Dr. R.J. Reece's report to the Local Government Board on the sanitary circumstances and administration of the Williton Rural District, with special reference to the appointment of medical officer of health.

FOR OFFICIAL USE

REPORTS

TO THE

LOCAL GOVERNMENT BOARD

ON

PUBLIC HEALTH AND MEDICAL SUBJECTS.

(NEW SERIES No. 36.)

Dr. R. J. Reece's Report to the Local Government Board on the Sanitary Circumstances and Administration of the Williton Rural District, with Special Reference to the Appointment of Medical Officer of Health.

LONDON:
PRINTED FOR HIS MAJESTY'S STATIONERY OFFICE,
BY DARLING & SON, LTD., 34–40, BACON STREET, E.

And to be purchased, either directly or through any Bookseller, from
WYMAN AND SONS, LTD., FETTER LANE, E.C.; or
OLIVER & BOYD, TWEEDDALE COURT, EDINBURGH; or
E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN.

1910.

Price Fourpence.

Dr. R. J. Reece's Report to the Local Government Board on the Sanitary Circumstances and Administration of the Williton Rural District, with Special Reference to the Appointment of Medical Officer of Health.

ARTHUR NEWSHOLME,
Medical Officer,
July 30th, 1910.

For purposes of public health administration the Williton Rural District is divided into an eastern and a western division, to each of which a medical officer of health is appointed. For many years past the Local Government Board, when a vacancy has occurred in either of these two appointments, have informed the district council that they regard the appointment of more than one medical officer of health in a rural district as undesirable in the interests of sanitary administration; that experience has shown that divided counsel from such officers is a real bar to progress in sanitary matters; that the attempt to obtain consistency in sanitary administration with the aid of more than one responsible adviser in one department has almost invariably proved a failure; and that in relation to the duties of the medical officer of health, the attendance at the meetings of the district council for affording assistance and advice, the supervision of the work of the inspector of nuisances, etc., the advantages of one appointment as compared with several are obvious. To communications of this sort the rural council has replied referring to the physical circumstances of its district, and stating that the policy of the council is to select a medical practitioner whose private practice extends over the greater part of the western division of the district as the medical officer of health for that division, and to adopt a similar course with reference to the eastern division; that if one medical practitioner were appointed medical officer of health for both divisions he would be going over only a comparatively small portion of the ground in the course of his private practice, and he would have to make many long special journeys; and that the appointment of one medical officer of health for the whole district would result in considerably increased expense, and a decrease in efficiency. The council further states that anyone acquainted with the local topography would not suggest the appointment of one medical officer of health for the whole district.

When in December, 1909, the clerk of the council informed the Board that the medical officer of health for the western division of the district had resigned, and the council proposed to appoint a medical officer of health for this division and maintained the opinion it had previously expressed to the Board concerning the appointment of two medical officers of health for the whole district,

(16603—21.) Wt. 6685—579. 500. 8/10. D & S.

the Board decided to instruct one of their medical inspectors to inspect the rural district and to report to them on its circumstances and sanitary administration.

The Williton Rural District is situated at the north-western part of the County of Somerset. Its western boundary touches the County of Devonshire; its northern boundary stretches along some 30 miles of coast bordering the Bristol Channel; while in no part is the district more than nine miles wide, measured from north to south. It contains no towns of any importance. Two small urban districts, Minehead, area 693 acres, population (1901) 2,511, and Watchet, area 700 acres, population (1901) 1,880, have been formed in the Williton Union, the remainder of which constitutes the Rural District of Williton. The district, though comparatively level towards the sea, rises abruptly in places. Its western portion embraces part of Exmoor, with its eastern extension the Brendon Hills; towards the eastern part of the district the Quantock Hills jut into it from the south.

Geology.—The geological backbone of the district is formed by two masses of Devonian strata—mixed sandstone and slate with occasional bands of limestone. The western mass of these strata forms the Brendon Hills and Exmoor, rising to a height of 1,700 feet at Dunkerry Beacon; a spur from the Brendon Hills runs northwards to the Bristol Channel forming Grabbist Hill and North Hill. The eastern mass forms the Quantock Hills which rise to a height of 1,260 feet at Will's Neck just outside the rural district. The lower ground around the base of the hills formed of the Devonian strata is composed of New Red Sandstone, which in places takes the form of a conglomerate. Near the sea coast the New Red Sandstone is overlaid by the Red Marl, which contains bands of alabaster (gypsum), above which is the Lower Lias. Alluvium and gravel are found in the valleys and in the low lying ground by the sea.

Railways.—The district has only one railway, the West Somerset branch of the Great Western Railway. This line leaves the main line at Taunton, and enters the district from the south, runs in a N.N.W. direction to Williton, and Watchet; it makes a curve round to Washford in the parish of Old Cleeve, and then runs in a N.W. direction to the terminus at Minehead. In the extreme eastern, and the extreme western portions of the district there is no railway.

Roads.—The clerk informs me that in the eastern division there are some 38 miles of main roads, and 141 miles of district roads, and in the western division that there are 32 miles of main roads and 152 miles of district roads.

Industries.—The district is an agricultural one; but from the month of June until the cold weather sets in, every available house is occupied by visitors who come for staghunting and holiday pursuits.

There is an old established tannery at Porlock.

