

1885.

NEW ZEALAND.

## SEACLIFF LUNATIC ASYLUM

(REPORT ON THE, BY THE ASSISTANT ENGINEER-IN-CHIEF).

*Laid on the Table, by Permission of the House, by the Hon. Mr. Richardson.*

Mr. W. N. BLAIR to the ENGINEER-IN-CHIEF, Wellington.

SIR,—

17th August, 1885.

In accordance with your instructions I have the honour to submit the following report on the alleged defects in the asylum building at Seacliff.

In order that the matter may be more readily understood, I shall consider the various statements made by the Inspector of Asylums seriatim, as they appear in his last annual report.

1. *Laundry.*

“Since my last visit a large number of important improvements have been carried out. A commodious laundry has just been completed, and will no doubt be a success. It is unfortunate however, that a larger steam-boiler and furnace were not provided, which would have been capable of heating all the coppers, for which four separate fires are now necessary. This arrangement was particularly specified in the plan prepared by myself and sanctioned by the Colonial Secretary. I am unaware by whose authority the alteration was made. There are bad workmanship and unsuitable timber in the horses of the drying-closets.”—(Inspector's Report, November, 1884.)

“The laundry is by no means a success, the bulk of the money set apart for its construction having been spent upon architectural effects. A larger steam-boiler here is a matter of necessity, the present one being a mere toy, extravagant of fuel, but incapable of supplying sufficient steam for the drying chamber.”—(Inspector's Report, May, 1885.)

As to the money spent on architectural effects, Mr. Lawson, the architect of the building says that the plan of the laundry is carried out on the exact lines furnished by Dr. Grabham himself. The walls are constructed of plain pressed brick, with Oamaru facings, and the finishing is of the plainest description. Including all fittings and plant, the cost of the laundry has been a little over 7d. per cubic foot, which bears favourable comparison with similar buildings recently erected in Dunedin, as can be seen by reference to the contract schedule. The statement made by the Inspector that the “bulk of the money (£3,000) has been spent on architectural effect” is beyond all reason. The amount so spent in proportion to the total cost of the building is not worth mentioning. The only attempt at ornamentation is in the gables, which are made with “crow-steps,” to correspond with the main building, and it is questionable whether this is not as cheap as laying the stones flat, and dressing them.

With reference to the alteration from the Inspector's plan of heating the coppers in the laundry of which he so strongly disapproves, Mr. Lawson says that the alteration was made because Dr. Neill decided that the steam-coils in the Inspector's plan would be dangerous to patients. Dr. Neill, whom I consulted on the subject, says that he expressed the opinion that steam-coils would be dangerous, but did not give orders for the alteration to be made. It is clear, therefore, that the alteration was made to meet the wishes of Dr. Neill, if not by his express orders; so the matter rests entirely between himself and the Inspector.

I examined the timber in the horses in the drying-room, and found neither bad workmanship nor unsuitable timber. The timber has shrunk very much through the excessive heat; but any timber would do so, no matter how well seasoned beforehand. The horses are not, however, a success for another reason—defective design. They are not stayed or braced in any way, consequently they twist about when moved, and do not work easily. They are made to the design of the asylum authorities, who are, of course, responsible. I may, however, add that, like most of the other “structural defects” in the asylum, these in the drying-horses can be remedied by an expenditure of a few shillings.

As to the steam-boiler, Mr. Lawson, who determined its size, reports the result of the trial as follows: “When we arrived at the building the thermometer was at 80° in the drying-closets, and was raised in twenty minutes to 125°, and up to 132°, and this with indifferent firewood, the pressure of steam in the boiler ranging from 45lb. to 54lb. As 110°, or at the most 120°, is a fair working temperature in the closets, this can be quite easily maintained, and hot water in abundance also supplied from store cistern for all purposes.”

It is difficult to determine what size boiler is required for this kind of work. From the trial above reported it would appear as if the present one was sufficient; but I am inclined to think, with the Inspector, that it is too small; that it will only do the work readily when extra care is used in working it, and when the drying-chambers are in perfect order. The engineer in charge of the laundry attributes the difficulty of keeping up steam partly to defects in the drying-chambers, which are made to the Inspector's plans. When at the Auckland asylum I understood the same trouble was experienced there, and I observe that the Inspector himself alludes to the subject. Another thing against a small boiler is that the water contains lime and other impurities, which cause rapid-incrustation. Unless carefully attended to, its capacity is soon impaired through this cause. I had, however, no opportunity of ascertaining whether the boiler was incrustated. I cannot condemn the boiler as unfit for the work; still, for the reasons just given, I think it desirable that another should be provided. The cost of the present boiler was £85.

