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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No.	2759	Press
		Mis.
489-490		
Dated	21-9-	1864.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
21st September 1864.*

No. 489. Read the following Proceedings of the Madras Government in the Educational Department:—

Passing orders on the report of the Sanitary Commissioners, containing their opinion on the plans and estimates of the proposed Lawrence Asylum at Ootacamund, Coimbatore District, with reference to their fulfilment of sanitary requirements, and, generally, with reference to the cost of the building. } (Here enter 9th September 1864, No. 263.)

No. 490. ORDER THEREON, 21st September 1864, No. 2,759.

1. Communicated to the Superintending Engineer, 7th Division, for early attention, with reference to paragraph 10.
2. Adverting to paragraph 11, the Superintending Engineer will be requested to report how much of the Budget allotment for the Lawrence Asylum buildings is likely to be expended during the current official year.

(True Extract.)

(Signed) J. H. M. SHAW STEWART, Major, R. E.,
Deputy Secretary to Government.

To the Superintending Engineer, 7th Division, with eleven estimates
and one specification.

Exd. T. O'Connor.

Extract from a note received from
the Clerk attached to the Chief Secre-
tary's Office at Colacannu.

"The Order about the Lawrence
Asylum, which is enclosed in the
present cover, has been dispatched
in M.S. to Colonel Walker and
with it Mr. Ellis' original letter
and the Office copy of the Proceedings
containing Mr. Shaw's letter, with
a request that they may be returned
when no longer required."

N. Apthorpe
Registrar

5

*Proceedings of the Madras Government, Educational Department,
9th September 1864.*

No. 39. Read the following letter from the Honorable R. S. ELLIS, President, Sanitary Commission, Madras; to Honorable A. J. ARBUTHNOT, Chief Secretary to Government, Fort Saint George, Madras, dated 20th July 1864, No. 201.

I have the honor to acknowledge the receipt of the Proceedings of Government dated 2nd ultimo, and the order thereon, No. 154*.

* *Herewith returned.*

2. The plans of the proposed Male and Female Lawrence Asylums have been carefully examined by this Commission, and appear in most respects to meet the requirements of the institutions.

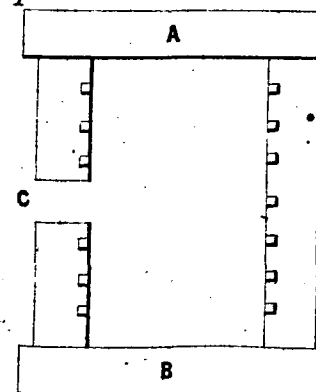
- The following Plans received.*
1. *Lower Story plan, Male branch.*
 2. *Do. do. Female branch.*
 3. *Upper do. do. Male branch.*
 4. *Do. do. do. Female branch.*
 5. *Longitudinal and Transverse Sections, Male branch.*
 6. *Front and Side Elevation, Male branch.*
 7. *Details of Urinals and Privies.*
 8. *Plan and Section of Work and Play-sheds.*
 9. *Plunge-bath.*
 10. *Plan, Section, and Elevation of Hospital.*
 11. *Plan, Section, and Elevation of Principal's Quarters.*
 12. *Servants' Quarters.*
 13. *Section of Asylum Sites.*

Object of this Report.—3. In certain particulars, however, it appears desirable to direct the attention of Government to some suggestions calculated, I believe, to promote the healthfulness and comfort of the occupants, as well as to diminish the large expenditure involved in the construction of these buildings.

4. In these observations on the several portions of the plan I have followed the order of the List of Estimate appended to Colonel Walker's letter reviewing Major Farewell's proposals.

