

Dr. J. Spencer Low's report to the Local Government Board on the sanitary circumstances and administration of the Pattrington Rural District : with special reference to the prevalence of diphtheria therein.

Contributors

Low, J. Spencer.
Great Britain. Local Government Board.

Publication/Creation

London : H.M.S.O., 1911 ([London] : Darling and Son)

Persistent URL

<https://wellcomecollection.org/works/dbbafnwe>

License and attribution

The copyright of this item has not been evaluated. Please refer to the original publisher/creator of this item for more information. You are free to use this item in any way that is permitted by the copyright and related rights legislation that applies to your use.
See rightsstatements.org for more information.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

FOR OFFICIAL USE.

REPORTS

TO THE

LOCAL GOVERNMENT BOARD

ON

PUBLIC HEALTH AND MEDICAL
SUBJECTS.

(NEW SERIES No. 48.)

Dr. J. Spencer Low's Report to the Local Government Board on the Sanitary Circumstances and Administration of the Patrington Rural District, with special reference to the prevalence of Diphtheria therein.



LONDON:

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

To be purchased, either directly or through any Bookseller, from

WYMAN & SONS, LIMITED, FETTER LANE, E.C. ; or

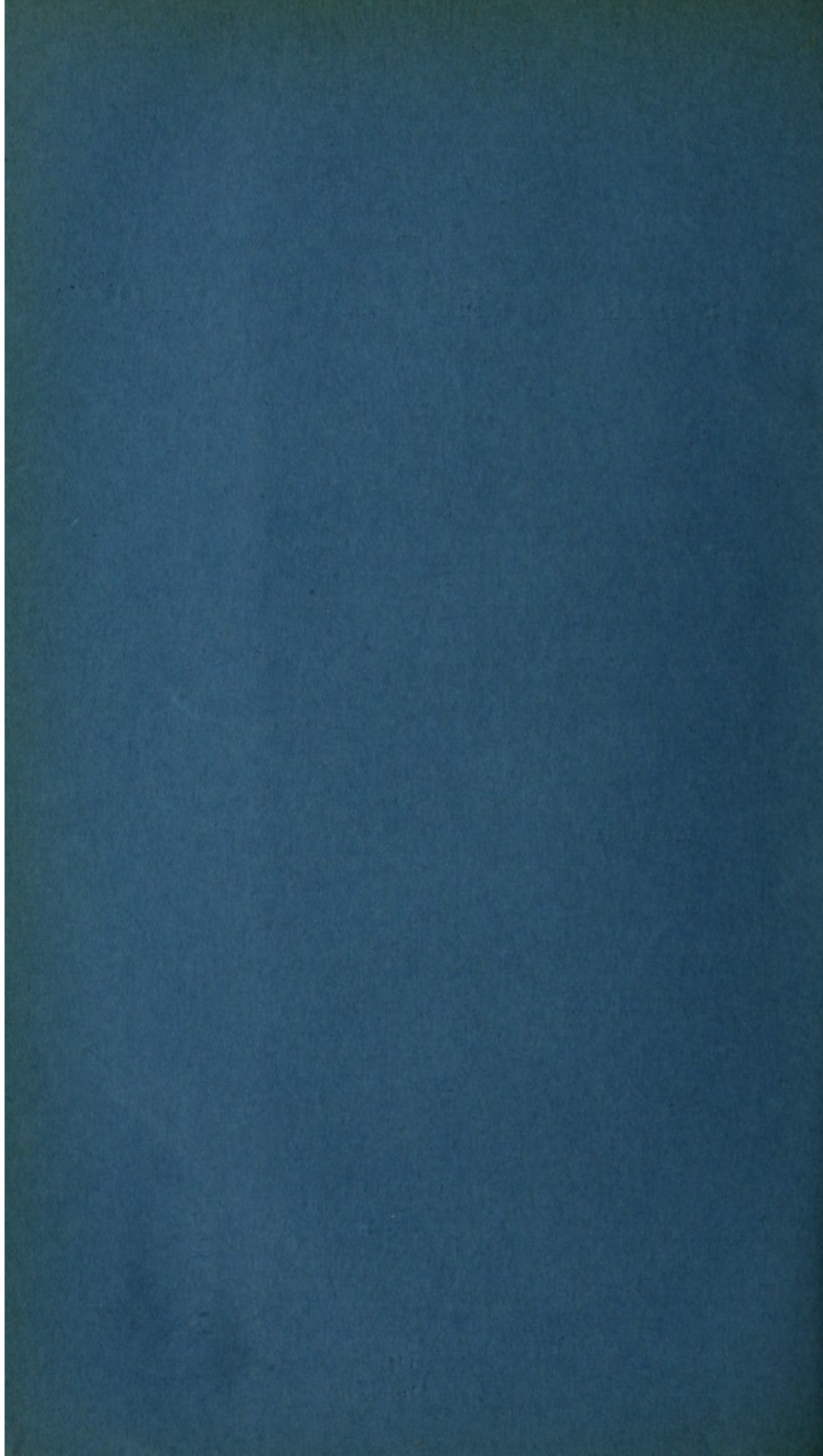
OLIVER AND BOYD, TWEEDDALE COURT, EDINBURGH ; or

E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN.