### 2. Larder.

"A very commodious meat-larder has been built behind the kitchen. The money expended here on architectural details would have been better employed elsewhere."—(Inspector's Report, November, 1884.)

The remarks above made with reference to the money spent on architectural effect in the laundry are applicable to the larder. The building is 19ft. long and 16ft. wide, and about 19ft. in average height. It has only cost about £150, so there was not much margin for architectural extravagance.

### 3. Drainage.

"Regarding the main block of buildings, or asylum proper, I have many defects to point out. Some of these were alluded to in my report of the 15th April last, but are not yet remedied. The dampness, or rather wet condition, of the two central portions of the ground-floor, call for immediate remedy. A portion of the floor taken up for my inspection in an attendant's room revealed a body of water some four inches in depth, and reaching above the bottom of the joists. A general odour of mouldiness pervades these two blocks of the building. The effect of the wet upon the woodwork will be prejudicial enough, but the danger to the health of the inhabitants is far more serious. Indeed the Medical Journal furnishes an unusual list of cases of chest affection and rheumatism, which may be fairly traced to this cause. Surely this is a matter worthy of consideration, and not beyond remedy."—(Inspector's Report, November, 1884.)

"The wet condition of the basement remains without alleviation, and will assuredly lead to the rapid decay of the floor-joists. I have grave doubts whether it is proper to occupy these rooms in their present state, which is dangerous to the health of both patients and attendants."—(Inspector's Report, May, 1885.)

With reference to the "odour of mouldiness" complained of, I paid considerable attention to the matter and could detect no such odour. In fact, I remarked that the atmosphere of the basement seemed particularly dry considering the newness of the building.

As to the water under one of the attendant's rooms, it was still there when I visited the asylum on the 27th ultimo, covering about fifteen square yards of ground. Dr. Neill says it has been there ever since he got possession of the building. Mr. Lawson remarks with reference to it, "This item is in itself so trifling that it scarcely merits attention, except in so far as to state that any competent workman could rectify it in the course of a day or so, and why it should be so carefully preserved in this same leaky state is somewhat singular, being at a single spot, and easily got at, and easily made good."

I indorse Mr. Lawson's opinion as to the insignificance of the evil and the ease with which it could be remedied; and, for a more practical proof, may state that on the 10th instant the District Engineer was instructed to have the water taken away. On the 15th he telegraphed: "I have had water removed from under room at Seacliff at a cost of £4 4s. 5d.; time, two men three and a half days, including going and coming." Dr. Neill could have done work himself for £3. I may remark that, although so long in existence and known to the asylum authorities and considered by them so serious, the Public Works Department was not made aware of the existence of this water under the building until some time after the inspection in May last.

In discussing the matter of drainage with me, Dr. Neill said that in his opinion the illnesses mentioned by the Inspector were not due to insufficient drainage, but to the dampness of the new building.

### 4. Leakage in Roof.

"In the large entertainment-hall a leakage through the roof, previously pointed out, is still permitted to deface the walls."—(Inspector's Report, November, 1884.)

"The leakage through the roof of the large hall shows greatly extended damage upon each of my successive visits, and ought to receive immediate attention."—(Inspector's Report, May, 1885.)

This also is a matter which only required mentioning to have rectified; the Public Works Department only heard of it lately, and the necessary repairs to the roof were at once carried out. The leakage was due entirely to broken slates, which is a work of maintenance, not a structural defect. The roof, containing as it does more than an acre and a half of slating, will require constant attention and frequent repairs.

### 5. Fittings in General.

"The woodwork and fittings of windows and doors throughout the establishment continue to show additional evidence of bad material and worse workmanship. Locks, bolts, and hinges are of trumpery character and unsafe; while the beads intended to secure window-frames and shutters can be pulled off with the fingers. Door-frames of single rooms are only held to the brickwork by a wooden wedge or two; and, during my visit, a window-frame in one of the turrets was observed

to be rocking to and fro with a slight breeze, never having been properly built in.”—(Inspector’s Report, November, 1884.)