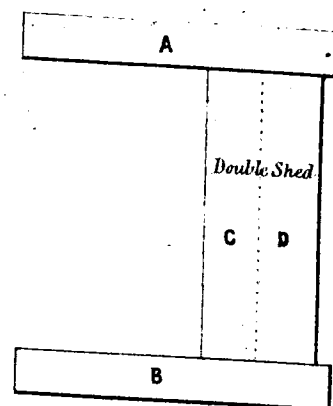
Play-shed and Workshop.—5. (List of Estimates, item 6.)—Although it may be beyond the proper functions of this Committee to criticise the cost of any building, I may be permitted to remark that the estimate for a play-shed and workshop, amounting to Rupees 50,190, appears to be exceedingly high for what seems to be simply a quadrangle of sheds 19 and 21 feet deep, and enclosing a space 100×257. The position of this out-building relatively to the Asylum is not shown in the plans submitted to this Commission, but if not in close proximity it should be connected with the main building by a covered way, so as to prevent the children getting wet in monsoon weather.

Proposed Plan.—6. It is also to be observed that the sheds of the long sides of



the quadrangle are left open on the inner side facing the Gymnasium Court-yard. This will render them practically of little use in the monsoon, and could be easily remedied by altering the present arrangement of the buildings as shown in the margin; blocks A and B being sheds enclosed on both sides, and C and D on the outer side only.

Alteration suggested.—7. I would suggest that blocks C and D should be approximated and made to form one double shed, closed at both outsides, and that the Gymnasium should be continued in the space enclosed on three sides by the sheds thus re-arranged.



This would in no degree diminish the actual superficial extent of covered ground, and would make it available for use at all seasons, while the depth of this double shed (42-8) would allow of its being more useful as a play-room than two rooms of open shed of the same length. A slight diminution of expense would also be effected.

Privies and Urinaries, cost of.—8. (List of Estimates, item 7.)—The proposed expenditure upon "privies, urinaries, and covered passages" thereto for the two Asylums, amounts to Rupees 17,750. This would include, apparently, 32 privy seats for boys and 32 for girls, and 16 urine receptacles for boys and the same for girls. An examination of these figures will show that for two privy seats and one urinal, the charge will be 559 Rupees, or estimating the cost of each item as nearly equal, about 184 Rupees for each privy seat.

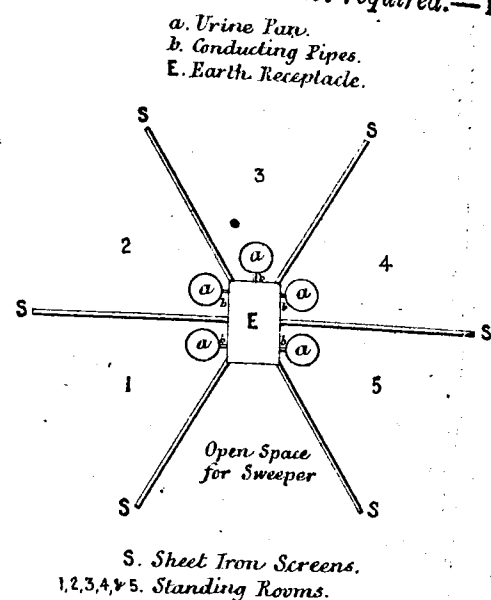
Cost of erection in Fort Saint George.—9. We have been favored by Captain H. W. Wood with a calculation of the cost of a very suitable latrine erected by that officer for the Garrison of Fort Saint George, and we find that each seat in this privy (constructed on a precisely similar plan) was only 88-12-0, or less than half of that proposed by Major Farewell.

Urinals for Females not required.—10. We also believe that separate urinals for females are not required, the omission of these will effect a saving of Rupees 2944.

Suggested improvement in those for the Male Asylum.—11. The urinals for males might without difficulty be constructed on the same principle as those manufactured by Mr. Jennings, shown at page 93 of the "Report of the Commission appointed for improving the Sanitary condition of Barracks and Hospitals" (1863).

Three or four of these might be introduced into the building now designed as a privy, and the urinals might be got rid of altogether as distinct buildings, and a further sum of Rupees 2944 thus saved.