PRINTED BY

DARLING AND SON, LIMITED, BACON STREET, E.
1911.

Price Fourpence.



Dr. J. Spencer Low's Report to the Local Government Board on the Sanitary Circumstances and Administration of the Patrington Rural District, with special reference to the prevalence of Diphtheria therein.

ARTHUR NEWSHOLME,
Medical Officer,
24th January, 1911.

Early in 1910 the Board received complaints that the Patrington Rural District Council had failed to take proper measures to deal with an epidemic of diphtheria and, further, that they had neglected to improve generally the sanitary state of the district. In consequence I was instructed to visit the locality in February, 1910, to ascertain the facts as to the prevalence of diphtheria and to give advice as to the necessary administrative procedure. Later I revisited the district in order to ascertain the manner in which the inspector of nuisances was then performing his duties, as the council had asked the Board to sanction his reappointment at an increased salary. In August, 1910, in consequence of a recrudescence of diphtheria, and in view of further complaints of continued inaction on the part of the council I again visited the locality. After my former visits the Board had called the attention of the district council to various instances of defective sanitary administration which, briefly stated, comprised:—

(1.) Inadequate arrangements for disinfecting premises invaded by diphtheria. (2.) Failure to provide an isolation hospital. (3.) Nuisance occasioned by discharge of sewage at the village of Keyingham into an open ditch in proximity to dwellings. (4.)

L O N D O N :
PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.
To be purchased, either directly or through any Bookseller, from
WYMAN & SONS, LIMITED, FETTER LANE, E.C.; or
OLIVER AND BOYD, TWEEDDALE COURT, EDINBURGH; or
E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN.

PRINTED BY
DARLING AND SON, LIMITED, BACON STREET, E.
1911.

Price Fourpence.

No. 48.

(17985—21.) Wt. 26142—898. 500. 2/11. D & S.

Failure to provide satisfactory means of cleansing and ventilating sewers at Patrington. (5.) Defective water supply at Patrington. (6.) Inefficient performance in some respects of the work of the inspector of nuisances. (7.) The duties of the inspector of nuisances not carried out under the supervision of the medical officer of health. (8.) No sanitary committee appointed by the district council.

The council promised attention to several of these points; they did not, however, accept the view that the water supply of Patrington was defective, neither did they assent to the formation of a sanitary committee. They decided to ventilate, but not to flush, the Patrington sewers, and they claimed to have dealt effectively with the sewage polluted ditch at Keyingham. As the result of my several visits I now make report as follows:—

DESCRIPTION OF THE DISTRICT.

The Rural District of Patrington, consisting of 26 parishes with a total acreage of 62,179, is situated in Holderness in the East Riding of Yorkshire; it is roughly triangular in shape and is bounded on two sides by the River Humber and the German Ocean, and on the landward side by the Sculcoates and Skirlaugh Rural Districts and the Borough of Hedon. It comprises the whole area of the Patrington Poor Law Union, less that of the Withernsea Urban District.

The population in 1891 was 7,497 (excluding that of Withernsea, created an urban district in 1898); it had decreased to 7,167 in 1901, and in 1909 it was estimated at 7,021.

The number of inhabited houses in 1901 was 1,620.

Some of the parishes are very sparsely populated; the only parishes which had, in 1901, a population of over 400 were Burstwick (476), Keyingham (549), Ottringham (466), Patrington (1,104), Paull (575, a considerable proportion of which is military), and Roos (436).

The rateable and annual assessable values are £73,658 and £48,003 respectively at October, 1910. No loans for sanitary purposes are outstanding.

The industries of the district are almost entirely agricultural.

PREVALENCE OF DIPHTHERIA AND OTHER INFECTIOUS DISEASES.

From the examination of the records of notified infectious diseases it appears that in the 10 year period, 1901–1910 19 cases and one death from typhoid fever and 148 cases and one death from scarlet fever were reported. In the same period 206 cases of diphtheria and membranous croup with 21 deaths have occurred.

In 1902, 1906 and 1909, 25, 31, and 26 cases of diphtheria (including membranous croup) respectively, were notified; the disease in the other years occurred in small amount.