When at Seacliff I specially asked Dr. Neill to show me the worst of the defects referred to; and I saw nothing beyond what can be seen in any new building, public or private. Anything that can be called a defect is due to shrinkage of timber, and even of this there is less than usual, for the framing of the doors is Baltic deal. The bolts and hinges are certainly not trumpery. I had no opportunity of judging of the locks, but Mr. Gore, M.H.R., who had the contract for building the asylum, informs me that Dr. Neill was consulted before the order for them was sent Home, and that they were manufactured by the firm who makes most of the locks for English asylums. I may state here that, in details like this, Dr. Neill was consulted at every step during the erection of the building.

The window-beads are of the ordinary kind seen every day. Those that the patients were expected to interfere with are tightly fastened to the frames, but all others have only two or three nails, so as to be readily taken off, which is the usual practice. Assuming that it is considered necessary to do so, all the beads can be nailed tightly for £4 or £5.

With reference to door-frames being secured by wooden wedges, I saw none of them; and Mr. Gore asserts emphatically that none were used.

The window-frame, stated to have rocked in a slight breeze, lights the staircase leading to the roof. The wall inside is not plastered, and there are no architraves, so the window must have shaken loose, not in a slight breeze, but in one of the gales which blow so fiercely at this elevation. The window could have been secured for 5s.

Altogether there are 1,273 doors and windows in the Seacliff Asylum. It is impossible to assert that the fittings of the whole of them are absolutely perfect in a mathematical sense, which seems to be the standard aimed at. But, for all practical purposes, they are quite complete and well finished.

#### 6. Movement in Foundations.

“I was sorry to notice that movement of the soil is still progressing beneath the female wing, as evidenced by cracked walls, falling plaster, and broken concrete pavement. This movement is evidently promoted by soakage of water from high ground at the rear of the building. It is highly desirable to provide against this soakage by laying down tar-pavement in the airing courts for a width of at least 12ft. from the walls, and by providing proper drainage to carry away the rainfall from them.”—(Inspector’s Report, November, 1884.)

“I have again to draw attention to the structural defects mentioned in my former reports. Movement continues to take place in the foundations of the female wing, in which a rent exists from roof to basement. Plaster is constantly falling, and alarming noises are at times heard in the timbers of the roof.”—(Inspector’s Report, May, 1885.)

This is really the only matter connected with the asylum that might have assumed a serious aspect. As there is a good deal of slipping ground in the neighbourhood fears were at first entertained that the whole slope of the hill was on the move. I am glad to say that these fears are groundless; there is clearly no general movement of the land.

The total length of the building is 570ft., and out of this there is only some 20ft. or 25ft. where the ground is not quite solid. After a careful examination of the building and ground, I came to the conclusion that, even in the small area affected, there is no great movement in any particular direction. The injury to the building is no more than might have been caused by irregular settlement in the foundations. That being the case, there will be no difficulty in preventing further damage. The impression, however, is that the movement has stopped. Dr. Neill himself thinks so, and Mr. Lawson, reporting to Mr. Ussher, the District Engineer, on the 6th July, 1885, says: “I have now the honour to inform you that, from measurements recently taken on the spot, I am in a position to state that no movement nor further extension of cracks in wall have taken place since, in company with Mr. Blair and yourself, I visited the building and examined the same. In other words, my former report as to this matter, of date 26th May last, is absolutely correct—namely, that the fracture in wall, caused by movement of strata, has not enlarged or extended since a trench was sunk, intercepting underflow of water-drainage, twelve months since, under direction of Public Works Department. Mr. Ussher himself, under date 14th instant, says: ‘From observations during the past few months, I have come to the conclusion that the cracks in the building have increased but slightly, if at all, during the past year, and I have no doubt the stone drain in its present position has been effective.’”

As there is an erroneous impression abroad on the subject, I may explain that the damage done to the building by the settlement is very small, not nearly as much as in several large buildings in Dunedin, of which no notice is taken. The north wing is not in any way affected, the whole of the damage being confined to about 25ft. of the ambulatory, between the north and second wings, and the rooms overhead. I saw a good many cracks both in the walls and plaster, but none right through the walls, and, although conspicuous enough on the plaster inside, no one walking past the building would notice the cracks. I cannot, therefore, understand on what grounds the Inspector makes the statement that a “rent exists from roof to basement.” If such a rent exists, how comes it that I found this part of the building occupied by patients? and so far as I can ascertain it was so occupied when the report was made.

