21H.—31.

The opening of the outfall sewerage works early in the year has now made it possible to connect all houses in the city, including Grey Lynn, to the new system, and will result in greatly diminishing the number of houses served by the old insanitary nightsoil system.

The opening of Myers's Park led to the demolition of a number of more or less dilapidated build-

ings, and provides a new air-space in the centre of the older parts of the town.

## Drainage and Nightsoil Disposal.

Auckland Suburbs.—Among the local bodies not yet incorporated in the city the most important sanitary advance during the year has been the final solution of the old-standing difficulty as to the disposal of nightsoil. This was not accomplished without a struggle, and the work of the Auckland Health Office during the first five months of 1914 is largely the history of the effort to overcome local jealousy and ignorant opposition over this question. We were fortunate in having the whole-hearted support of Mr. O. Nicholson, Mayor of Mount Eden, without whom the final solution would not have been reached.

In the annual report for last year I mentioned the final collapse of the old system, and the failure of the clauses in the Lands Empowering Bill which were intended to temporarily settle the difficulty. Under this Act a temporary depot in a suitable locality was secured in the Avondale Road District. There was much active opposition on the part of the residents at first, and, indeed, police assistance had to be secured on several occasions. However, the opposition was overcome, and it was hoped the site would serve till the completion of the outfall sewerage works, and the connection thereto of the Arch Hill sewer enabled us to adopt the flushing-tank system of disposal. Unfortunately it was found that the area in use was under the jurisdiction of the Public Trustee, and, as his approval could not be obtained, the occupation of the site under the Lands Empowering Act became illegal, necessitating the removal elsewhere of the depot. After further efforts to secure the only really suitable site in the district—that in the Mount Roskill area—a site less suitable, but not actually leading to danger to the surroundings, was found after much effort at Mount Albert, and here the work was carried on under the most stringent conditions as to preventing nuisance till the flushing-tank was completed. At the request of the residents the nightsoil was trenched in instead of being ploughed, and the surface, after covering, was treated with lime and kerosene—all at the expense of the Department.

Meantime the securing of a site for the flushing-tank was meeting with infinite difficulty. The approval of the Drainage Board had first to be secured to the general principle, but fortunately we had the support of their engineer. We were naturally limited to the sewer-line, which fortunately ran through an unpopulated area. But though the position was suitable, we had to face the sentimental objection of the local authority in whose district the site lay, and the natural opposition of the owners of neighbouring properties. After much heartburning and many somewhat heated meetings these matters were settled and the work taken in hand, the Government advancing the money in

the form of a loan to the various local bodies concerned.

The flushing-tank system came into use on the 19th July, and after a few preliminary difficulties as to working were overcome, involving the provision of a larger outfall pipe, has continued in regular use without causing the smallest nuisance or inconvenience to the neighbourhood, save for the unavoidable noise of the carts as they pass along the roads. The disposal of the nightsoil is now effected in a wholly sanitary manner, and the long distance which the carts formerly had to traverse to the depot is avoided. The carts, too, can be effectively washed in the tank and leave the depot clean. The floor of the building is covered in concrete, and can be readily flushed down, while the tank itself empties completely. It would be difficult on entering the building later in the day to detect any trace of the purpose for which it is constructed. A plentiful flush of water and a little care on the part of the man in charge ensures a very satisfactory result. No blockage in the sewer has occurred, the only noticeable result being a periodic increase in the work required to be performed by the screening apparatus at the outfall works.

The One-tree Hill district is now sewered in the most populous areas, but as a nightsoil service is still necessary in the outlying parts, the Board has secured a suitable site and erected a flushing-tank similar in most respects to that at Mount Albert, which is now working well.

The work of the Drainage Board has progressed so far that it is now possible in many suburban areas to provide sewerage connections. The opening of the Arch Hill sewer has thus provided for a large part of Mount Albert, Eden Terrace, part of Point Chevalier, and the more urgent parts of the Mount Eden Borough. It is for these bodies now to take advantage of the facilities offered, and this is being done in Eden Terrace, which in the course of the present year will be able to abandon the nightsoil service entirely. In Mount Eden the need for drainage in the clay areas is especially felt, and it is satisfactory to know that the Council proposes to secure a loan at an early date for sewerage purposes.

On the eastern side, as already mentioned, the One-tree Hill Board has sewered the more needful parts of the district, which sewering-work is progressing at Epsom. The greater part of Remuera also has sewerage connections. In Ellerslie the Town Board are laying sewers, but a difficulty has arisen in regard to the disposal of the sewage. The Board proposed to discharge into the septic tank provided for the group of workers' cottages, and so into the porous scoria rock, but we have objected to this on the ground that it would endanger the Onehunga and Manukau water-supplies. sewage can be carried to junction with the Onehunga reticulation, or, if treated in the septic tank,

must be sufficiently treated in aerating-beds before discharging into the subsoil.

Northcote.—A drainage scheme has been prepared and permission obtained from the Harbour Board to discharge the treated effluent into the harbour.