From January 1st to December 31st, 1910, 86 cases of diphtheria and 7 deaths occurred in the district in the following localities :—

Parish.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	No. of cases.	No. of houses invaded.
Patrington and Patrington Haven.	—	36	3	2	—	—	—	1	—	—	—	—	42	18
Ottringham..	—	—	—	—	—	4	7	8	—	—	—	—	19	13
Keyingham..	6	—	1	1	—	—	—	—	—	—	—	—	8	6
Burstwick ...	—	—	—	—	—	—	—	1	—	—	—	—	1	1
Sunk Island..	1	4	—	—	—	—	1	2	3	1	—	—	12	7
Welwick	1	—	—	—	—	—	—	—	—	—	—	—	1	1
Paull	1	—	—	—	—	—	—	—	—	1	1	—	3	2
Total cases of diphtheria.	9	40	4	3	—	4	8	12	3	2	1	—	86	48
Diphtheria deaths.	2	—	—	—	—	—	2	2	—	1	—	—	Total deaths. 7	Houses in which deaths occurred. 7

Three of the deaths occurred in Ottringham, and one each in Keyingham, Sunk Island, Paull and Burstwick.

In 1910 the earliest cases occurred in the village of Keyingham, 5 of them, among school children at ages from 11 to 13 years, being notified between January 12th and 22nd; another instance occurred a few days afterwards in a house previously infected. These cases included two "carriers," without any symptoms, who were found to be attending school. A schoolboy had contracted diphtheria in the previous October, but it is not known whether he also had acted as a "carrier" on his return to school. Two apparently sporadic cases also occurred in this village in the months of March and April, 1910.

The origin of the 3 remaining January cases, all in different parishes, remained untraced.

Diphtheria broke out in the village of Patrington in February, 1910; between the 4th and 20th of that month 36 cases were notified. Multiple attacks occurred in this village in several houses, *i.e.*, 8, 7, 4, 3, 3, 2, 2, 2, and 2 attacks respectively, were in the same households. Practically the whole of the Patrington cases were school children or other members of households already infected. The three March and the two April attacks occurred in houses already invaded in February. The August case was a second attack, the child having been previously notified in February; 6 other children had been notified from this house in which the last case had occurred towards the end of April. No house in Patrington was newly invaded after February.

The Sunk Island cases in January and February were associated with one another, but the origin of the first case, and that of the three July and August attacks which occurred in three different

households was not traced. The four September and October cases in this parish occurred in one house, there being a month's interval between the first and last notification.

Diphtheria attacked Ottringham in June: a boy notified in January at Keyingham two miles off, had no symptoms, but on a swab being taken diphtheria bacilli were found to be present in his throat. No precautions were taken by this boy's mother who declined to believe that he was infectious, though diphtheria was actually present in the house in the person of another son who died of the disease during the same month. The boy who acted as a "carrier" was not isolated but allowed to frequent the neighbourhood of the Ottringham school. No diphtheria is known to have occurred in Ottringham during the early months of the year (cases had been notified in Keyingham up to the middle of April), but infection may have been present, though undetected, for during some weeks before the first case was notified children suffering from sore throat attended school.

In one short row of houses in Ottringham 4 were infected at considerable intervals, pointing to case to case infection. In another part of the village 2 houses standing next to one another were infected, one furnishing 5 attacks. All the June cases in Ottringham were school children, as were nearly all those attacked in July and August. It seems probable that in some way, which was not ascertained, diphtheria spread from Keyingham to Patrington and Ottringham, which are distant 6 and 2 miles respectively, as well as in less amount in other parishes. The disease chiefly attacked school children, multiple attacks in houses were common, and in several instances "carriers" without any obvious symptoms were found to be attending school. 8 attacks occurred in one house, and other instances of multiple attacks were 7, 5, 4 (twice) 3 (three times) and 2 (9 times) in the same households; the remaining 32 households experienced one attack only. The chief factors which favoured the spread of the disease were attendance at school of "carriers," and defective isolation of recognised cases. The outbreak was not associated with illness among cats or other domestic animals. No facts were elicited which implicated the milk supply. Insanitary conditions in the villages invaded by diphtheria, especially defective methods of sewage disposal (see pages 9 and 10), may reasonably be regarded as having rendered children more liable to attack. The age and sex incidence of the 86 cases attacked in 1910 was as follows:—

	Under 5 years.		5 to 13 years.		14 to 20 years.		Over 20 years.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Cases...	4	4	22	39	2	10	2	3	30	56
Deaths.	2		5		—		—			

80.2 per cent. of the cases occurred in children under 13 years of age (70.9 per cent. at ages 5 to 13 years); 65.1 per cent. of those attacked were females.