Punjab system recommended for adoption.—12. The Commission observe that



the Punjab system of conservancy is proposed to be adopted in the latrines of these institutions. This system consists in the removal of excreta without the addition of water. But this method of cleansing privies, although an improvement in conservancy, does not in any degree deodorize the excreta, as is effectually done by the use of sifted dry earth on the "dry earth conservancy system."

Dry Earth system to be preferred.—This method of conservancy has been fully tried in the General Hospital, with complete success.

Arrangements required for the Dry Earth system.—13. This Commission would therefore strongly recommend that at the Lawrence Asylum the "Dry earth system" should be adopted. The fittings proposed in Major Farewell's plans are well adapted for this, but the air-tight urinals should be re-placed with simple metal boxes to contain dry earth, and of sufficient size to be carried to a distance, where the earth which has been saturated with urine could be buried.

Unnecessary brick-work in proposed Latrines.—14. In point of construction I would observe that Major Farewell has apparently planned brick-wall partitions between the seats. These are unnecessary, as sheet iron (painted in the first instance with coal tar) is both cheaper and better adapted, besides being less absorbent of evil smells and not requiring repair.

Considerable economy practicable.—15. If, as I have proposed, this last alteration be made, if the urinals are dispensed with, and the approach to the privy correspondingly shortened, it may be hoped that a very considerable reduction may be effected in this item of expense.

Site of Buildings.—16. I am unable to offer any remarks upon the suitability or otherwise of the site chosen for the main buildings, or as to the relative positions occupied by the several buildings, as the survey of the ground selected for them has not been received.

The detailed arrangement of rooms as shown in the plans of the lower and upper stories appears generally suitable, but there are one or two points to which the attention of Government should, I think, be given.

Night Closets.—17. The "water closet" for night use should be worked on the dry earth system instead of the Punjab system—(Vide paragraph 6 of Major Farewell's letter, No. 274).

Baths.—18. The plunge-baths, though of sufficient size, do not appear to allow sufficient space for the bathers to dress. Both for convenience and decency this defect should be remedied. For it must be borne in mind that the elder portion of these (more particularly in the female branch) require a certain amount of privacy while dressing and undressing.

Washing Rooms.—19. The "washing rooms" are provided with portable basins which will require to be carried or moved to be emptied and filled. This is an objectionable arrangement, as it is certain to result in breakage of the basins and slopping of water. It would be much better to have fixed "ware-basins" with plugs emptying into a pipe by which the water could be carried off, each basin being replenished at will by a "bibcock" above it.

20. We have no doubt that it will suggest itself to Major Farewell that it is desirable that the basins should be arranged at three or four different heights, to suit the different stature of boys of 15 or 16, and of perhaps 5 or 6 years only.

I only allude to this point, as no indication is given in the plan of any notice having been taken of this necessity.

21. Children washing should stand on wooden gratings, and every possible means should be adopted to keep the floors dry.

Unnecessary masonry in these Rooms.—22. It seems somewhat doubtful whether any necessity exists for the heavy masonry provided in the plan to support the basins. Light iron supports could easily sustain a platform of granite slabs into which the proposed "plug basins" could be fitted flush with the surface of the stone. This would, we believe, greatly lessen the cost of construction where brick building materials are expensive. Asphalte is very much preferable to granite as a flooring for the washing-rooms; but, perhaps, might be found too expensive. If granite is on this account preferred the jointings should be carefully cemented, to prevent percolation of water and the resulting dampness of the ground. Asphalte possesses the advantage of an opportunity being offered by it of giving to the floor a sufficient slope to allow of its being washed dry in a very few minutes.

Foot Basins required.—23. No provision appears to have been made for washing the feet of the children. We think this ought to be done by supplying a limited number of foot basins, fitted as the hand basins, but of larger size and almost on the level of the ground.