That the Inspector does not really consider the movement in the building serious is shown by the simple remedy he proposes: putting down tar-pavements in the airing-court, and carrying away the rainfall from them.

It is quite clear that the movement in the ground has stopped altogether, or become so small as to be harmless. It would therefore be unnecessary to do anything further beyond repairing the cracks, were it not that recent borings show the ground to be soft. The drain put in at the back of the building is not deep enough to intercept all the water. Under these circumstances it is desir-

able, as a preventative to future settlement, to lower the drain. I think this is all that is required to give complete security.

#### 7. Store Fittings.

“The store-rooms and offices are good and conveniently situated, but the fittings as left by the contractor were of the roughest. Much time has been spent in reconstructing shelves, bins, and other articles which had become quite unserviceable through warping and shrinkage.”—(Inspector's Report, November, 1884.)

These fittings did not form part of the contract, but were an extra done at the request of the asylum authorities. The work is certainly not up to the mark, there being undue shrinkage and warping in some of the timber, which seems to have been green and sappy to begin with. The explanation given to me by the architect and contractor is, that the work was wanted in a particular hurry, so the materials readiest to hand had to be taken. Under any circumstances the matter is a trivial one. The total cost of the extra fittings in the store was £33 17s., and a fraction of this amount will make good the defects.

#### 8. Tanks and Piping.

“The hot-water tanks, lined with lead, are frequently under repair, and will eventually become unserviceable after causing much mischief to ceilings. Some of the bath-room ceilings are being destroyed by leakage from valves and waste-pipes, the former unprovided with safes, and the latter having joints made of putty instead of solder.”—(Inspector's Report, 1885.)

The hot-water tanks, which were also an extra to the contract, are four in number, measuring about 3ft. 6in. each way. They are made of wood lined with lead. It was first intended to have them of copper, but the present plan was adopted on the score of economy. The lead expands and contracts by the change of temperature, and eventually cracks, causing leakage. The same action is observable every day in baths and gutters. It was from the first known that lead would require more maintenance than copper, but with tradesmen about, as at the asylum, this was not considered a serious objection.

The valves, or rather taps in the bath-rooms, were originally placed so as to drip into the baths, as at the old Dunedin asylum, the handles being moveable to prevent interference by patients. At Dr. Neill's instance they were moved from this position, and placed in a locked cupboard alongside the bath, so they now drip on to the floor. The cost of providing the taps with cups or safes leading to the waste-pipe will be from 7s. to 8s. for each bath, or £6 to £7 for the whole building. It is unnecessary to direct attention to the insignificance of this sum.

I may, however, add that the damage to the ceilings is not due entirely to the drip from the taps, but mainly from the water that runs on to the floor from persons using the baths. As pointed out by Mr. Lawson, the only effectual remedy is to cover the whole floor with lead, or some other impervious material. This was recommended while the building was in course of erection, but not authorized on account of the expense.

The statements that the joints of the waste-pipes are made of putty instead of solder is the most serious charge in the whole report, for it implies gross dishonesty on the part of the builder or plumber, and gross negligence or corruption on the part of the Architect and Clerk of Works. It will therefore be scarcely credited that the statement is without substantial foundation. Dr. Neill's explanation is that, in fixing the woodwork, a carpenter accidentally made a hole in one of the pipes. As there was no plumber about, he temporarily plugged up the hole, not, as it happened, with putty, though that is immaterial, but with Portland cement. That such a trifling circumstance should be magnified into a general charge of dishonesty and maladministration against those connected with the works is simply inexplicable.

#### 9. Roads and Airing-courts.

“The roads and paths about the asylum are in a very bad state of muddiness; a great deal of road-metal is necessary for their formation and repair. The airing-courts also are wet for want of proper drains; that the patients are kept within doors much to their detriment.”—(Inspector's Report, May, 1885.)

I can indorse what is said by the Inspector as to the bad state of the roads, but can give no explanation on the subject, for the matter is altogether in the hands of the asylum authorities. That being so, it is scarcely for me to venture an opinion on the subject; but it strikes me as anomalous that such a state of things should be allowed to exist for long, with so much labour available in the asylum and plenty of material for road-making on the ground. Work of this kind at asylums has hitherto not been charged to loan moneys.

