

Dr. T. C. Langdon's report to the local government board of the inspection of the sanitary condition of the rural sanitary district of Wells.

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Mr. T. C. Langdon's Report to the Local Government Board of the Inspection of the Sanitary Condition of the Rural Sanitary District of Wells.

EDWARD C. SEATON, M.D.,
Medical Department,
September 19, 1879.

CORRESPONDENCE extending over a considerable period having taken place between the Local Government Board and the Wells Rural Sanitary Authority on the sanitary state of the above-named district, especially as to the drainage and water-supply of some parts of it, a complete inquiry on the subject by a Medical Inspector from the Board was determined on, and I was instructed to make the inspection.

The Rural Sanitary District of Wells comprises an area of 54,616 acres, District. with a population at the last census of 11,972. It surrounds three Urban Sanitary Districts, viz., Wells, Street, and Glastonbury, containing together a population of 10,343. The extent of the district from north to south is about 16, and from east to west about 15, miles. This area comprises 14 entire parishes, besides a large part of the parish of St. Cuthbert, the second largest parish in Somersetshire (the remainder of which is included in the Wells Urban District) and a small portion of the parish of Glastonbury (the rest of which forms the Glastonbury Urban District). The names of these parishes, with their respective populations, are as follows:—

| | Pop. | | Pop. |
|---------------------------|-------|--------------------------|-------|
| Chewton Mendip - - - | 836 | North Wootton - - - | 289 |
| St. Cuthbert, part of - - | 3,175 | Baltonsborough - - - | 743 |
| Green Ore - - - | 0 | West Bradley - - - | 176 |
| Dinder - - - | 187 | West Pennard - - - | 794 |
| Priddy - - - | 249 | Butleigh - - - | 954 |
| Rodney Stoke - - - | 360 | Glastonbury, part of - - | 134 |
| Westbury - - - | 617 | Meare - - - | 1,639 |
| Wookey - - - | 1,139 | Walton - - - | 680 |

The surface of the country is very undulating, extending from the Mendip Hills in the north, to the low-lying districts around Glastonbury and Meare in the south-west. The drainage of the district south of the Mendips is from north and east to the south-west, but the portion to the north of the hills named drains to the north-west. Topography,
Soil, &c.

The soil, mostly fertile, varies considerably, but it consists chiefly of Carboniferous Limestone and Lias Clay and Limestone in the Mendips, Red Marl at Wookey, Marlstone at Pennard Hill, Lower Lias Clay in the adjoining parishes of West Bradley, Baltonsboro' and Butleigh, and Peat in the neighbourhood of Meare.

The Sanitary Authority is the Wells Board of Guardians, which meets once a fortnight, when sanitary and educational matter share the time which remains "after the usual business." This, the Chairman told me, often lasts for several hours, and as the Annual Report for 1878 of the Medical Officer of Health, dated February 8th last, had not been read when I left Wells on May 9th, it would seem that but insufficient time can remain for such other subjects. The Medical Officer of Health, who resides in Wells, is also Medical Officer of Health for the Urban districts of Wells, Glastonbury, and Street; he has retired from private practice. There is one Inspector of Nuisances for the Rural District, who receives a salary of 100*l.* per annum; he resides at Glastonbury, and is expected to go on foot (for with such a stipend he cannot keep a horse) over this extensive area. These officers are not required by the Sanitary Authority to attend their meetings, and have no opportunity of talking over with them any of the subjects brought under their consideration. Local
Authority.

Industries.

Dairy farming is the principal occupation of the population. There are lead mines in the Mendips not at present worked, and some extensive paper mills at Wookey Hole, while at Meare many of the people earn their livelihood by turf-cutting.

I visited the different parishes of the district and found the following conditions:—

GREEN ORE; CHEWTON MENDIP (Pop. 836) ; and PRIDDY (Pop. 249).

These three parishes are on the Mendip Hills; the first had at the date of my visit no inhabitant. Chewton Mendip is composed of a village and some scattered houses. For the most part the cottages seem well cared for. In the village the water-supply from shallow wells is abundant, but in some instances these wells require greater protection to avoid fouling by surface drainage. The privy accommodation is insufficient; in some cases excrement is deposited in pits, while in others it is conveyed by pipes into the stream which passes through the village.