Measures taken on the occurrence of cases of diphtheria.—On receipt of a notification certificate the medical officer of health visited invaded houses, took swabs from the throats of cases and of such contacts as he considered advisable, unless this had already been done by the private medical attendant. He gave advice to parents and others as to necessary precautions, and if necessary he instructed contacts to remain away from work; he excluded from school all children living in invaded houses and all children under 5 years of age. Schools were visited by the medical officer of health, swabs were taken from cases in which any suspicion arose, and also from apparently healthy children. Inquiry was made in this way into the occurrence of "missed" and of "carrier" cases. Closure of both day and Sunday schools was resorted to when the epidemic had become established in the various villages. Printed forms for routine inquiry into the history and origin of cases were not used. There would be advantage in future in the employment of such forms; most of the preliminary information necessary could be obtained by a trained inspector of nuisances, and further details could subsequently be filled in by the medical officer of health. At present the inspector of nuisances makes no inquiries unless specially instructed to do so. As a rule he has no official knowledge of the occurrence of any case of infectious disease until he is requested by the medical officer of health to proceed to the infected premises at the termination of the attack to conduct disinfection. Where "home isolation" is employed, there would be advantage if the inspector of nuisances paid frequent visits to infected premises to see that the patient was being kept properly isolated.

Diphtheria antitoxin has been administered in most instances, but the district council have not arranged to supply it gratuitously in necessitous cases. This course was recommended by the medical officer of health in his annual reports for 1903 and 1904.

Disinfection was performed under unsatisfactory conditions. In some instances premises were disinfected under the supervision of private medical practitioners who certified that the infected house had been thoroughly disinfected under their supervision. In spite of such certificates, however, the process has been sometimes conducted in an inadequate manner; domestic disinfection cannot be regarded as having been satisfactory.

When infected articles and premises have been disinfected by the inspector of nuisances fumigation by formalin has been employed. In the early part of 1910, during an illness of this official, disinfection fell into abeyance, and eventually after considerable delay the medical officer of health himself had to conduct the necessary proceedings. The district council failed to make prompt arrangements for the due performance of the duties of the inspector of nuisances during his illness. No steam disinfector is available for use in the district. No isolation hospital is available, but at the time of my last visit to Patrington the council were endeavouring to find a suitable site for the purpose. Isolation in country cottages is often difficult, if not impossible; but there can be no excuse for sending a child from a diphtheria infected house to play with children in a neighbouring village. Blame cannot attach solely to the district council, as has been held locally by some, when house-

holders unnecessarily expose infectious children to contact with those who are healthy. This has happened not only in the villages where diphtheria has been prevalent in 1910. The reports of the medical officer of health in former years contain reference to similar negligence ; for instance, at Burton Pidsea in 1909, (diphtheria), and at Keyingham in 1906, children convalescing after scarlet fever and desquamating were allowed to mingle with healthy persons. Much advantage would be gained by prosecution under section 126 of the Public Health Act, 1875, of a special case or cases in which infected persons have been wilfully exposed notwithstanding due warning.

SANITARY CIRCUMSTANCES.

Housing.—Of the 1,648 tenements in this district at the census of 1901, 639 contained less than 5 rooms ; of these, 493 tenements contained four rooms, 96 three rooms, 46 two rooms, and 4 one room. 18 of the tenements of less than five rooms contained more than two persons per room.

Although most of the working-class dwellings are old, the bulk of them are tidily kept, forming comfortable homes ; they are generally provided with fair sized gardens ; some houses are of a poor type and are damp. Many back yards are unpaved or defectively paved, a condition leading to accumulation of waste water and filth ; numerous instances of insanitary gullies were seen. More attention to the surroundings of premises is needed, especially in view of the close proximity of the wells to houses.

In 1909 the medical officer of health and the inspector of nuisances reported a house at Welwick as unfit for human habitation ; on this being brought to the notice of the agents of the owner, they asked the council to obtain a closing order. No further action, however, was taken by the district council, and on their default the county council obtained the order from the magistrates. Even then the house remained occupied for several months longer ; it had recently been closed when I last visited the district after an ejectment order had been obtained and executed.

Few new houses have been erected in recent years. Since 1905 24 houses have been built in 12 different parishes, 31 in another locality adjacent to the Withernsea Urban District, and some 12 in Patrington itself. Habitable cottages readily let in this area, and I am informed that none stand empty for more than a few days.