Statistics.—The following table shows the name of each parish in the two administrative divisions of the district, its acreage, population, and number of inhabited houses at the Census of 1901;

and, from information supplied by the clerk of the rural district council, the rateable and assessable value of each parish at Lady Day 1909.

Names of Parishes.	Area in Acres.	Population Census 1901.	Inhabited Houses 1901.	Rateable Value Lady Day 1909.	Assessable Value for Poor Rate.
Eastern Division.					
				£	£
Bicknoller	1,912	254	67	2,509	1,788
Brompton Ralph ...	2,736	320	70	2,905	1,847
Clatworthy	2,964	146	30	2,182	1,376
Crowcombe	3,271	374	83	3,648	2,652
Dodington	1,335	82	17	952	649
East Quantockshead	2,338	149	42	1,345	955
Elworthy	1,768	110	25	1,607	1,047
Holford	1,083	166	41	1,258	975
Kilton with Lilstock	1,689	93	18	1,268	876
Kilve...	1,775	149	41	1,373	1,032
Monksilver	783	143	41	1,116	799
Nettlecombe ...	3,073	260	61	3,714	2,513
Sampford Brett ...	1,151	178	40	2,079	1,421
Stogumber	5,349	835	195	6,186	4,265
Stogursey	5,961	1,034	252	7,598	5,183
Stringston	859	97	20	863	560
West Quantockshead	1,467	195	39	1,708	1,333
Williton	3,008	1,371	282	6,937	5,248
Total ...	42,522	5,956	1,364	49,248	34,519
Western Division.					
				£	£
Carhampton ...	2,788	371	86	4,421	3,029
Culbone	1,337	34	7	332	251
Cutcombe	7,143	446	95	4,070	2,693
Dunster	2,888	1,182	265	6,807	5,500
Luccombe	3,870	391	100	3,649	2,825
Luxborough ...	3,728	314	63	2,151	1,538
Minehead Without...	3,332	269	56	2,402	1,757
Oare	4,017	77	14	705	483
Old Cleeve	5,203	1,348	317	8,240	6,070
Porlock	4,665	655	155	4,356	3,727
Selworthy	2,959	467	111	3,409	2,467
Stoke Pero	3,508	38	9	557	390
Timberscombe ...	2,858	300	80	3,208	2,163
Treborough	1,829	120	25	1,139	798
Withycombe ...	3,565	348	73	3,253	2,132
Wootton Courtney ...	3,299	266	63	2,304	1,610
Total ...	56,989	6,626	1,519	51,003	37,433
Total Both Divisions	99,511	12,582	2,883	100,251	71,952

From this table it will be seen that the acreage, population and rateable value of the Eastern and Western divisions of the district are not very dissimilar; that out of the 34 parishes, 15 have

populations of less than 200 persons, and only six have populations exceeding 500 persons. In the parishes of Old Cleeve, population 1,348, and Stogursey, population 1,034, the inhabitants are not grouped in a single village but in several small hamlets. The most thickly populated portion of the parish of Luccombe, known as Doverhay, adjoins the most populous portion of the parish of Porlock, and these two portions together form one village. Only eight parishes have 100 or more inhabited houses (census 1901).

During the eight year period 1902-1909 the number of births was 1,928, and the number of deaths from all causes was 1,424. Of these deaths, 126 were among children under one year of age. From these figures it appears that, during the period in question calculated on the population at the 1901 census, the mean annual birth-rate was 19·154, the mean annual death-rate from all causes was 14·1, per 1,000 of the population; while the infantile death-rate was 65·4 per 1,000 births.

Sanitary Circumstances.

Water Supply.—There is abundant water to be obtained from springs rising on the slopes of Exmoor, the Brendon Hills and the Quantock Hills. Many of the springs yield a large quantity of water at all seasons of the year, and are so situated as to be secure from risk of serious pollution. It is only in the eastern side of the district that plentiful supplies of wholesome water are not available in close proximity to villages. With the exception of the villages of Stogursey, Sampford Brett and Monksilver, there is no considerable collection of houses without a supply of pipe-borne water. Some of these supplies have been provided by the council, but the greater part have been provided by private land owners. Where such supplies are not available the inhabitants depend for water on local wells, springs and streams.

The Eastern Division.—There are piped water supplies provided by private enterprise in the following parishes :—Crowcombe, East Quantockshead, Holford, Kilton with Lilstock (but the supply does not extend to Lilstock), Kilve (in which is included the hamlet of Putsham). The rural district council have provided a public water supply to the parishes of Williton and Stogumber. Public water supplies are required for the parishes of Stogursey and Sampford Brett, where the present supply is derived from wells in the villages which from their position appear to be liable to risk of pollution. A water supply is also required for the village of Monksilver.

The Western Division.—The following parishes have piped water supplies provided by private enterprise : —Carhampton, Cutcombe, Dunster, parts of Luccombe, Luxborough, Old Cleeve, Selworthy and Timberscombe, Treborough and Withycombe. The rural district council have carried out water schemes for the supply at Porlock and its suburb of Doverhay in the Luccombe parish, to part of Luccombe village, and to Wootton Courtney. The parish of Minehead Without is partly supplied from the mains of the Minehead Urban District Council, and partly by private enterprise.

