

Report to the General Board of Health on a preliminary inquiry into the sewerage, drainage, and supply of water, and the sanitary condition of the inhabitants of the borough of Newport / by George Thomas Clark, Superintending Inspector.

Contributors

Clark, George Thomas, 1809-1898.
Great Britain. General Board of Health.

Publication/Creation

London : Printed by W. Clowes & Sons ... for Her Majesty's Stationery Office, 1850.

Persistent URL

<https://wellcomecollection.org/works/byt5bdu3>

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



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

8
PUBLIC HEALTH ACT,

(11 & 12 Vict., Cap. 63.)

REPORT

TO THE

GENERAL BOARD OF HEALTH,

ON A

PRELIMINARY INQUIRY

INTO THE SEWERAGE, DRAINAGE, AND SUPPLY OF
WATER, AND THE SANITARY CONDITION
OF THE INHABITANTS

OF THE BOROUGH OF

NEWPORT.

BY GEORGE THOMAS CLARK, Esq.,

SUPERINTENDING INSPECTOR.



LONDON:

PRINTED BY W. CLOWES & SONS, STAMFORD STREET,

FOR HER MAJESTY'S STATIONERY OFFICE.

1850.


PUBLIC HEALTH ACT,
(11 & 12 Vict., Cap. 55.)
REPORT
GENERAL BOARD OF HEALTH
NOTIFICATION.

THE General Board of Health hereby give notice, in terms of section 9th of the Public Health Act, that on or before the 1st April next, written statements may be forwarded to the Board with respect to any matter contained in or omitted from the accompanying Report on the Sewerage, Drainage, and Supply of Water, and the Sanitary Condition of the Inhabitants of the borough of NEWPORT, or with respect to any amendment to be proposed therein.

By order of the Board,

HENRY AUSTIN, *Secretary.*

Gwydyr House, Whitehall,
19th February, 1850.



PUBLIC HEALTH ACT (11 and 12 Vict., cap. 63).

Report to the General Board of Health on a Preliminary Inquiry into the Sewerage, Drainage, and Supply of Water, and the Sanitary Condition of the Inhabitants of the Borough of NEWPORT. By GEORGE THOMAS CLARK, Superintending Inspector.

Northampton, 28th October, 1849.

MY LORDS AND GENTLEMEN,

YOUR instructions directed me to inquire into, and report upon, the municipal borough of Newport, in the county of Monmouth. Accordingly, after notice given, as directed by the Public Health Act, I held public sittings in the Town-hall at Newport on the forenoons of the 21st, 22nd, and 23rd of August last, and employed the remainder of those days in the inspection of the borough, and in collecting information, the result of which I have the honour to lay before you in the following Report:—

1. The inquiry took place upon a petition from the municipal borough of Newport. The signatures attached are very numerous, and include those of a county member, the present and late mayor, the vicar, several borough magistrates and members of the Corporation, 11 medical men, and a large body of rate-payers.

2. I found in all quarters great readiness to afford the requisite assistance, and there was placed at my disposal a mass of information relating to the sanitary condition of the borough, collected by the Health Committee, under the Board of Guardians, whose exertions have been carried on for several months past, and have been attended with much success. I received from various other quarters maps and plans of the town, and much verbal and documentary evidence concerning the sewerage and water supply.

3. I have especially to acknowledge the presence and support of Mr. Wm. Evans, mayor; the Rev. Edward Hawkins, vicar; Mr. Thomas Woollett, town clerk; Mr. Samuel Homfray, a county magistrate; Mr. T. Hughes, a borough magistrate; Mr. Joseph Latch, chairman of the Health Committee; Messrs. R. Mullock and Lewis Edwards, aldermen; Mr. T. Morris, alderman and surveyor; Mr. F. Justice, on the part of Sir C. Morgan; Mr. E. S. Barber, surveyor; Mr. Corn. Evans, clerk to the Local Commissioners; Mr. W. D. Evans,

clerk to the Board of Guardians; Mr. R. F. Woollett, surgeon to the Dispensary; and Mr. S. English, superintendent of the borough police. There was manifested a very general and thorough conviction of the importance of a proper water supply, sewerage, and house drainage, and of the insufficiency of the existing local powers to secure these benefits to the full extent. It is remarkable that this strong expression of opinion comes from a town in which unusual exertions have been made to carry out the Nuisances Act; and the experience of Newport confirms what I have elsewhere almost invariably found, that those who have done their best to carry out the existing law are precisely those who endeavour to obtain the application of the Public Health Act.

