

of 20th March, 1883, from Mr. Lawson wanted, in addition to the general formation of the ground and the drainage, outhouses, airing-courts, gasworks, bells, and medical superintendent's residence gone on with; so that even then the drainage was not made a prominent requirement. In answer to the letter I asked Mr. Lawson to submit a scheme of drainage, &c., outhouses, &c., with estimates. This was done on the 23rd March, 1883. I added in my minute to him on the subject, "I will talk it (the scheme) over with you beforehand if you like." On the 8th May, 1883, Mr. Lawson forwarded the estimates for the various works required, with a plan of the drainage. In forwarding this plan he says: "As to the drainage, it would be of great importance if this part of the work could be at once placed in hand. A large amount of rain-water from the roof alone is sufficient to injure the foundations, and when to this is added all the natural surface-drainage you can imagine what may result. Would I be authorised to proceed with this at once?" From this and the preceding letter, which I have already referred to, it will be seen that Mr. Lawson relied on these drainage-works, of which he made a plan, to prevent the settlement he dreaded. He again refers to the surface-drainage on the 31st May, 1883. He says, writing of the works that were necessary to complete everything at Seacliff, that he "would again draw your attention to the urgent necessity of having the drainage portion of the work put in hand as soon as possible, so as to prevent damage to the building." All these letters bear out the fact that Mr. Lawson had amended his ideas with reference to the drainage. He abandoned the isolated-drain scheme entirely, and went in for the surface-drainage. This surface-drainage he drew a plan of. It was duly authorised, and the work was carried out in accordance therewith. Mr. Lawson, therefore, got all that he required under his amended ideas. He abandoned the isolated drain in 1881, and then ever after 1881 he looked to the surface-drainage as the cure or preventative of settlement. That surface-drainage was supplied according to his own plans, which were duly carried out. Mr. Lawson, therefore, got all that he asked for. As already stated, Mr. Lawson was silent with reference to the isolated drain from the 29th March, 1881, to 12th May, 1884. He then, in reply to a statement of Dr. Grabham about the dampness of the walls, advocated the making of this main drain to prevent dampness and all underground movement. This was, of course, after the cracks had appeared. We next hear from Mr. Lawson a year afterwards, on the 25th May, 1885, also in reply to a report by Dr. Grabham. In this reply he says "that the fracture in the wall caused by the movement of the strata referred to is in no way serious, and, so far as I am aware, has not enlarged or extended since the drain was sunk intercepting the underflow of the drainage-water twelve months ago, under the direction of the Public Works Department." Again he refers to the same subject on the 6th July, 1885, in a letter to Mr. Ussher. He says in this letter: "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 the cracks in the wall has 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 the 26th May last, is absolutely correct—viz., that the fracture in the wall caused by the movement in the strata has not enlarged or extended since the trench was sunk intercepting the underflow of water twelve months ago, under the direction of the Public Works Department. The trench hereinbefore referred to is shown on the Drawing No. 2 accompanying your late report on this crack, and representing cross-section at Seacliff Asylum. This work is in the direction of the main drainage, or drain advised by me from the first; but I would still urge that one further back, deeper, and continued right across the whole distance, as also shown in your drawing, should be formed, and so thoroughly complete the isolation and solidification of the site." This shows that at that time Mr. Lawson was satisfied with the drain that had been put in by the Public Works Department, and up to so recent a date as the 20th July, 1886, Mr. Lawson seems to have continued of the same opinion, for on that date he wrote to Dr. Macgregor, stating, "As to the crack of the wall in north wing, and broken plaster resulting from same, these were caused solely by moving of adjoining strata, and cannot in any way be blamed on the building. The underground drainage having been intercepted, this movement has apparently ceased, and the plaster-work has been made good." It will be further seen that, although Mr. Lawson at this time advocated the extension of the drain further south, he was satisfied with what had been done, and he admits that what had been put in was in accordance with his original ideas of the isolating-drain. This is not, however, in accordance with his ideas as expressed in the published private letter to me of the 2nd February, 1886, which states that the southern half of the central portion of the building is already secured by natural formation and drainage. Mr. Lawson's letter advocates another drain further back, and deeper, and continued across the whole distance, according to a plan prepared by Mr. Ussher. This drain was not carried out, but another drain, as already described, nearer to the building, close to the northern and western sides of the northern block, was made. This drain is carried out to a great depth, 17ft. below the foundation of the building. I will describe this drain to you from the plan. This [indicating on plan] shows the block which was affected by the first drain put in. This drain was put in between the months of May and July, 1884. A section of it is shown here [indicating on plan]. That section corresponds within a few feet in position with the plan attached to that published sketch of Mr. Lawson's. It is almost of the same depth, but there are a few feet different in the positions.

*Mr. Lawson*: There is no scale to my sketch.

*Mr. Blair*: I will merely say that the drain is practically on the level of the back of the foundations of the walls. It will certainly intercept any flow of water in this direction towards the building [indicating on plan]. Any flow that would go past that drain would be a long way below the building. This drain was put in in 1884. You will also see that this drain was built by shafts put in about every 20ft. The second drain was put in at a much lower level. The top is about 12ft. 6in. below the foundations of the back wall, and it is 18ft. away from them at the middle. That drain was also built with shafts, although there are fewer shafts.

*The Chairman*: There are three shafts in it.