In the remaining parishes of the district there are but few habitations, and these are scattered over the country side as single

houses or in small groups. Occasionally water from a spring is piped to small collections of houses, but there are no extensive water schemes.

Crowcombe is supplied by springs which, rising in a wood, are piped to a reservoir on the hill side. The reservoir is built of brick and cemented inside. From the reservoir a 3-inch main is carried to the village by gravitation. The water is abundant in quantity and the source appears to be free from pollution.

East Quantockshead is supplied from a source similar to that described above.

Dodington.—A group of houses is sufficiently supplied from a spring, the water of which is pumped by a hydraulic ram to a cistern. This is a private supply.

Holford.—Collecting pipes are laid by the side of a stream in a combe—Hodder's Combe—and the water is piped to a covered brick reservoir situated half a mile lower down the combe. The ground in the immediate neighbourhood of the reservoir is drained by agricultural pipes to the reservoir. From the reservoir the water flows by gravitation in a 2-inch iron pipe to the village. This supply was provided by a private syndicate in 1893. In 1898 the permission of the Board was sought by the council for a loan to purchase this supply; an extension of the water mains to a small collection of houses, known as "Woodlands" was then contemplated. The Board, having regard to the small size of the mains, and to the fact that the mains were laid only 2 feet from the surface of the ground, declined to entertain the application. Water flows down this combe in a small stream, in a gravel bed which apparently contains a considerable amount of water. Situated higher up the combe than the position of the collecting pipes of the water service small meadows abut on the stream. At the time of my visit certain of these meadows were heavily manured. There is room for considerable improvement in this supply; and risk of pollution should be obviated.

Kilton.—Springs rising in the Quantock Hills are intercepted underground and the water taken to a collecting tank, whence it passes to a reservoir. From the reservoir the water flows by gravitation in a 3-inch iron main to supply the village of Putsham, about a mile and a half from the source. The main is continued on to Kilve and thence to Kilton, both villages being supplied. The water appears to be sufficient in quantity, and the source is free from pollution.

Williton.—After local inquiry in 1901 by one of the Board's Engineering Inspectors sanction to borrow money for the provision of a public water supply was granted to the rural district council. The waters of a spring which rises in Rowden Farm in the parish of Stogumber are collected in a tank and piped to a service reservoir, whence it is distributed by gravitation. The spring head is situated at the northern end of an arable field which slopes towards it from the south. At the local inquiry it was not thought that the water was in danger of contamination from this field, as a small excavation was stated to disclose the Devonian Shillet as the stratum from which the spring flows.

Stogumber.—The water supply for this village was provided by the rural district council by money borrowed on loan after local inquiry held by the Board in 1897. The water of a spring which rises on the hill-side is intercepted by a brick tank, and then led to a collecting tank by a 4-inch cast iron pipe. From this tank the water passes by a similar main to a service reservoir, whence it is distributed to the village by gravitation. The reservoir is built of brick and it is covered over, and has a capacity of about 18,000 gallons. This supply of water is ample, and it appears to be free from pollution.

Cutcombe.—A well, said to be 60 feet deep, has been sunk in pasture land on a hill above the village. The water is raised by a windmill to two reservoirs, each said to hold 30,000 gallons. They are built of brick and are covered over with galvanized iron roofs. The water is said to be sufficient in quantity and of good quality.

Dunster.—The water of a spring is collected in a small covered receiving tank in a combe about two miles to the S.W. of the village, whence it flows by gravitation through a 4-inch iron main to Dunster. The overflow from the tank is piped to the water mains of Minehead Urban District. This district obtains its water supply from the same locality as does Dunster, and for some distance the water mains of the two places are laid side by side. The supply of water is ample, and appears to be free from pollution.

The village of *Alcombe*, in Dunster parish, derives its supply from springs situated in a wood to the S.W. of the village. The water is piped to a small brick reservoir situated to the western side of the village, whence it flows by gravitation to supply the village. There appears to be no source of pollution in the neighbourhood of the springs. But within a few feet of the reservoir is a pigsty on a higher level than the floor of the reservoir; this should be removed and the ground surface immediately around the reservoir, which at the time of my visit was littered with rubbish, should be covered with impermeable material.

There is a supplemental supply to the village of Alcombe, derived from springs situated near those already described. This supply is the property of a landowner who, by arrangement with the owner of Dunster-Alcombe estate, allows the overflow from his supply to pass by a pipe to the water main from which Alcombe is supplied. Also by arrangement with the owner of the Dunster-Alcombe estate, the Minehead Urban District Council are to give 20,000 gallons of water per day to the Alcombe supply if required so to do.

Luccombe.—There are two supplies to the village of Luccombe proper. Springs which rise on a hillside above the village are collected in two reservoirs, whence the water flows by gravitation to the houses. These springs are situated one above the other on the hill side; the upper supply belongs to the rural district council, the lower to a local landowner. The supply is ample and appears to be free from pollution.

Luxborough.—The parts of this parish known as *Church Town* and *Kingsbridge* have each a small private supply of water. In each case pipes have been laid to springs on the hillside and the water collected in small covered tanks, whence it is distributed to the village by gravitation. On higher ground than the gathering area of these supplies the ground is cultivated.

A portion of the parish of *Minehead Without* is supplied from the Alcombe water supply mentioned above, and from the Minehead Urban District Council's mains.