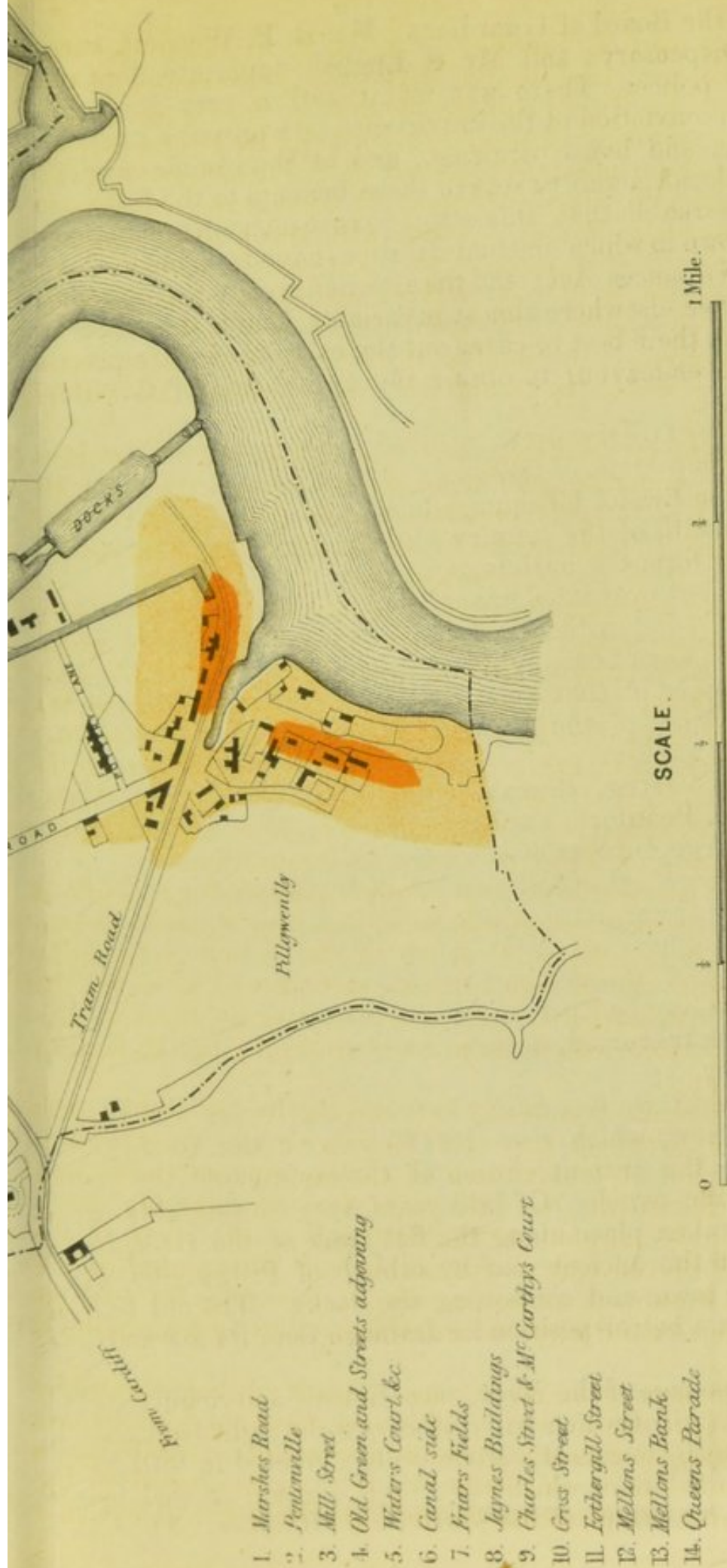
4. GENERAL DESCRIPTION.—Newport is one of the largest and most important of those numerous towns upon the northern shore of the Bristol Channel, which owe their prosperity to the mineral wealth of the country behind and around them, and of which they form the outlets and ports.