24. The heavy masonry wall between the parallel rows of basins might be with advantage and economy re-placed by iron sheeting, to rise to a height of say 6½ feet from the ground.

Waste Water.—25. In order to secure as fully as possible the greatest practicable avoidance of damp in the washing-rooms, we would recommend that all waste water should be conveyed away by closed pipes, to empty into a reservoir some distance from the building. The storage of waste bathing water in close proximity to a house fully occupied is objectionable: no doubt the water reservoir could be made useful for gardening purposes.

Drinking Fountains required.—The arrangement of the school-rooms appears good, but we are struck with the want of a drinking fountain either in or close to these apartments. Some such provision should be made here and in the sleeping apartments and dining-rooms.

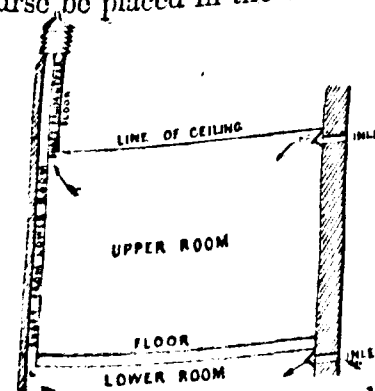
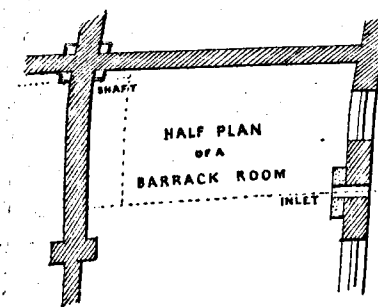
Removal of Rain-water.—26. This Commission fully concurs with the Acting Principal Inspector General, Medical Department, as to the inadvisability of the method proposed by Major Farewell of removing the main water by a channel under the basement. Mr. Shaw's objections on this subject are so pertinent that we have merely to intimate our entire concurrence with them. All pipes conducting water from a building should be so placed as to be readily accessible to inspection and examination at all times. This is the only way of securing the immediate detection of leakage on the one hand, and on the other the possibility of repairs being effected without injury to buildings and at small cost.

Ventilation.—27. Major Farewell does not enter very fully into the subject of ventilation, but from this report, and from the sections of the building, we gather that the following provisions are made for that object.

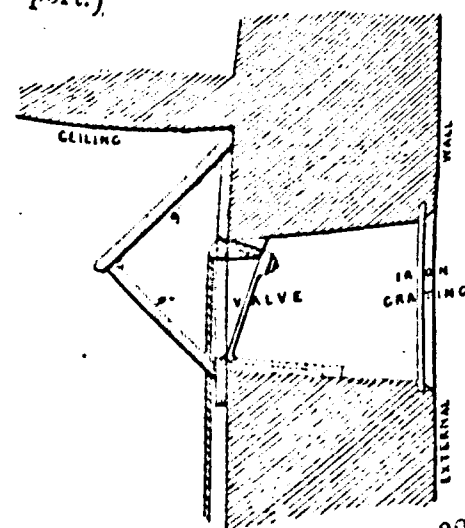
28. Upon both floors the rooms are provided with open fire-places, which are meant to serve solely as means of ventilation. The upper rooms are also provided with Mair's patent roof ventilation; and it is stated that the supply of air in these rooms can be increased at pleasure by opening the doors. In the lower rooms it is proposed to secure ventilation by carrying shafts through the walls of the upper story, communicating with the atmosphere, below the eaves of the building and opening into the rooms below the ceilings. These shafts are made in both walls, and at intervals of twenty-five feet apart.

Improvements suggested.—29. We are of opinion that the ventilation provided for in the upper rooms is sufficient; but in the lower rooms, instead of having ventilating shafts upon both sides, we strongly recommend the adoption of the arrangement suggested by the "Commission appointed in England for improving the Sanitary condition of Barracks and Hospitals."

