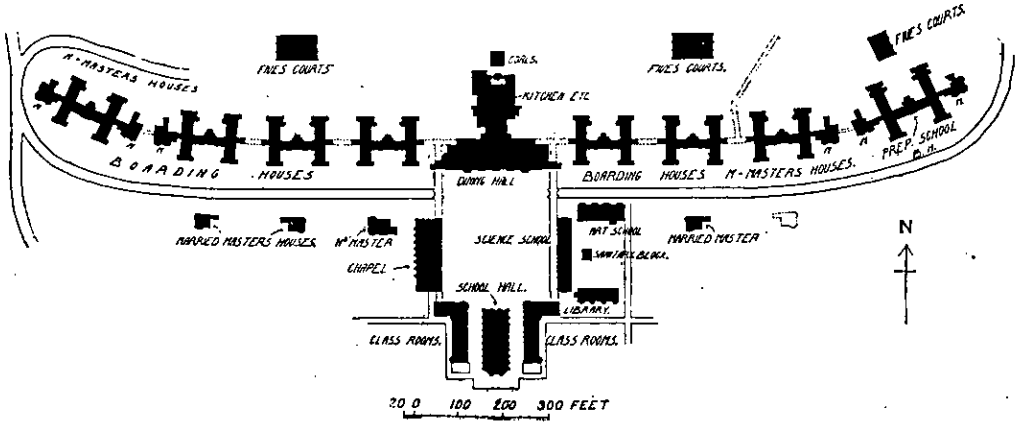
192. COMPETITION DESIGN FOR CHRIST'S HOSPITAL.

Paley & Austin, Architects.



193. COMPETITION DESIGN FOR CHRIST'S HOSPITAL.

Carpenter & Ingelow, Architects.



194. BLOCK PLAN OF CHRIST'S HOSPITAL, NEW BUILDINGS AT HORSHAM.

Sir Aston Webb & Mr Ingress Bell, Architects.