5. Newport is situated upon the Usk, $4\frac{1}{2}$ miles above its mouth, and $3\frac{1}{4}$ miles below the very ancient city of Caerleon, of which it is said to have been, in Roman times, the "Port." At present it stands in that relation to a tract of the South Welsh coal-field, east of the Rumney, and it receives thence, for export, the greater part of the produce of the iron-works of Pontypool, Varteg, Blaenafon, Blaina, Nant-y-Glo, Victoria, Ebbw-vale, Beaufort, Tredegar, Sirhowy, Bute, and Rumney, and of a large number of very considerable collieries.

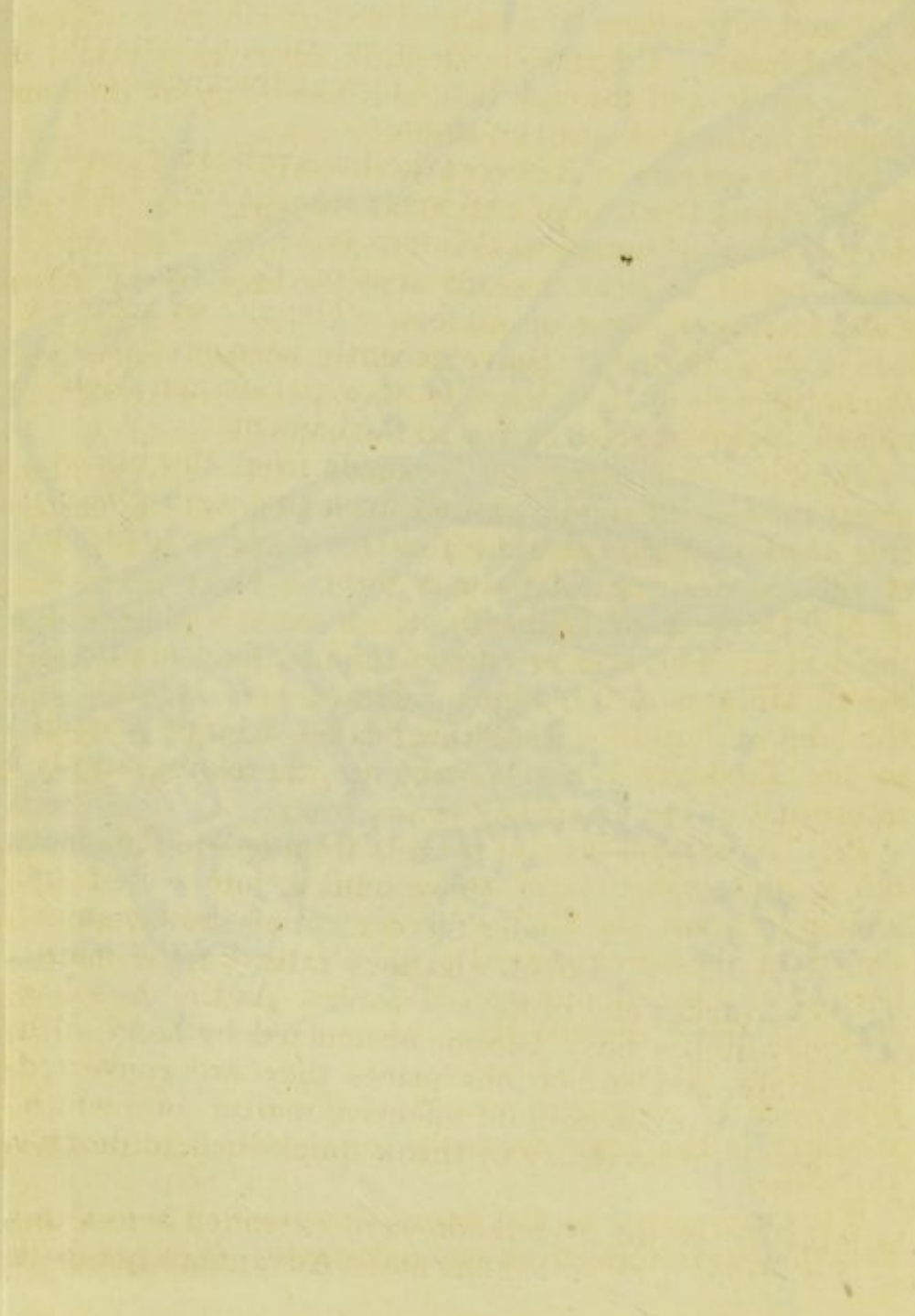
6. The town stands almost wholly upon the right bank of the river, at the point at which the hill country sinks down into that broad and level band which skirts, though irregularly, both shores of the Severn, and a tract of which, under the name of "Gwent-loog Level," extends from the Usk to the Taff, and is traversed, between these rivers, by the Ebbw and the Rumney.