30. This arrangement is shown at page 76 of their Report. The inlets should of course be placed in the outer walls near the ceiling; thus:



and we recommend that they should be of the section here shown—(Page 75 of same Report.)



We further recommend that the "inlets" should not be placed immediately opposite the ventilating shafts, but that they should be respectively placed between every two adjacent ventilating shafts at points equidistant from both.

31. The foregoing recommendations will not be a cause of any additional expense, it is believed, and if complied with will tend to promote the purity of the air in the class and dinner rooms, and this point is one of considerable importance.

Warming of the Institutions.—32. In paragraph 14 of his letter under report, Major Farewell alludes very briefly to the artificial means of heating to be adopted in the main buildings. This he proposes to effect by stoves placed as shown in the accompanying plans. The advantages hoped for by Major Farewell, namely, the benefit of fires below in the corridors and dining-rooms and of heating the dormitories above, would appear to be counter-balanced by one or two practical objections to the use of stoves in closed buildings unless, they are supplied abundantly with fresh

air, and for this sufficient provision has not, we consider, been made—(Vide paragraph 29). It is to be regretted that no design of the stoves proposed has been forwarded, but as Major Farewell has to depend upon wood as his fuel, we suppose that those in which slow combustion is effected would probably be selected by him.

That economy of fuel results from their use, and that a maximum of heat is evolved with a minimum of expenditure of fuel, cannot be doubted. But whether the original Arnott's stove be intended, or the more recent modifications of it, I would strongly recommend that the use of them should be avoided.

33. The recorded opinions of the highest authorities are strongly against the use of stoves in places densely occupied, and I am further compelled to remark that as open fires are inadmissible as being likely to produce accidents, and as the children are liable to feel cold most when at repose during the day, as at meals or during school hours, the use of any apparatus in the *dining halls* and *passages* only should not be relied on as capable of sufficiently heating the school-rooms.

34. The use of artificial heating apparatus at night will not be required, as the children, if provided with sufficient warm bed clothing, will not suffer from cold, especially as they will sleep in dormitories fully occupied.

It appears that the position of the stoves placed at the end of the school-rooms close to, and impeding the light from the windows is little calculated to promote warmth, a great portion of the evolved heat being likely to be wasted by the adjacent glass windows.

35. In order to establish fully the evils attendant on the use of the stoves it would be necessary to enter upon details of the known objections to these modes of heating. To summarize these remarks, which are to be found in all standard works of reference, would be to pass too lightly over a very important subject. I simply refer to the more practical of them in these remarks. I lose no time, however, in directing attention to this subject, as it is one which, to be dealt with satisfactorily, must be considered before the construction of the building is completed, or even very far advanced.

36. To employ in a large room open stoves capable of adequately heating the dining-rooms and passages, and from them the school-rooms, &c., would not only cause the consumption of a great deal of wood, but if (as Major Farewell seems to propose) the stove pipe is carried right up to a height of 34 feet to the roof, the draught would be so great as probably to over-heat the stove pipe, and as certainly burn the surrounding air.

37. The scorching of the air by its contact with metal at a high heat forms a practical objection to the use of most of the stoves now employed.

38. Slow combustion stoves are open to another and even more serious objection, namely, their tendency to cause a deflux of carbonic acid from the ash pit into the apartment.

* *Arts, Manufactures, and Mines, 4th Ed.*
Vol. II, pages 749 to 753.

39. Dr. Ure* many years ago directed attention to these facts, and in reporting on the ill health of a number of gentlemen working at an office in the long room of the London Custom House, he observed upon the objections above named and demonstrated the amount of illness

to which they may give rise. He says finally, "In conclusion, I take leave to state to you my firm conviction that the only method of warming your long room and subsidiary apartments, combining salubrity, safety, and economy, with convenience in erection and durable comfort in use, is by a series of steam pipes laid along the floor, at the line of the desk partitions, in suitable lengths, with small arched junction-pipes rising over the several door-ways to keep the passages clear, and at the same time to allow a free expansion and contraction in the pipes, thereby providing for the permanent soundness of the joints."