Porlock and *Doverhay*, the latter being in the parish of Luccombe but really forming part of the village of Porlock, are provided with a public water supply. This supply is derived from two sources given to the council by private landowners. The water is derived from springs rising in combes within a short distance of the village. The mains, etc., were provided by loan after inquiry by the Board, the village of Porlock being supplied in 1876, and West Porlock and Porlock Weir in 1877. The source appears to be free from obvious contamination. The water is collected in small reservoirs, whence it flows to the village by gravitation. In the summer months the supply to Porlock now runs short at certain periods of the day. This may be accounted for either by the springs not yielding a sufficient quantity to meet the hourly demand, the storage capacity being very limited; or on account of the small size of the mains, 2½ inches in diameter. Certain lengths of the main have recently been taken up, and found to be much corroded, and the internal diameter materially decreased by rust.

The water supply to this village needs improvement. The mains should be replaced by pipes of larger diameter, not only in order to allow of sufficient water passing to the village at the hours of greatest consumption, but also to permit of suitable fire hydrants being provided. The yield of the springs in the dry season should be carefully estimated, and if the amount of water available is found to be less than the quantity required, then either additional storage should be provided, or the supply should be supplemented from other springs, which appear to be available in the vicinity.

Old Cleeve village, and *Blue Anchor* and *Bilbrook*, have a supply provided by the landowner, derived from springs at Rodhuish, some miles distant, and situated in the parish of Withycombe. The water of the springs rises in a covered brick reservoir, which was built over them some seven years ago. It has a capacity of about 6,000 gallons. The supply is distributed by gravitation and is ample in quantity. Within a few yards of this reservoir, and on higher ground, is a farmhouse and farmyard. The farmyard is drained to a point beyond the reservoir; but at the time of my visit there was a cesspit privy and an undrained pigsty at this farm. I have since learnt that the privy has been converted to a pail closet. Beyond and above this farmyard there is another farm, with cowsheds draining to a pit, into which the water-closet of the farmhouse also discharges. This latter farm is not owned by the landowner who has provided the water supply.

The village of *Rodhuish* cannot be supplied by gravitation from this source, and a local landowner has provided a supply of water, which flows to the village by gravitation, and which is derived from springs which are intercepted in pipes. These pipes are driven into a bank from the roadside, and pass under an arable field, about 8 feet from the surface. There is abundance of water, but the surroundings of this supply and of that described above are such that they must be regarded with suspicion.

The hamlet of *Washford* is partly supplied from the water mains of the Watchet Urban District Council.

Selworthy.—In this parish the hamlets of *Allerford* and *Bossington* have been provided with a water supply by the local landowner. The water is collected in a small tank on a hillside, whence it flows by gravitation to the houses. There appears to be no source of pollution, and the quantity is said to be sufficient.

Timberscombe.—The village has two sources of supply. One supply is derived from springs on the hillside to the north-east of the village; the water passes to a collecting tank and flows to the village by gravitation. On higher ground than the outcrop of the water there is arable land. This supply was installed by a local landowner. The other supply is obtained by collecting water in a small covered tank. This tank is placed on the bank of a small stream, but it is said to be supplied by springs rising on higher land. Only the houses in the lower part of the village can be supplied by gravitation from this second source. There is divided opinion as to the question on whom the responsibility rests with regard to keeping this service in proper condition, and apparently the parish council claim a right to administer the supply. The result is not satisfactory. There are certain standpipes in the village, from which the taps have been wrenched off, and the water flows to waste. The supply of water is said to run short in the summer months. This supply requires the attention of the rural district council.

Treborough.—The water from a spring is impounded in a field, and collected in a small tank, whence it is piped to the Rectory. A supply is afforded to the inhabitants of the village from a tap connected with the tank.

The water is abundant in quantity; but the spring rises in a field, which is on the same level as an adjacent undrained farmyard.

The village proper only consists of the Rectory and a few small houses, and a school.

Withycombe and Carhampton.—This supply is provided by the landowner. The water of certain springs is impounded in a valley about half a mile to the south of the village of Withycombe, and carried by pipes down to a small brick reservoir at the village. The village is supplied by gravitation from this reservoir. The pipes, 2½ inches in diameter, are continued for two miles, supplying a few farms on their course, to a covered brick reservoir, capacity about 11,000 gallons, from which the village of Carhampton is supplied by gravitation. This supply is ample in quantity.

Wootton Courtney has a supply provided by loan after local inquiry held by the Board in 1903. The water of a spring which rises on the hillside above the inhabited area is impounded, and passes to the village by gravitation. The water of the spring was at first impounded in a reservoir; but this reservoir became undermined by the water, and the spring

reappeared below the level of the reservoir. Attempts have been made to bring the water back to the reservoir, but with little success. A small tank has been placed below the level of the reservoir to collect the water. The supply is sufficient in quantity notwithstanding the waste of water caused by the conditions obtaining at the reservoir.

Sewerage, Drainage and Sewage disposal.—As with the water supplies, so with the sewering of the villages, much work has been done by private landowners. It would seem however that in several instances the schemes originated and partly carried out by landowners, have had to be completed by the district council. There are certain systems of sewerage in the district which require sewage disposal works.

The council has adopted the principle of laying short sections of sewers at different times, with a view to finally completing a system of sewers for each of the more populous portions of their district. These short sections of sewers are paid for as they are laid down.