7. The old town lies chiefly between the bridge and the hill of St. Woollos, which rises 196 feet above the river, and is crowned by the ancient church of the same name, the mother church of the parish. Of late years, very considerable extensions have taken place along the flat bank of the river, in the direction of the ancient marshy suburb of Pillgwenlly, now a part of the town, and containing the docks. The old town is, therefore, in a better position for drainage than its low and level suburb.

8. The passage of the river, once difficult and commanded by a castle, the shell of which still rises above the right bank, is now rendered easy by means of a stone bridge, erected in 1801, and a hundred yards above which the river is again crossed by the timber and iron bridge of the South Wales Railway. The Usk is



The first part of the book is devoted to a description of the various species of the genus *Canis*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The second part of the book is devoted to a description of the various species of the genus *Lupus*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The third part of the book is devoted to a description of the various species of the genus *Vulpes*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The fourth part of the book is devoted to a description of the various species of the genus *Urocyon*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The fifth part of the book is devoted to a description of the various species of the genus *Procyon*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The sixth part of the book is devoted to a description of the various species of the genus *Nyctereutes*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The seventh part of the book is devoted to a description of the various species of the genus *Ursus*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The eighth part of the book is devoted to a description of the various species of the genus *Panthera*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The ninth part of the book is devoted to a description of the various species of the genus *Felis*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The tenth part of the book is devoted to a description of the various species of the genus *Acinonyx*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The eleventh part of the book is devoted to a description of the various species of the genus *Homotherium*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The twelfth part of the book is devoted to a description of the various species of the genus *Megistonyx*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The thirteenth part of the book is devoted to a description of the various species of the genus *Homotherium*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The fourteenth part of the book is devoted to a description of the various species of the genus *Megistonyx*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The fifteenth part of the book is devoted to a description of the various species of the genus *Homotherium*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The sixteenth part of the book is devoted to a description of the various species of the genus *Megistonyx*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The seventeenth part of the book is devoted to a description of the various species of the genus *Homotherium*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The eighteenth part of the book is devoted to a description of the various species of the genus *Megistonyx*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The nineteenth part of the book is devoted to a description of the various species of the genus *Homotherium*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties. The twentieth part of the book is devoted to a description of the various species of the genus *Megistonyx*. The author gives a detailed account of the habits and characteristics of each species, and also of the various subspecies and varieties.



navigable for shipping up to the stone bridge. The Monmouthshire canal, from Brecon and Pontypool, with a branch from the Ebbw, traverses the town, keeping near and parallel to the right bank of the Usk, and communicating with the dock basin. Between the basin and the old town are numerous tramroads used in the conveyance of iron and coal. Both canal and tramroads, however important they may be to the commercial interests of the town, are not favourable to its sanitary condition. The canal checks the drainage of the town towards the river, and the tramroads, in their present condition, favour the accumulation of filth.