Priddy is a most dismal looking village. Many of the houses are quite unfit to live in, some even in ruins; most of them are detached. They stand in good gardens, surrounding an open green, or extending up the hills on either side. An abundant supply of water is brought into the village from a spring, by means of pipes, but many of the houses are a long way from the point to which it is so brought; a few cottages derive their supply from other springs. I visited 22 houses; of these six had no closet, where closets did exist ten were full, one in a fallen-down state, and only four in good condition. Pigs are kept very near to houses, with heaps of manure close to doors and windows.

ST. CUTHBERT (Pop. 3,175).

A large part of this parish, including a number of hamlets surrounding the city of Wells, is in the rural district, viz.:

East and West Horrington, two hamlets on the south slope of the Mendips contain together about 60 houses. Many of the cottages are old and out of repair, especially those occupied by their owners. The water-supply is reputed to be good and abundant. The privy accommodation is insufficient. I found an instance where only one privy was provided for seven cottages.

Dulcote is a pretty hamlet to the S.E. of Wells; it is well cared for with a good and abundant supply of water from the hill. The mode of disposal of excrement is by privies with large pits.

Polsham and Coxley, two hamlets to the S.W. of Wells. Water-supply reputed good from shallow wells. Privy system as in the rest of District. Other small collections of houses which require no special comment.

DINDER (Pop. 187).

A small village at the foot of the Mendips, with houses in good repair; there is plenty of water from wells said to be good. A stream which passes through the village is sometimes offensive; it is much polluted by the refuse from a large brewery and from silk factories, also by sewage from Shepton Mallet.

RODNEY STOKE (Pop. 360) and WESTBURY (Pop. 617).

Two small villages situated at the foot of the Mendip Hills. The cottages are tolerably good. The water-supply is abundant from springs in the adjoining hills. A stream runs through the principal part of the village of Westbury receiving farmyard drainage. The shallow wells in both these villages are insufficiently protected against all sorts of pollution.

WOOKEY (Pop. 1,139).

Besides the village of Wookey there are in this parish four hamlets on the road from Wells to Highbridge named Worth, Yarley, Henton and Bladeney; through these passes the river Axe, which was formerly the source of water-

supply, but which has become so polluted by refuse from paper mills as to be quite useless for drinking purposes; complaints are made of the offensive odours given out from it, and all fish have disappeared from it.

Along this route I found 11 houses with no water-supply except from a shallow well of doubtful purity as it derives its supply from surface soakage; it is dry in summer; there were 46 more houses without water except at some distance. I am informed that plenty of good water could be obtained by sinking wells. Privies empty in many cases into ditches; they require more frequent cleansing and are also insufficient in number.

Wookey village contains about 45 houses supplied with water by shallow wells, some of which are polluted by bad surface drainage and proximity of privies; the latter are frequently full, and insufficient in number. A farmer in the village told me that he remembered the Axe as a good trout stream, now he cannot even give its water to his cattle; it once fouled his well. He said the river had been black and offensive for about 11 years; before that it was much less polluted.

NORTH WOOTTON (Pop. 289).

A small village on the banks of a tributary of the Brue. The water-supply is derived from springs, but requires more protection from surface pollution. Too much farm refuse is allowed to accumulate. Pigs are kept too near to houses and in a very filthy condition.

BALTONSBORO' (Pop. 743); WEST BRADLEY (Pop. 176); WEST PENNARD (Pop. 794).

These three adjoining parishes have a most unsatisfactory water-supply. This is derived from six different sources. 1st, from springs in the hills; 2nd, wells; 3rd, rain water stored in tanks and casks; 4th, a brook running from the hills; 5th, the river Brue; 6th, "pools" as they are locally called. Some houses have no supply except that contained in the neighbouring ditches. Only a few are supplied from the springs of good water which rise in the Marlstone of Pennard hill, and a few others are near enough to use water from the brook. The water in the wells sunk in the clay soil at the foot of the hill is in most cases complained of as being too hard for domestic use, sometimes also as having a disagreeable taste; one person described it as "metalliferous," and although there are a good many wells in these parishes they are but little used. There are only a few places where rain water is stored in properly constructed tanks, but it is common to find it carried from the roofs by pipes into the "pools."