Eastern Division.

Bicknoller is being sewered in piecemeal fashion by the rural district council. The sewage is received in a small settling tank 4 feet 6 inches square and 5 feet deep; divided into two by a partition. The overflow from the tank passes to a ditch to find its way to a water course.

Kilve.—The hamlet of Putsham has a main sewer, provided by the rural district council, which discharges to a stream.

Williton.—This village has been partly sewered; the work has been done in sections. The sewage is received in a settling tank the overflow from which passes to a ditch, or can be partly disposed of by broad irrigation on pasture land.

Sampford Brett is partly sewered in its higher part, and the pipe sewer of this part of the village is connected with the old road surface drain which discharges to a stream.

Stogumber is partly sewered. There are three main sewers, two discharge to a watercourse which passes through the village, and the third on to a pasture field. There are no sewage disposal works.

Stogursey is partly sewered, and the sewer discharges to a watercourse.

Western Division.

Carhampton.—The greater part of this village has been provided with sewers by private enterprise; the system however needs extension to the westward. There are no sewage disposal works, and the crude sewage is discharged to a watercourse, which in the summer months, except for the sewage, would be almost dry. Here the sewage collects in a foul pond.

Cutcombe.—The village of this name has only the old stone road drain. The hamlet of Wheddon Cross is sewered, and practically every house has been connected with the sewerage system. The sewage is discharged to a settling tank 6 feet by 5 feet by 5 feet; divided into three parts by partitions. The overflow from this tank passes along trenches cut in the hill side on pasture land.

Dunster.—The village has been sewered by the local landowner. The sewage is received in a covered settling tank the overflow from which passes through a coke breeze filter bed, 12 feet by 15 feet by 4 feet 6 inches, to discharge to a stream. At the time of my visit the sewage was passing direct to the stream; the filter bed, which had been in use for 10 years, had silted up; and the filtering material was being replaced by fresh coke breeze. The drains of certain cottages, which from their position on low lying land cannot be connected with the main sewerage system, are connected with the storm overflow pipe from the disposal works, which discharges direct to the stream.

At Alcombe, a pipe sewer has been laid by a private landowner to sewer his property in the higher part of the village, and this pipe sewer joins to the old road drain ; this in turn is connected with a system of pipe sewers which has been put in by the other landowner of the village. The sewage is discharged to settling tanks, whence it passes through coke breeze filters, the effluent from which is distributed over meadow land by broad irrigation.

Porlock and Doverhay have a sewerage system, the cost of which was provided for by loan, sanction to which was granted in 1899 and 1900 after local inquiry by the Board.

The sewage is discharged to the sea.

Luccombe.—A landowner has connected drains of certain houses on his property to a sewer which discharges to a tank, the overflow from which is irrigated over meadow land.

Luxborough.—The part of the parish known as Church Town has a sewer which discharges to a cesspool ; and Kingsbridge has a sewer which discharges to a small tank, whence the effluent passes to a stream.

Old Cleeve.—The village has been sewered by the local landowner, and most of the house drains are connected to the sewerage system. The sewage is discharged to a small grit chamber, whence it passes over slate contact beds 12 feet by 12 feet by 3 feet deep. The effluent passes to a ditch and finds its way across a field.

Washford has been partially sewered by the district council, and the sewage is discharged in a crude state to a stream.

Timberscombe is sewered partly by pipe sewers and partly by an old stone road drain. The outfall is to a ditch, along which the sewage passes to ultimately find its way to a stream.

Wootton Courtney is partly sewered, and the work is being done by sections. The sewage is discharged to a watercourse.

Disposal and removal of excrement and refuse.—The principal method of excrement disposal in the district is by cesspit privy, and this type of closet is not confined to the purely country districts, but can be seen in large villages, as at Williton. In some of the villages and hamlets which have sewerage systems, though not every house is provided with a water closet, the number of water closets is not inconsiderable. There are many pail closets and the number is increasing in substitution for old cesspit privies.

The responsibility of emptying these receptacles devolves on the occupiers of the houses, and as a rule there is ample garden space available for the disposal of the contents. The conditions pertaining at certain villages are specially dealt with later in this report.

There is no public scavenging of refuse in any part of the district and the provision of suitable ashbins is not universally enforced. But as stated above the householders can generally dispose of the refuse on their land. Instances were observed where house refuse was allowed to accumulate near dwellings in objectionable fashion. The need of public scavenging is particularly noticeable at Porlock where certain houses have no gardens, and where the retention of house refuse in heaps in small back yards constitutes a nuisance which should not be tolerated.

Dwellings and their surroundings—The housing accommodation varies very considerably in the district, from old houses and cottages erected centuries ago, to modern dwellings built within the last few years. Of the old houses, the larger and the more substantially constructed have been kept in good repair, but many of the smaller houses and cottages are dilapidated and falling into ruin. The

general impression left after inspection of the district is that most of the houses are damp.

This dampness results from several causes; to begin with, the climate is humid. Houses have been built directly on the ground without any steps being taken to prevent the moisture from the soil rising into the interior of the dwellings. The walls of certain houses are constructed of materials such as mud or porous bricks liable to absorb moisture, and many houses were built at a time when damp-proof courses were but seldom used. Also many houses were observed which had no eavespouting. Even where eave-spouting and rain water down-spouts have been provided, arrangements do not always exist for carrying the rain water away from the houses; it is discharged on the ground surface, and soaks into the footings of the houses. There is a general absence of paving in the immediate vicinity of the houses.