9. St. Woollos-hill is composed of old red sandstone; a part of the tract which extends hither from Cardiff, and sweeps round to Abergavenny and Brecon, forming the whole valley of the Usk, and supporting the eastern and northern margins of the mineral basin. Pillgwenlly is built upon an alluvial deposit of fine mud; and through this bed, here of great thickness, the channel of the Usk passes below the town.

10. The exports of Newport, between the 1st April, 1848, and the 1st April, 1849, were, coal, 637,088 tons; iron, 313,950 tons; the inland or up tonnages were 201,065 tons. The docks, which were opened in 1842, include a water area of $4\frac{1}{2}$ acres, with gates having a clear opening of 62 feet. The rise of spring tide is about 36 feet. Barracks have recently been erected on the north-west of the town. In conjunction with Usk and Monmouth, Newport returns one member to Parliament.

11. The main street of Newport extends from the bridge along the Cardiff road. All the ground upon the north side of this road is high; nearly all to the south of it is low. Much of the old and part of the new town is built upon the estate of Mr. Herbert, of Llanarth, which extends along the river to the docks. The greater part of the new town is the property of Sir C. Morgan, of Tredegar. The owners of both estates let the land on building leases; the latter has let a large portion to the Tredegar Wharf Company, who are, therefore, largely interested in the prosperity of the town.

12. The natural level of the new town is from one to four feet below high-water mark spring tides, and is intersected by certain "rheens" or ditches, under the control of the Commissioners of the Gwent-loog Level, who levy rates for the maintenance of these ditches and of the sea-bank. As the town has extended these ditches have become obstructed by house filth and street refuse, and in various places they are converted into lines of stagnant, semi-fluid offensive matter, into which, recently, it has been necessary to throw quick-lime to destroy the stench.

13. Originally, as the tramroads were extended across this flat, they were formed on embankments. Advantage has been

taken of these to bring ballast, by degrees, from the shipping, and thus to raise the whole surface six to eight feet. A few houses were built before this was done, and these are particularly low and damp, and are seats of fever. Latterly every new house near the river has been built upon this layer of ballast, which, being usually shingle, is naturally dry, and affords great facilities for a good drainage.

14. Great credit is due to the Tredegar Company for their persistence in this arrangement. They also, as the rheens become filled up with ballast, lay down culverts of large diameter to take their place.

15. **GOVERNMENT AND LOCAL ACTS.**—The borough includes the town of Newport and part of the parishes of St. Woollos and Christchurch, and is governed by 6 aldermen and 18 councillors, out of which body the mayor is annually chosen. In the corporation is vested the management of the police and other ordinary municipal duties.

16. The Improvement Commissioners are constituted under an Act of 7 Geo. IV., c. 6 (1826), and before the boundaries were fixed by the Municipal Act; their jurisdiction is confined to the old borough, which includes rather above one-third of the area of the present borough and about one-half of the inhabitants. The number of these Commissioners is unlimited, and there are 30 at present. The Corporation annually select 12 out of their own body, and the remainder are appointed by the Act or elected by the ratepayers, and hold office for life. The qualification is the occupation, under certain limitations, of an estate of inheritance of 50*l.* per annum, or the possession of actual property worth 1,500*l.* The Commissioners are found in practice to be too numerous; so large a number divides the responsibility. The work is really carried on by 8 or 10 of the more diligent, subject to certain hurtful interferences.

17. The duties vested in these Commissioners are lighting, paving, maintaining roads, cleansing, &c. In the event of a house owner refusing to lay a drain, the Commissioners may lay it; but by a singular blunder in the Act, they are also, in such a case, to pay the expense.

18. They have no power to enter courts, or to cause foot pavement to be laid, although they may repair it when laid. The petitioners state, with respect to this Act,—

“That although for a portion of the borough there is a Local Act for paving, lighting, and cleansing the town, its powers are very ineffective for all sanitary purposes.

“That a large portion of the borough, chiefly consisting of the dwellings of the poor, is not included in the provisions of the said Act; and that in this portion the buildings have been very rapidly erected, and many new streets formed without regard to any system of drainage or surface cleansing.”