At Baltonsboro', some of the houses are supplied with water by the Brue, a slowly running turbid stream, which receives impurities from privies and farm-yards. I observed a dipping place in the churchyard along one side of which the stream passes draining it, and at a short distance above it receives impurities such as I have named. By far the greater number of persons drink from "pools"; these are little ponds of stagnant water dug out in garden, yard, or orchard. These pools receive rain, surface drainage (sometimes from roads), and soakage from the adjoining soil. Their contents are always turbid after rain, some of them become dry in summer, some offensive. One I was told became "as green as a leek," another "of the colour of coffee." They contain dead leaves and other refuse, and many live creatures. I dipped out a glass of water from a pool at West Pennard which was yellow and stinking, and contained a large number of young newts. Some of these pools are used by the inhabitants in common with the ducks and cattle, and some are so near to privies and pigsties that they cannot fail to be most impure. It seems scarcely possible to exaggerate the danger of such a supply, but the Guardians of these parishes complain (in a memorial addressed to the Local Government Board dated September 1877) of such exaggeration by the Medical Officer of Health for having drawn the attention of the Sanitary Authority to this subject.

About 1875, the Sanitary Authority began to consider the best means of providing a pure supply of water for these parishes, and consulted Mr. Bailey-Denton on the subject. The source which he selected was the Washingstone

spring, which rises in the Marlstone, on the south side of Pennard hill, and which he proposed to convey in pipes with water-posts at intervals. This scheme has at length been abandoned, partly on the score of cost, and partly from the fear of opposition from those who claim a right in the water which flows from this source.

The Register of Deaths shows a marked improvement during the past three years in these parishes, for while in the ten years ending December 31st, 1875, 33 deaths were attributed to diarrhoea, fever, diphtheria angina maligna &c., scarlatina and erysipelas, with a few more to whooping cough and measles; during the last three years there have been eight deaths from whooping cough and measles, and none from the other diseases. There is however one unsatisfactory fact arrived at from these records, viz., that while the death-rate per 1,000 in the Rural District of Wells for the past three years has been 14, that for West Pennard has been 19, Baltonsboro' 17, and West Bradley 15, or for the three parishes together, 17, in other words three above the death-rate of the whole district.

BUTLEIGH (Pop. 954).

This is a well cared-for village. Water-supply from shallow wells is reputed to be good. A drain for house slops has been made through a part of this village by Ralph Neville Grenville, Esq., who has erected for some of his cottages a very well-constructed kind of earth and ash closet. See the Board's Report "On certain Means of preventing Excrement Nuisances in Towns and Villages" (page 20).

GLASTONBURY (Pop. 134).

A few houses adjoining Street belong to this parish and require no comment.

MEARE AND GODNEY (Pop. 1,639).

Meare is a scattered village. The majority of the houses are good, others are much out of repair. Privies mostly open into wet ditches which in some cases run alongside of the road, and often close to houses, and receive refuse from pig-sties and farmyards. Pigs and manure heaps are kept too near houses throughout the parish. Water-supply from shallow wells, some impure from soakage from privies and surface drains.

Godney is a hamlet in this parish containing between 40 and 50 houses, and close to the moorlands. Farms, pigsties, and privies drain into open ditches. The water-supply is from a tributary of the Brue, which besides the impurities which it receives at and near this hamlet from farmyards and house drainage, contains the sewage of the Wells Urban District and of Shepton Mallet, as well as refuse from factories and from a large brewery. The weeds on the bottom of this stream are covered with slime, and I am told that fish have disappeared from it. The peaty soil makes it impossible to sink wells at this spot. The owner of a flour mill below Wells has given notice that he intends to take proceedings to compel the Urban Authority to take their sewage out of the river, and I am informed that they have asked him to give them till the year 1882.

During the three years ending December 31st, 1878, the average mortality per 1,000 for this parish was only 15, but there were four deaths from "fever" in 1876, and there have been four cases during the present year, and I find that from January 1868 to December 1878 there were 40 deaths, as follows: scarlatina, 21; diarrhoea, 8; fever, 10; erysipelas, 1.

WALTON (Pop. 680).

Stands on the side of a hill, and with the exception of a few scattered houses forms one street. Water-supply from shallow wells, some complained of. Part of this village is imperfectly drained by a sewer put in by the Agent of the Marquis of Bath without any supervision by the Sanitary Authority. The refuse from the remainder including that from privies, farmyards, and house drainage in great part finds its way into open gutters, which pass either before or behind the houses, are very filthy, and sometimes close to doors and windows, and often not far from shallow wells. Too much refuse and

manure are allowed to accumulate near houses, and pigs are kept in a dirty condition.