Proposed method of Warming.—40. The arrangement of pipes here indicated is one that might with advantage be imitated in the class-rooms and dining-rooms of the Asylum; it will not then, probably, be found necessary to erect any stoves or to use the open fire-places, to both of which there are strong objections.

41. If not attended with too great expense, I would suggest that the lower floor of the building should, when the weather is cold, be heated by hot air or hot water.

42. The "Derby," "Cockle," or "Belper" stove, has been successfully employed in the Derby Infirmary, and would appear suitable for the purposes here indicated, while its adoption in a hospital would seem to prove that it is not considered a source of discomfort or injury to patients. I shall be happy to forward for the perusal of Major Farewell a description of this stove, which it will be seen can be employed in hot weather to ventilate the building, and it is comparatively inexpensive in cost of erection.

43. By this system, or by that suggested in next paragraph, all risk of fire is avoided, as the process of burning wood to warm the water or air can be carried on outside the building, or in the cook-rooms.

44. Should it, however, be desired to substitute hot water distributed by pipes, some of the usual plans might be adopted. But whether hot air or hot water be used I would prominently bring to notice the necessity of having the tubing as little as possible in contact with wood work, owing to the tendency of the latter to become altered by constant exposure to high heat even though far below the burning point.

45. This fact first noticed by the late Mr. Braidwood of the London Fire Brigade, and now well known, induces me to recommend that the "low pressure hot-water apparatus" should be adopted, and that the precaution I have noticed should be carefully borne in mind.*

46. The low pressure system of hot-water pipes could, according to the recommendation noted in paragraphs 39 and 40, be erected at small cost, and be fed from a boiler in the kitchen range. As the tubing should only extend to the corridors, dining, and school-rooms, it would probably be found not to be as expensive as the proposed stoves, while it would be more efficacious in promoting the comfort of the children, and this without any risk of injuring their health.

No Latrine accommodation for Servants.—47. I would direct attention to the fact that, according to the plans submitted to this Commission, no latrine accommo-

dation has been provided for servants attached to the establishment. This defect ought to be remedied by the erection of two dry earth latrines, one for males and one for females.

48. The Commission have perused the Report of Mr. Shaw, Acting Principal Inspector General, Medical Department, and concur with him in the suggestions appended to his letter.

Dormitories.—49. They observe with regret that the arrangements of the building and the necessity for strict supervision at night, seem to render it necessary to place so large a number as sixty-five persons in a single room. This is open to objection, but the ill effect of a crowded dormitory in a great measure may be avoided by the insertion of one ventilating pane of perforated zinc in each window.

Plunge-baths.—50. With reference to Mr. Shaw's observations, we think that the plunge-baths should be approached by a covered way, as otherwise in the monsoon access to them may be difficult.

Cooking Rooms.—51. The cook-rooms are, we observe, on the ground floor of the building. The nature of the ground may prevent the selection of any appropriate site outside the main building which would be preferable. But in any case the teachers' cooking-rooms, both downstairs and upstairs, should, I think, be removed. They must be a source of discomfort to the occupant of the building, and may prove a cause of danger to it.

Hospital.—52. In the hospital the "separate ward" should be provided with an entirely independent entrance at the end of the building. One of the "night pan rooms" attached to it, should be made into a lavatory, so as to promote the comfort of the inmates who require entire seclusion. Similar means of ventilation, as have been recommended for the dining and school-rooms, should be provided for the hospital wards, and an open fire-place would be found the best means of heating these apartments. This should be protected with a wire guard kept locked.

Water.—53. Water should be laid on for the lavatories, and filtered water provided for the patients as well as for all the Asylum.

54. We concur in Mr. Shaw's remarks relative to the position of the cook-rooms and lavatories and latrines of the hospital.