Water supply.—The soil of Holderness is a rich alluvium resting upon glacial clay in which are bands or patches of sand and gravel ; in these rain-water collects, and upon wells sunk in these patches the Patrington Rural District is dependent for its water supply. The depth of the wells is regulated by the varying depth and thickness of these beds of sand and gravel. Many wells are polluted owing to contamination of the subsoil by leakage from privies, middens, defective gullies, drains with open joints, manured gardens and accumulations of refuse of various sorts. Certain wells furnish water of a satisfactory quality, but some of them are situated too far away from houses, and water has in consequence to

be carried long distances. Most wells, however, are sunk in proximity to dwellings in back yards and cultivated gardens. The interiors of the wells are constructed of brickwork with open joints. In a considerable number the pump was found to be out of order. The wells are rarely cleaned out, and even when this has been effected they are still liable to recurrence of the contamination from the polluted subsoil. Shortage of water is at times experienced in various parts of the district, wells fail, and householders have to obtain water on sufferance from various sources. On Sunk Island—reclaimed from the Humber and the property of the Crown—the soil is “warp,” and no potable water is obtainable from wells or bores; rain-water or water carted from a distance has to be used for domestic purposes; Spurn Head is supplied in similar fashion. At Winestead water from a well is pumped to a tank from which it is piped to houses in the village; with this exception water has to be carried to houses from wells.

In 1905 Dr. S. W. Wheaton and Mr. Sandford Fawcett reported to the Local Government Board on the water supply of Holderness;* after describing the sources of drinking water in each sanitary district in that area—including Patrington—they came to the conclusion that the places (amongst others) most urgently in need of a supply of water were:—

“Certain villages the water supplies of which are especially unsatisfactory, owing to their liability to contamination, or the intrinsically bad quality of the water as shown by its chemical composition, such as Patrington, Ottringham, Keyingham, Burstwick, Hollym. Other villages and areas which suffer from either entire absence of potable water, as for instance Sunk Island; or where the available supplies are situate at such a distance from dwellings as to entail great labour in providing the amount of water which is necessary for health and domestic comfort, such as Paull.”

The report concluded by stating two alternative sources for the water supply of Holderness:—

(1). The waterworks of the Borough of Hull; a proposed water main would run from Hull, a pumping station to be erected beyond the city boundary, to Hedon, there dividing into a branch to Hornsea and another to Withernsea, both seaside resorts; the latter main would pass through the villages of Thorngumbald, Ryhill, Keyingham, Ottringham, Winestead, Patrington, and Hollym, and within two miles or less of Paull, Welwick, Holmpton, Rimswell, Halsham and Burstwick, all in the Rural District of Patrington. The cost of this scheme with a consumption in the Holderness area of 500,000 gallons of water a day, purchased from Hull at a cost for the first 30 years of 6*d.* per 1000 gallons, was estimated at a rate (assuming that no water charges were made) of 3*s.* 4*d.* in the £ on the annual assessable value of the places to be supplied.

* Report on the water supply of that portion of the East Riding of Yorkshire which is known as Holderness, by Dr. S. W. Wheaton and Mr. Sandford Fawcett; 1905.

If water charges of 1s. per 1,000 gallons were made to consumers, the same quantity of water being used, the entire cost of the scheme would be met without any assistance from the rates; a similar result would be attained with a consumption of 250,000 gallons daily at 1s. 3d. per 1,000 gallons to consumers.

(2). An alternative source was from wells sunk in the chalk in the Wolds near Arram, the water mains running through the Patrington district as in the above scheme. If 500,000 gallons a day were consumed, the entire cost would be met by water charges equal to 7·34 pence per 1,000 gallons to consumers. If no water charges were made the annual cost would equal a rate of rather less than 1s. 5½d. in the £ on the annual assessable value of the area to be supplied. These calculations have been made on the assumption that all the places in Holderness through which the mains would run, and half those within 2 miles, would take the water. In the Hull scheme the Holderness population (allowing for summer visitors) was taken at 13,600, and the annual assessable value of the area to be supplied £57,727 in 1904. In the Wolds scheme the population would be 16,217 and the annual assessable value £76,337, as other villages (outside the Patrington district) would be brought within the area to be supplied.

By the co-operation of the Urban District Councils of Hornsea and Withernsea, the Town Council of Hedon, and the Rural District Councils of Patrington, Skirlaugh and Beverley, water could be obtained for the supply of Holderness, but without such co-operation the cost to Patrington of water from such sources would be prohibitive. In 1906 a drastic report was made by the county medical officer of health on the water supply of the Patrington district. The county council pointed out that the district council were bound by statute to see that every inhabited house in the district had within a reasonable distance an available supply of wholesome water; it was further pointed out that if a wholesome supply of water could not be obtained from local wells, it was the duty of the district council to consider from what other sources outside their district such supply could be provided. The district council took no effective action, and denied that the water supply of the district was unsatisfactory.