Old houses are constantly falling into ruin; the medical officer of health of the eastern division told me that in parts of his district, probably as many houses had fallen into ruin, as there had been new houses built since the Census period of 1901.

In many of the villages owned by large landowners the houses have for the most part been kept in good repair, but in some places defective roofs are to be seen. A considerable number of the cottages have thatched roofs, and such cottages are not limited to the more rural parts of the district, but can be seen in most of the villages.

It is not an uncommon thing to see swill tubs for pigs' food placed within a few feet of dwellings, even where there is ample garden space available to allow of such tubs being kept at a considerable distance from the houses.

General cleanliness prevails inside the cottages.

Dairies and Cowsheds.—The dairy farming industry is practically limited to supplying the larger villages with milk and butter; comparatively little milk is exported from the district. Want of railway facilities may account for this. In this part of the country it is the custom to keep the cows in the open air for the greater part of the year, and only to bring them to the cowsheds in inclement weather or for milking purposes, and indeed, at many of the farms, the cows are milked in the fields. The condition of the cowsheds varies considerably. One large landowner has practically reconstructed the cowsheds on his estate, and has brought them up to model requirements. From this type of cowshed to dilapidated and undrained structures, every type of cowshed may be seen in the district. Still the greater number are substantially built, and frequently they are open on one side. Several were seen which were very dirty, and it is a common practice to pile up the manure against the wall of the cowshed. The water supply used for washing the milk utensils in certain instances needs the attention of the rural district council.

The dairies seen were mostly well kept and clean.

There are 41 dairies, cowsheds, and milk shops registered in the district.

Slaughter Houses.—There are ten slaughter-houses in the district. These vary in construction and in general condition. The defects

principally observed were defective floors, and drain openings inside the slaughter-house. Lairs for cattle awaiting slaughter sometimes form part of the actual slaughter-house.

The surroundings of certain of the slaughter-houses are objectionable; manure and refuse being heaped up near the slaughter-houses.

Common Lodging Houses.—There is no common lodging-house in the district.

Bakehouses.—There are 17 bakehouses in the district. Of those seen, the greater number were clean and in good condition; though in some the flooring was defective and dirty, and one or two are not well lighted.

Sanitary Administration.

The rural district council consists of 45 members, and the chairman, who is a co-opted member. It has a "works committee," but no sanitary committee.

Adoptive Acts.—The Infectious Diseases (Notification) Act.—The notification of measles was added to the list of notifiable diseases in January, 1910. The Infectious Diseases Prevention Act, 1890, and Part III. of the Public Health Acts Amendment Act, 1890, have been adopted by the rural district council, and came into operation in 1899.

Byelaws.—The following byelaws are in force in the district:—

Subject.	Apply to	Allowed by the Local Government Board.
New Buildings (Series IVA.)	The whole district... ...	9th March, 1908.
Drainage of existing Buildings.	The whole district... ...	21st January, 1908.
Nuisances	The whole district... ...	21st January, 1908.
Cleansing Footways, &c. ...	The parishes of Dunster, Luccombe, Porlock, Stogursey, and Williton.	2nd March, 1908.
Slaughter Houses	The parishes of Bicknoller, Carhampton, Crowcombe, Dunster, Luccombe, Luxborough, Minehead Without, Old Cleeve, Porlock, Stogumber, Stogursey, Timberscombe, Williton, and Wootton Courtney.	27th February, 1908

Regulations.—The following regulations apply to the whole of the district:—

Connections of drains with sewers	...	19th March, 1900.
Dairies, cowsheds and milkshops	...	1st February, 1908.

Isolation Hospital.—In 1902, the Somerset County Council made an Order under the Isolation Hospitals Acts, 1893 and 1901, on the petition of the Williton Rural District Council conjointly with the Minehead Urban District Council, constituting the western division, excepting the parish of Old Cleeve, of the Williton Rural District,

and the Minehead Urban District, a hospital district under the name of "The Minehead and Williton (West) Hospital District." After local inquiry, the Board in 1905 consented to the borrowing by the county council of the sum of £5,500, for the provision of an isolation hospital for infectious diseases, other than small-pox. This hospital is situated on the main road between Minehead and Porlock in the parish of Selworthy, and consists of an administration block, a laundry and disinfecting block, a mortuary, and two ward blocks, each containing three wards for two beds each.

The county council contributes one-third to the cost of this hospital.

Method of dealing with Infectious Disease.—In the eastern division of the district, the medical officer of health on receipt of the notification of a case of infectious disease, goes to the invaded home and investigates the circumstances associated with the case; he also informs the inspector of nuisances with regard to the case. The inspector of nuisances inspects the sanitary condition of the house, and if necessary tests the house drains, and takes samples of drinking water for analysis. The inspector sends a written notice to the schoolmaster or mistress if the patient has been attending school, or if any children from the invaded house are attending school. In future, the printed forms suggested by the county medical officer of health will be used. Printed forms giving warning against the exposure of persons suffering from infectious disease are left with the householder. No notices are left to be filled in by the medical attendant to be forwarded to the medical officer of health after the termination of the case, and when the house is ready for disinfection; but disinfection after scarlet fever is not undertaken until a medical certificate is received that the patient is free from infection.