Parsonage.—55. Among the out-buildings our attention was arrested by the parsonage, the rooms of which might be better distributed. The cost, £3214-0-0, appears somewhat out of proportion to the accommodation afforded.

56. I have considered it advisable to furnish in this letter illustrations, to make perfectly clear to Government the nature of the recommendations of this Commission. In order to expedite the passing of final orders thereon I may add that I am prepared to supply copies of these drawings to Major Farewell, should he desire them.

57. It is, however, probable that the plan of urinal shown opposite paragraph 10, will be alone required, as the Report on the improvement of Barracks and Hospitals is probably already in his possession.

No. 40. ORDER THEREON, 9th September 1864, No. 263.

In their report recorded above, the Sanitary Commissioners give their opinion on the plans and estimates of the proposed Lawrence Asylum at Ootacamund, with reference to their fulfilment of sanitary requirements and, generally, with reference to the cost of the building.

2. The Superintending Engineer of the 7th Division, Colonel Walker, considers that the design does credit to Major Farewell, and appears entirely to approve of the plans and estimates, except in respects the cost of excavation, in which he considers that a considerable reduction (Rupees 55,000) may be made. He states that the Principal of the existing institution considers the "general arrangements of all the parts excellent, and admirably suited for the purpose to which they are to be hereafter devoted." The Committee of Management have also approved the plan generally.

3. The Principal Inspector General of the Medical Department thinks that the plans, with some exceptions remarked upon by him, meet all sanitary requirements.

4. The Sanitary Commissioners consider that the plans appear in most respects to meet the requirements of the institution; but they agree with Dr. Shaw in objecting to the system of draining the main buildings, and suggest important alterations in the ventilation and the arrangement of the privies, &c., and the mode of warming the buildings.

5. The estimated cost of the whole is 11½ lacs, including a Chapel for which plans and estimates have not yet been prepared.

6. The Governor in Council is unable to concur with the officers above-named in their opinion of the plan, which he considers defective in several very important respects, while it involves an expenditure quite disproportioned to the object to be attained. For instance, the vacant or unemployed space in passages or corridors bears a very undue proportion to that occupied for the purposes of the institution. The passages on the ground-floor occupy an area of 13,896 square feet, while the area of the rooms does not exceed 21,312 feet; and as these passages are carried up to the roof, the same proportion exists in the upper story, so that in point of fact nearly two-thirds of the area roofed over is occupied by passages, though it is proposed to use a portion of these passages as dining-rooms. Again, the dormitories are merely long galleries with openings only on one side to the outer air, and these far apart; while as many as 65 children are to sleep in one room. In four of these galleries, each of which is intended for 39 children and is 99 feet in length, a space of 28 feet at one end is without any opening at all to the external air. The same arrangement extends to the lower floor. The school-rooms are 98 feet long by 18 feet wide, and have 28 feet without a window and therefore dark—a space sure to become a receptacle for rubbish, while almost useless for educational purposes. Besides this, in such rooms the pupils cannot be under their Master's eye, and he cannot bring together a class without disturbing the other children.

7. The long passages on the ground-floor are to be used as dining-rooms, and one of them as a Chapel on Sundays. For this purpose, the tables must be removed and the benches brought from the other wing for morning service; the tables being re-placed for the midday meal and again removed for evening service, and again re-placed. The width being 18 feet, it is impossible to get the children into less than

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9th September 1864.*

150 feet of its length (233 feet)—a distance far too great for the voice to be heard distinctly. Independently of these reasons, the employment of a room used for other purposes as a Chapel is very objectionable. The institution will contain 800 children, besides the Masters and their families, and a large body of domestics, many of whom will be Europeans. The performance of Divine service in a room temporarily adapted for the purpose, is not calculated to produce such a beneficial effect on the children as the more decent orderly and joint worship of the whole establishment in a place set apart for the worship of God, and for that only. The plan and estimate for a Chapel should therefore be prepared without delay.