In 1908 a private company obtained parliamentary powers to supply water in Holderness, but no steps have yet been taken by this company to provide a water service.

Excrement disposal and removal.—The usual method of excrement disposal is by means of pail closets, midden or vault privies; there are very few water-closets. The privy contents are removed by householders and deposited in gardens and elsewhere.

House refuse is deposited in ashpits and middens the contents of which are removed by householders. There is no system of public scavenging.

Sewerage and sewage disposal. Patrington.—This village is the only one in the district provided with a completely distributed system of piped sewers and with sewage disposal works. The sewers were constructed over 30 years ago. No provision is made for flushing them; ventilation is effected by means of open

manholes ; part of the system has little fall. The medical officer of health has pointed out annually in his reports from 1900 to 1909 that the Patrington sewers required flushing, but no action in the matter has been taken by the district council. Numerous complaints of smells from sewer manholes have been made, but little if any notice has been taken by the council until the middle of 1910 when they decided to substitute ventilation by vertical air-shafts in place of the open manholes.* There appears to be no intention to provide means of flushing or cleansing the sewers. The parish council have offered to grant the free use of a patch of parish land situated about the highest point in the village as a site for a flushing tank ; it is believed locally that water could easily be obtained there by sinking a well from which water could be raised to the tank by means of a small windmill. Sewage is received at the outfall works in settling tanks the effluent from which is treated upon land by intermittent downward filtration. At the time of my last visit, however, crude sewage from the settling tanks discharged directly into an agricultural drain, with which connection had in some manner or other been established, and ultimately passed in an untreated condition into a ditch used for land drainage. Steps however were being taken to rectify the matter. When I had previously visited these works in February, 1910, the tank effluent was being satisfactorily dealt with on the land ; I learn however that the county medical officer of health has from time to time found that an insufficiently purified effluent was being discharged into the ditch above mentioned. The district council should arrange for proper supervision at these works.

Keyingham.—In this village sewage is discharged in a crude state directly or through piped sewers into open ditches, on the course of which several catch pits have been constructed. Half pipes have been laid in the bottom of some ditches to facilitate the flow of sewage. Owing to the proximity of these slop ditches to houses, roads, gardens, and the village school, much nuisance from the stench has been complained of. In the past the ditches and catch pits have not been thoroughly and regularly cleaned out. In view of recent complaints, some catch pits have been cut off from the system and others have been partly filled in with soil, but they have not been properly cleaned out and they still act as catch pits owing to settling of the soil which has been put into them. The inspector of nuisances to whom the district council had delegated the duty of dealing with these catch pits informed me that the pits had been thoroughly cleaned out and properly filled in. On personal inspection with him and the medical officer of health, however, the conditions already described were found. His unsatisfactory explanation was that he “had done the best he could.” Offensive matter is still being deposited in the ditches ; they had been cleaned out a day or two before one of my visits, but sludge heaps had not been properly removed from the ditch bank on the roadside. If the catch pits are filled up more sludge must necessarily be deposited in the ditches. Although effort had been made to improve superficially the appearance of these pits and ditches immediately prior to my

* I have since learnt that this work is being carried out.

visits, the system cannot fail to prove a recurring nuisance. The Keyingham sewerage system has been condemned by the medical officer of health in his annual reports since 1898, but the district council have ignored his complaints, and until recently have not admitted that any nuisance has been occasioned. The council should secure the services of some one capable of preparing a proper scheme for sewerage of the village, and piping the sewage to a point remote from dwellings, with an estimate of the probable cost. The feasibility of such a scheme could then be considered.

Burstwick.—The sewage of this scattered village is discharged into a land drain at a point where it is crossed by a main road. An extensive deposit of sludge occurs here, giving rise to complaints of nuisance.

Ottringham.—The sewerage system consists of brick culverts and sanitary pipes, discharging into ditches. No provision for flushing or ventilation is made except through small catch pits for road washings, which are a source of many complaints of nuisance. The inspector of nuisances informed me that these complaints, though of long standing, had not reached his ears until the time of my visit to Ottringham. The improperly trapped road gullies are, I was informed, to be removed and replaced by sanitary gullies.

Elsewhere in the district slopwater is piped into ditches, often in proximity to houses. I was told by the inspector of nuisances that in various places badly laid or defective sewers had been taken up and replaced by sanitary pipes, properly jointed in cement. However, I should mention that I found at Easington that the pipes of a recently laid sewer had been jointed merely in clay.*

House drainage.—Most houses are furnished with yard gullies, some of which are not properly trapped; they are sometimes small brick catch pits, and soakage is permitted into the surrounding sub-soil leading to pollution of wells. Many of the gullies and catch pits were in a very foul state.