The following is a statement of the death-rate per 1,000 living (mean of 3 years) for each of the parishes of the district, calculated from the tables prepared for the Sanitary Authority by the Medical Officer of Health. The inmates of the County Asylum and the deaths among the inmates not belonging to the district being deducted. The deaths in the County Asylum and in the Workhouse of persons belonging to the district have been added to those of the parishes to which they belonged:

| Parish. | Death-Rate per 1,000 living, mean of 3 years. | Parish. | Death-Rate per 1,000 living, mean of 3 years. |
|-----------------------------|---|----------------------------|---|
| Chewton Mendip - - - | 13 | North Wootton - - - | 19 |
| St. Cuthbert, Part of - - - | 12 | Baltonsboro' - - - | 17 |
| Green Ore - - - | 0 | West Bradley - - - | 15 |
| Dinder - - - | 24 | West Pennard - - - | 19 |
| Priddy - - - | 16 | Butleigh - - - | 11 |
| Rodney Stoke - - - | 23 | Glastonbury, Part of - - - | 7 |
| Westbury - - - | 20 | Meare - - - | 15 |
| Wookey - - - | 21 | Walton - - - | 12 |

Death-rate for the whole district calculated as above—14 per 1,000 living.

As the result of my inspection, I find that the water-supply is in some portions of the district much contaminated, and in others so circumstanced that it is liable to pollution by means of excremental and surface soakage. Although there is in many places an abundance of water, yet it is often not available for the purposes of the population, either because it is allowed to run to waste, or because it is not brought within reasonable reach of their houses. Where springs are used they are not sufficiently protected at their source, and along their channels are not subject to the supervision necessary to prevent their becoming fouled by means of surface drainage. Very generally the means of sewerage and drainage are defective. The privies generally are faulty in point of construction and the cause of nuisance owing to the large accumulations of human excreta and to their contents often passing into open ditches in the vicinity of dwellings and public highways.

Whilst the annual average mortality for the whole Rural District during the past three years has been 14 per 1,000 living; yet it was as high as 24 per 1,000 in Dinder; and 23 and 20 in Rodney Stoke and Westbury respectively.

The past history of the district shows that in connexion with the conditions detailed in this Report, preventable diseases have been widely prevalent, and although they have lately been much less in amount, yet so long as the conditions referred to remain in existence, there will always be danger of recurring outbreaks of such diseases.

The Sanitary Authority is without any means for the proper isolation of persons suffering from infectious diseases.

Hitherto the action of the Sanitary Authority has been very imperfect. Certain measures have been adopted to prevent overcrowding, and some of the more obvious nuisances have been dealt with, but the importance of the adoption of measures, such as the provision of efficient means of water-supply and drainage, which would lead to a permanent improvement in the sanitary condition of the district, has evidently not been sufficiently appreciated. The marked improvement which has followed the action of the Sanitary Authority in the neighbouring district of Glastonbury affords an obvious example of what may be effected by the adoption of such sanitary measures as are here referred to.

THOS. C. LANGDON.

Recommendations.

1. It is requisite that steps should be taken by the Sanitary Authority to provide the dwellings throughout their district with wholesome water. Where it is found practicable the Sanitary Authority should in the larger villages and hamlets themselves make this provision, and such water-supplies should remain subject to their control and supervision.
2. It is requisite also that measures should be adopted to do away with the various nuisances attendant on defective means of drainage.
3. Sufficient closet accommodation should be provided throughout the district. As opportunity offers, the existing privies should be so modified in point of construction that they shall no longer be capable of causing nuisance, and of containing for lengthened periods large quantities of excrement in the neighbourhood of dwellings. Generally in this respect the recommendations of the Board's Report "On certain Means of preventing Excrement Nuisances in Towns and Villages" should be followed, and particularly the system of excrement disposal for cottages introduced by Mr. Neville Grenville at Butleigh should receive consideration. The advisability of framing byelaws with a view to the proper construction and management of closets should also receive the attention of the Authority.
4. With a view of preventing the spread of infectious diseases in their district, the Authority should provide some means for isolating persons sick of such diseases, and for disinfecting articles of clothing and bedding.
5. It would seem highly essential to a more efficient sanitary administration of this district that more time and attention should be devoted to the sanitary business than can possibly be done at the end of the ordinary meetings of the guardians. Under a different arrangement the recommendations of the Medical Officer of Health would doubtless receive more consideration than they hitherto have done, and opportunity would be afforded for conferring at regular intervals with the Sanitary Officers as to conditions affecting health in the district.

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