8. The washing-rooms in the Girls' Asylum are too large (apparently in order to use up surplus space); the kitchen, scullery, wash-house, laundry, dairy and cheese-room are all under the dormitories—these should occupy detached buildings. The drains running under the building cannot be altered under the present plan.

9. It appears to the Governor in Council that some of the defects above noticed may be remedied by a very simple modification. Retaining the same width of building, 62 feet, the dormitories might be made transverse instead of longitudinal, opening from a passage or corridor of reasonable width parallel to the front wall of the building; each room would then be 52 or 53 feet long and 18 feet wide, and would hold 20 children, giving to each 48 feet of floor. These rooms would have a window or windows at each end, and might have additional ventilators in the gables; while the cubical area for each child might be increased by running the front wall of the room to the height of 7 or 8 feet only, throwing thus the whole of the passage up to the roof into the room. As each room would be, including one wall, say 20 feet in width, the whole length of the building irrespective of Master's houses, would be $20 \times 20 = 400$ feet, while at present the length is 644. The space occupied by two bedrooms (37.6 or 38 feet into 51 or 52 in the clear) would make a well shaped school-room, large enough for 100 children, where each child would have 10.38 space on the floor. The same sized room would accommodate easily 200 as a dining-room. The space therefore of 12 rooms, out of 20 in the upper floor, would be sufficient to accommodate the children at school and at their meals; and there would then be 7500 square feet or thereabouts for the store-rooms, washing-room, &c., required, and which might with propriety be placed in the main building. The kitchen and scullery should be detached, and the wash-house and laundry might be placed over these; and the space gained in length of building, viz., upwards of 200 feet, would admit of a central building as a Chapel in one block with the house for the Principal as a central point in the other block, and yet occupy much less space than at present.

10. A copy of this order and of the letter of the Sanitary Commissioners will be forthwith forwarded to Colonel Walker and Major Farewell, and they will be instructed to revise the plans with the least possible delay, with reference to the suggestions made above and those contained in Dr. Shaw's letter of the 15th March, and the letter of the Sanitary Commissioners, and to submit them, if possible, in the rough to His Excellency the Governor before he leaves the Hills.

11. The re-construction of the plans will necessarily involve some delay in the execution of the work, and probably it will not be possible to expend the whole of the Budget allotment of 1½ lacs during the current year. If this be the case, the Government desire that some portion be diverted to other works; for instance, the

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9th September 1864.*

Coonoor new Glhaut track and the Coimbatore station Travellers' Bungalow and Choultry. This, however, will be considered in the Public Works Department.

12. Mr. Ellis will be requested to supply copies of the illustration of his letter to obviate delay in the forwarding of the copy of his letter to Major Farewell.

(True Extract.)

Secretary to Government.

To the Public Works Department, with 14 Plans, 11 Estimates
and 1 Specification; also Proceedings No. 154.

- „ President, Sanitary Commission.
- „ Principal Inspector General, Medical Department.
- „ Director of Public Instruction.

Exd. J. Tulloch.

20-10-11

1878/86. Deptt.
Pro. off. for September
No. 4156.

Pro. of Govt. the
Educational Deptt.

Dated - 9th Sept/86
Received 21

No. 213.

E 13.

Enclosure

CP 1072/84

CP 4336/86

Having read over
the report of the Sanitary Committee
containing their opinion on the plans
submitted of the proposed Lawrie's
Asylum at Astoria, Borneo
& with reference to the
Sanitary requirements, and, generally,
with reference to the cost of the same.

W. H. C. Order

22/2/87

1. Communicated to the Superintendent Engineer, & Division for my
attention, with reference to para 10.

2. Requesting to para 11 the Superintendent Engineer will be requested
to report how much of the Budget is allocated for the Asylum Asylum.

3. Nothing is likely to be expected during the current Office Year.

4. See memo 11. Estimated
and 15 specification.

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