There is one *common lodging house* in the district. It contains a very small room used for sleeping purposes, but unfit for such use, and a larger room with two double beds. Both house and bedding were in a filthy state. The duty of inspection has been allotted to the police. I was informed that in view of the limited accommodation, drunk and sober men had, perforce, to occupy the same bed. This double occupancy of beds by adult males is contrary to the provisions of number 21 of the byelaws in force in the district.

Most of the *slaughter houses* are well kept; some, however, are in very close proximity to dwellings. A considerable quantity of blood reaches the Patrington sewers, and nuisance is occasioned by its decomposition. The slaughter houses are not registered or licensed in this rural district; the requisite urban powers not having been obtained by the district council.

* I have since learnt from the inspector of nuisances that this sewer was jointed in this way on his instructions (but without his personal supervision) as it rested on "made" soil. As the sewer is intended to form permanent work, it should have been properly laid on a stable foundation and with cement joints.

Cowsheds are in some cases well ventilated and properly floored and drained. In other instances, however, the condition of the sheds is not satisfactory, and they should be more closely supervised. I found that some of the sheds had been recently improved or rebuilt. The surroundings of some sheds are filthy. 28 persons are registered as cowkeepers or purveyors of milk, but some persons have evaded registration. Regulations under the Dairies, Cowsheds and Milkshops Order were made in 1900.

There is an *offensive trade*, a knacker's yard, which is fairly well kept, though nuisance is complained of when the wind is in a certain quarter. Improvements are projected here, such as raising the height of the boiler chimney.

SANITARY ADMINISTRATION.

The Patrington Rural District Council consists of 31 members who meet fortnightly after the meeting of the Board of Guardians; there is no sanitary committee. No optional Acts are in force in the district. The only byelaws in operation are those relating to common lodging houses, allowed by the Board on March 5th 1900.

The only loan sanctioned by the Board for sanitary purposes in this district was one of £2,000 in 1878 for sewerage and sewage disposal at Patrington.

The medical officer of health, Dr. W. H. Coates, M.A., M.B. Durham, M.R.C.S., L.R.C.P., L.S.A., L. San. Sc. Durham, Barrister-at-law, receives an annual salary of £55 half of which is repaid from county council funds. Dr. Coates is district medical officer, public vaccinator and workhouse medical officer in the Patrington Union; and he is a member of the East Riding of Yorkshire County Council. He analyses samples of water submitted to him, without additional salary. Dr. Coates, who was appointed in 1896, is familiar with the sanitary condition of his district over much of which his private practice extends. His methods of dealing with outbreaks of infectious disease have been already described.

The district council have ignored much of the valuable advice given to them by Dr. Coates. His yearly and other criticisms on the subject of the Patrington and Keyingham sewerage systems have received little, if any, notice, and in various other matters the district council have failed to follow his advice. The Infectious Disease Notification Act, 1889, was not adopted till 1897. The Patrington Rural District Council were the last rural authority in the East Riding to arrange for bacteriological examination in suspected cases of diphtheria, typhoid fever, phthisis, etc.; this course was agreed to in 1907. The council have not arranged to supply diphtheria antitoxin gratuitously in necessitous cases. They do not pay for the printing of the annual report of the medical officer of health, who himself bears the cost.

In March, 1910, less than a month after my first visit to the district, Dr. Coates was not re-elected medical officer of health on the expiry of the annual period for which for several years he had

been appointed, another medical practitioner who had not applied for the post being elected in his stead. This practitioner however refused to accept office, and at the next meeting of the council Dr. Coates was re-instated. The council were unable to allege any neglect of duty against their medical officer of health whose only offence appears to have been that, in their eyes, he had been too persistent in reporting annually the sanitary shortcomings of the district; he appears also to have been improperly blamed because the Board had sent to the district a medical inspector to whom Dr. Coates gave the necessary assistance which it was his duty to render.

The inspector of nuisances, Mr. T. G. Hart, receives an annual salary of £50, half this amount being paid from county council funds and he receives £2 2s. a year as sanitary surveyor; Mr. Hart conducts also the business of an auctioneer. He does not possess the certificate of the Royal Sanitary Institute or similar body. Mr. Hart tendered his resignation to the council during the course of my inspection, but I learn that it has since been withdrawn.