On the termination of the case the inspector of nuisances disinfects the invaded house; formalin vapour is used for this purpose, though sometimes fumigation by burning sulphur is employed. The walls and ceilings of the rooms are lime-washed: few of the country cottages have papered walls, but generally where the walls are papered the paper is stripped off. The occupiers are directed to wash and to boil all clothes and articles which can be submitted to these processes.

A similar procedure is followed in the western division, except that inasmuch as this division (save only the Old Cleeve parish) is included in the isolation hospital scheme, the above procedure is varied; for the house is disinfected on the removal of the patient to the hospital, and the infected clothes, bedding, etc., are removed for disinfection to the steam disinfecting apparatus at the hospital.

Houses are disinfected after deaths from tuberculosis if the householders request that this be done.

Disinfectants are supplied by the rural district council in cases of infectious disease, and in the past the council has paid for the bacterial examination of "swabs," from suspected cases of diphtheria. The county council now offer to examine material for evidence of diphtheria and enteric fever for the rural district council.

Disinfecting Apparatus.—There is a Thresh's steam disinfecting apparatus at the isolation hospital, and this is available for the

disinfection of infected articles from all parts of the western division of the district, save the parish of Old Cleeve.

Sanitary Staff.—The sanitary staff consists of two medical officers of health; one doing duty in the eastern, and the other in the western division of the district; and one officer who holds the appointments of sanitary surveyor and inspector of nuisances for the whole district.

Medical Officers of Health.—The *Eastern Division.*—Mr. Charles Rowe Killick, M.B., Lond., L.S.A., Lond., was appointed medical officer of health in June, 1898. Salary £50, of which half is repaid from the county funds. Dr. Killick holds the appointment of medical officer to the Williton Union Workhouse, and is Certifying Factory Surgeon; he is in extensive general practice.

Dr. Killick attends the monthly meetings of the council when he has reason to believe that his presence may be required, or when he is requested to do so. He writes the annual report on his division of the district, and makes special reports when necessary, but he makes no monthly report to the council. He keeps the register of cases of notified infectious diseases. At one time he kept a journal, but there are no entries in this book since 1906. He makes a preliminary chemical examination of potable waters, before the samples are submitted by the council for examination by a public analyst. He does not direct the work of the inspector of nuisances in his division of the district, but this latter officer can always consult him, as he lives next door but one to him. There are no records to show whether of recent years Dr. Killick has carried out the duties of his office in their entirety.

Mr. S. G. Graham, who is the medical officer of health for the Watchet Urban District, and who is in partnership with Dr. Killick, was appointed assistant medical officer of health for the eastern division of the Williton Rural District in 1903.

The *Western Division.*—On the resignation in December, 1909, of the medical officer of health for this division, Mr. William Bain, M.B., B.S. Lond, M.R.C.S. Eng., L.R.C.P. Lond., was appointed by the council to the office from 1st January to 25th March, 1910. It was in consequence of this appointment by the council that the Board directed inspection of the district. Dr. Bain was appointed medical officer of health to the Minehead Urban District in August, 1909. Prior to this appointment he had had no experience in public health work.

Sanitary Surveyor and Inspector of Nuisances.—Mr. R. E. Jackman, who holds the certificate of the Sanitary Institute, was appointed in November, 1904. His salary as inspector of nuisances is £85 per annum, of which half is paid by the county council, and £60 per annum as sanitary surveyor. When first appointed he received £120 per annum for the two appointments. His remuneration is increased by annual increments until a maximum of £150 per annum is reached.

Mr. Jackman designs sewerage schemes and schemes for water supply; he has superintendence of water-mains, sewers, and sewage disposal works; he superintends any new sanitary work which is in progress in the district; he examines and reports on plans submitted to the council under the building byelaws; he tests the new and old

house drains; he disinfects infected houses; he superintends the removal of cases to the isolation hospital. He is engaged in a house-to-house survey of the district, he keeps a daily diary, a record of the house-to-house survey, a register of workshops, a register of dairies, cowsheds, and milkshops, a record of drains tested, a journal of nuisances dealt with, and a record of complaints received.

Mr. Jackman is not provided with an office, nor with clerical assistance; he does not receive a travelling allowance; he traverses the district on a bicycle. On some occasions when it has been necessary to sleep away from his home the council have paid his out-of-pocket expenses.

Until the year 1904 there were two inspectors of nuisances for the district, one having the eastern and the other the western division allotted to him. The salary allotted to each officer was at that time £25 per annum, of which half was repaid by the county council. Both were part-time officers, but one also held the appointment of surveyor of highways. The work associated with the office of sanitary surveyor was not done by a regular officer duly appointed to the office, but was paid for by fee, and the aggregate amount of these fees was considerable. On the death of the inspector of nuisances of the eastern division, the Board wrote to the rural district council, stating that in their opinion the vacancy afforded a favourable opportunity for the appointment of one inspector of nuisances at an adequate salary, who should be required to devote his whole time to the duties of the office throughout the rural district, and that there appeared to be ample work to occupy the whole time of a competent and energetic officer, and requested the district council to take the matter into their consideration. The suggestion of the Board was accepted by the rural district, but not in its entirety. Mr. Jackman, when appointed, was required to devote the whole of his time to official work, but he was required to perform the duties of sanitary surveyor, to which a separate salary was allotted, as well as those of inspector of nuisances. It is clear, however, that Mr. Jackman without assistance cannot carry out the duties of both offices. Half of the salary allotted to the appointment of inspector of nuisances is repaid from the county fund. Mr. Jackman considers that about half his time is occupied with his duties as sanitary surveyor, and half with those of inspector of nuisances.