#### 10. Furniture and Gasworks.

“The two large halls are perfectly useless, having no seats or tables, and being without any means of lighting them. Furniture ought to be supplied without further delay, and gasworks established. The whole of the asylum is at present wretchedly lighted by kerosene-lamps, which require the entire services of a man to trim and attend to. They are also an element of considerable danger. Lighting by gas would materially assist in warming the building, which is wretchedly cold now, and must be still more so in winter; while the whole of the residual products of manufacture would find a ready use in the establishment. Viewed only as a matter of economy, the provision of a proper gas-making plant is highly desirable.”—(Inspector's Report, 1885.)

This is also a matter in which the initiative at least rests with the asylum authorities. Whether the furniture is to be provided or the gasworks erected is a question between the Inspector and the Government, so I see no reason why it should be made the subject of a public complaint. As for the gasworks, a pause may well be made before beginning them, for they are estimated to cost £6,600.

*Summary.*

The following is a summary of the principal conclusions come to in the foregoing report :—

- 1 and 2. There is no extravagant expenditure of money on architectural effects in the laundry and larder. The boiler can do its work when it and the other appliances are in perfect order; but it is desirable to get a larger one. The alteration in the Inspector's method of heating the coppers was made to meet the wishes of the Medical Superintendent. The workmanship and materials in the drying-houses are not bad and unsuitable, but the design furnished by the asylum authorities has a few minor defects.
3. Beyond that arising from its newness, there is no particular dampness about the building. The water which lodged under the basement has been drained off at a cost of £4 4s. 5d.
4. The leakage in the roof, which was due to broken slates, has been repaired. This is a mere matter of maintenance.
5. The woodwork and fittings of windows and doors are a good fair job, and the locks, bolts, and hinges are not trumpery. It is not usual to nail window-beads tightly, but if considered necessary they could be done for £4 or £5.
6. There is no general movement in the ground, and there has been little or no movement of any kind for about twelve months. The damage done is comparatively small, and the part of the building affected is in constant occupation.
7. The store-fittings were made of green and sappy timber, so have shrunk and warped unduly. The total cost, however, was only £33 17s., and a small fraction of this amount will make good the defects.
8. The tanks were made of lead advisedly, on the score of economy; the leakage is due to imperfect maintenance. The valves or taps were altered into their present position by direction of the Medical Superintendent. The cost of providing safes for the drip would be £6 or £7, but this will not completely save the ceilings, which are mainly injured by water spilt on the floor. There are no putty-joints in the pipes.
- 9 and 10. The roads and airing-courts are in a bad condition from mud, but this a matter for the asylum authorities. It also rests with them to take the initiative in furnishing the hall and erecting gasworks.

*Conclusion.*

Leaving out the settlement of the building, which could not be foreseen, and the boiler, which is very much a question of keeping the other appliances in good order, all the structural defects in the Seacliff Asylum referred to in the Inspector's report may be rectified for £30. When we consider that the building has cost £78,000, the whole matter is summed up in the telegram I sent from Dunedin stating that the faults have no practical existence.

This brings me to what I consider the root of the whole trouble—the practice of referring to headquarters every trifling matter that arises in connection with the asylum. The regulations relating to the repair of public buildings provide that the officer in charge of any building can get small repairs done on application to the local Engineer of the Public Works Department, and the Engineer is authorized to do such repairs without reference to Wellington.

Instead of adhering to these regulations, the practice at Seacliff appears to be for the Medical Superintendent to let things remain until the Inspector makes his half-yearly visit, and direct his attention to them. The Inspector enters his opinion of them in a book kept at the institution, and in due course a copy of this entry reaches Wellington. Whether it ever reaches the person who is expected to take action is a detail which seems to receive little attention. As already noticed, the report of November, 1884, contained a reference to the water under the building, the leakage in the roof, and the loose window, all of which required immediate attention. That report was not seen in the Public Works Department until some time after the May, 1885, report had been received.

If the regulations above mentioned are only worked to there will be no delay in rectifying any little defect that may appear and repairing any damage that takes place; and, what is perhaps equally important, much misconception all round will be avoided.

I have, &c.,

W. N. BLAIR,  
Assistant Engineer-in-Chief.

The Engineer-in-Chief, Wellington.