The district council will do well to appoint as their inspector of nuisances a man holding the certificate of the Royal Sanitary Institute or similar body, or one who is qualified by previous experience of the duties, to devote his whole time to this work, especially in view of the very large amount of additional inspection which has in future to be carried out in accordance with the regulations framed by the Local Government Board under the Housing and Town Planning Act, 1909. I cannot recommend continuance of existing arrangements under present conditions.

Nuisances are rife in all parts of the district, and the duty of inspection of nuisances has not hitherto been adequately performed.

The inspector of nuisances should act in conjunction with, and under the instructions of, the medical officer of health; these two officers should confer frequently on the work of inspection and on other matters; in the past this co-operation has been lacking. The council undertook in June, 1910, that this should be done, but in September I found that no attempt had been made to carry it out systematically. These two officers correspond with one another at irregular intervals.*

Conclusions.—The sanitary administration of the Patrington Rural District Council has been characterised by one main principle—an objection to spend money for sanitary purposes.

Improvement in the water supply will probably require co-operation with several adjacent local authorities. The council should, however, take steps to remedy the defects in the sewerage systems of Patrington and Keyingham noted in this report.

* I found that the instructions of the council referred to in their letter to the Board, dated June 14th, 1910, that the inspector of nuisances was to confer with the medical officer of health once a week to discuss matters which arise in the course of his duties, and to settle his routine work of inspection for the following week, were not being observed.

Judging by the present condition of the district the existing system of sanitary administration, namely, delegation of duties in any particular parish mainly to the representatives of that locality on the council, has proved a failure.

A council composed of 31 members is an unwieldy body to deal in detail with routine sanitary affairs, and the formation of a sanitary committee is a matter of much importance. The Patrington Rural District Council have hitherto declined to adopt this course. If such a committee were appointed, action recommended by them to be taken would be liable to be debated also at council meetings. When important matters of policy are at issue such double consideration is desirable, but when lists of nuisances and the like have been considered by a committee appointed for this purpose, this should usually suffice as it does with other sanitary authorities. Such a committee also would have sufficient time to consider in detail the periodical reports of the medical officer of health and inspector of nuisances. The meeting of the Patrington Rural District Council follows directly that of the Patrington Board of Guardians, and after dealing with the Poor Law business there may be but little time available for highway affairs, and still less for sanitary matters, if the length of meetings is to be kept within reasonable limits.

The minutes of the public health work of the council are written up and prepared by the inspector of nuisances who then sends them to the clerk. This is an undesirable arrangement, more especially because argument has from time to time arisen as to the precise nature of the instructions which the inspector of nuisances has received at council meetings. The council should see that the minutes are taken and kept by the clerk.

The *Midwives Act* is administered by the East Riding County Council under the supervision of the county medical officer of health. Only one midwife, doing very little work, is registered in the Patrington Rural District.

RECOMMENDATIONS.

1. *Infectious Diseases*.—

- (a.) Each notified case should be the subject of prompt and careful inquiry, the results of which should be permanently recorded on appropriate cards or forms.
- (b.) A properly equipped isolation hospital should be provided forthwith to which patients who cannot be isolated at home could be removed. Pending the erection of such a hospital, cases treated at home should be visited at frequent intervals by the inspector of nuisances and their isolation supervised. The wilful exposure of infected articles or persons should be made the subject of legal proceedings.
- (c.) Infected premises and articles should be efficiently disinfected, and the inadequate arrangements mentioned on page 5 should be discontinued.
- (d.) The district council should arrange to supply diphtheria antitoxin for the use of the poorer inhabitants.

2. *Water supply*.—The district council should take steps, in conjunction with other local authorities in Holderness, to secure a better water supply for their district.

3. *Sewerage and sewage disposal*.—The district council should provide means for cleansing the sewers at Patrington, and the sewage disposal works at that place should be more closely supervised. The council should cause a scheme to be prepared for improving the sewerage system of Keyingham, and sewage should be conducted to a point sufficiently far removed from dwellings to obviate nuisance. Methods of drainage and sewage disposal in other villages, such as Burstwick and Ottringham, should be improved.

4. More effective control should be exercised over *registered premises and trades*, especially over cowsheds and the common lodging house, and also over the slaughter houses.

5. More attention should be paid to *insanitary conditions in the vicinity of dwellings*, such as unpaved yards, defective gullies and drains, and accumulations of refuse.

6. *The work of the inspector of nuisances* should be carried out under the direct supervision of the medical officer of health.

7. The district council should appoint a *sanitary committee*.

8. *The minutes of council meetings* should be properly taken and kept.

In conclusion, I have much pleasure in acknowledging the assistance I received during my visit to the district from the members and officers of the council, and also from Dr. Mitchell Wilson, medical officer of health to the East Riding County Council.

J. SPENCER LOW.