Study of his books and records shows that he could not do the amount of work that he does unless his office work is done during the evening.

Mr. Jackman has performed his various duties with tact, judgment, and discrimination, and it is no reflection on Mr. Jackman to say that in the district there are nuisances—and many of them of a type which are prone to recur—which remain unabated; and that some sanitary work which is comprised in the duties of an inspector of nuisances is not attempted. The circumstances of the district are such that there is more sanitary work to do than can be done by a single officer.

I am therefore of opinion that the rural district council should consider the desirability of either appointing an assistant inspector of nuisances, or of giving adequate clerical assistance to the inspector of nuisances.

The Midwives Act, 1902.—The County Council of Somersetshire has appointed a lady inspector of midwives, and the present holder of the office—Miss Dusantoy—succeeded to the appointment in December, 1906. The county council pay for the training of six midwives, and have always six midwives passing through the course of training.

Summary and Recommendations.

In the Williton Rural District, during the last 15 years, many of the conditions liable to affect the health of the population have undergone notable change for the better. Within this period many of the works of water supply and sewerage mentioned in this report have been carried out. The aim of the sanitary authority has been (and in my opinion quite rightly) first to bring about the provision of suitable water supplies to the villages, and then to arrange for works of sewerage.

Although part of the credit for these improved conditions is due to the rural district council, nevertheless the active co-operation of resident landowners of large estates who have undertaken extensive works of sanitary improvement on their property has very materially assisted to bring about this result.

There still remain many matters, however, that need the district council's serious attention.

Several conditions call for remedy in the village of Monksilver. This village consists of a small group of houses, nearly all of which are damp, while some have walls partly made of mud supported by wooden beams; eavespouting is defective or absent. Very few of the houses can be considered to be in a sanitary condition. No sewerage system has been provided; some privies are placed over the streams which flow through the village; slop water is thrown on the ground near the dwellings. The water supply is derived from wells, and the water supply of one public well has been condemned on chemical analysis as unfit for domestic use. There appears to be ample water available for the supply of the village from springs on the hillside above it.

In Roadwater the water supply is in part derived from a well which from its surroundings is liable to risk of pollution. A stream which passes through the village is in part used as a sewer, privies being placed over it.

The condition of the houses, their sanitary conveniences, and drainage, in the village of Williton; the structural condition of certain houses in Withycombe; the sewerage and water supply of Washford; and the water supply of Elsworthy should have attention.

A sewerage scheme is required for Crowcombe, and the hamlets of Bossington and Allerford will need to be provided with sewers in the near future.

The attention of the rural district council should be specially directed to Porlock and Doverhay. The population of this village is materially increased in the summer months by the influx of visitors, and the housing accommodation is taxed to the utmost. These visitors bring with them many horses for

the staghunting, &c., and all available sheds, drained or undrained, are used as stables. The condition of the water supply has already been referred to. The district council should themselves undertake the scavenging of house refuse, enforce the provision of suitable covered ashbins for house refuse, and of covered receptacles for manure, and draw up regulations for the periodical removal of manure.

The primary reason for the inspection of this rural district was to ascertain whether one medical officer of health could adequately carry out the duties of his office throughout the whole district. The distance from the eastern to the western boundary of the district is roughly some 30 miles, but it is traversed by excellent main roads, from which branch roads run up among the hills. The roads are well made, and kept in good repair.

The extreme western portion of the district, which embraces part of Exmoor and certain parts of the southern portion, is very sparsely populated; only at Porlock is there any considerable aggregation of persons on area.

The occasions on which the medical officer of health would be required to travel to the opposite confines of his district must be very rare indeed. Although the country is hilly in places, the most populous parts are situated on comparatively level ground. There is no large town, and very few villages have as many as 100 houses. There are no large manufactories, nor trades requiring constant supervision.

It is popularly supposed that a medical officer of health of a rural district who is also in general practice, is enabled while visiting his private patients to carry out the duties required of him in his capacity as medical officer of health. The amount of even the routine duties of a health officer which can be, and is, performed in this fashion is much over-estimated. The care of those actually sick is often an urgent matter, and the pressing need of the individual receives the first consideration of the medical attendant. Medical officers of health in rural districts find it necessary, if efficient work is to be done, to arrange their daily and weekly programme so as to allot definite times to their public health duties; these duties not infrequently necessitate special journeys which can seldom be associated with their private work as medical practitioners. This being so the actual travelling required of a medical officer of health in carrying out his public duties is not greatly lessened because his private practice is situated within the district for which he also acts as health officer.

There are advantages if his public health duties carry him beyond the area to which his private practice extends, for in such case public and private interests are not likely to be brought into conflict.

After inspection of the district, and after traversing every part of it, I am satisfied that one medical officer of health could adequately discharge the duties of his office, and with advantage to the district.

RICHARD J. REECE.