19. There is, in fact, no public or general government in the lower town. Whatever has been effected there has been done under the Nuisances Removal Act, applied with a degree of energy, induced, no doubt, in great measure, by the dread and presence of the cholera.

20. The following letter, addressed by the town clerk of the borough in 1846 to the Secretary to the late Health of Towns Commission, states briefly the defects of the local government:—

“ *Newport, Monmouthshire,*
December 14, 1846.”

“ SIR,

“ IN reply to your circular, bearing date the 12th instant, I beg to state that in 1826 an Act was passed (7 Geo. IV. c. 6) for lighting, watching, paving, cleansing and improving the streets, highways, and places within the town and borough of Newport, in the county of Monmouth. The objects of this statute are clear from the title; but it is found very defective in its operation, and only relates to the ancient limits of the municipal borough, which is also a parochial district.

“ The Commissioners were, some of them, appointed by the Act. Two elections have been subsequently held to supply vacancies; and the Town Council, under the provisions of 73rd section of 5 and 6 Will. IV., c. 76, annually, on the 1st of January, appoint 12 out of their own body, who continue in office till the 1st of January following. No transfer of authority has been made under section 75 of the last-mentioned statute.

“ The Boundary Act, 2 and 3 Will. IV., c. 64, referred to in the 7th section of the Municipal Reform Act, has extended the borough for Parliamentary and municipal purposes into portions of the adjoining parishes of St. Woollos and Christchurch, where the population is fast increasing, and the want of efficient drainage, paving, and lighting, are experienced in a still greater degree than in the old borough.

“ The Newport and Pillgwenlly Water-works Act, 1846, has created a trading company for the supply of the town and neighbourhood with water, and it is believed they will shortly commence their works; but unless some general Act is shortly passed enforcing drainage, &c., and *some directing power appointed, not in any manner subject to local influences*, the inconveniences already experienced will increase to the great detriment of the health of the inhabitants, particularly of the poorer classes.

“ I shall always be happy to afford you any local intelligence on this matter,

“ And remain,

“ Your most obedient Servant,

“ *H. Hobhouse, Esq.*

“ *THOMAS WOOLLETT, Town Clerk.*”

21. The Local Acts are—1. The Lighting and Watching, &c., Act, 7 Geo. IV. cap. 6 (1826); 2. The Newport Dock Act, 21st July, 1835; 3. The Newport Gas Act, 31st May, 1843; 4. The Newport and Pillgwenlly Water-works Act, 16th July, 1846.

22. FINANCE.—The Corporation levy annually a borough rate of 6d. in the pound, producing 600*l.*, “which is paid by the

overseers of the borough of Newport, and the assessment on those parts of St. Woollos and Christchurch situate within the municipal borough produces a like amount."

23. The Commissioners rate is restricted to 15*d.* in the pound annually, but this originally included watching, which is now vested in the corporation. The rate actually levied, and considered as the limit allowed, is 1*s.* in the pound, which produces about 1,200*l.*; the old borough contributing 600*l.*, the St. Woollos 575*l.* and Christchurch 25*l.* All houses assessed under 10*l.* rental are excluded from the operation of this rate; a most objectionable exemption on many accounts, and one which induces the erection of a low class of houses.

24. The following is the statement of the expenditure of the sums levied by the Commissioners during the last four years:—

An ACCOUNT of SUMS of MONEY PAID, LAID OUT, and EXPENDED, in pursuance of the powers and provisions of an Act of Parliament passed in the 7th year of the reign of his late Majesty George the Fourth, for the Improvement of the Town of Newport, in the County of Monmouth, for the year ending 1st July, 1846.

	£.	s.	d.	£.	s.	d.
Paid for lighting the town . . .	355	10	5			
„ repairs of roads and footpaths . . .	317	6	3			
„ scavenging and cleansing . . .	145	10	1			
„ repairs of pavements . . .	83	3	0			
„ watering the streets . . .	33	10	6			
„ construction and repairs of drains . . .	29	4	3			
„ repairs of pumps and wells . . .	24	0	2			
„ new fire-engine . . .	147	19	0			
	<hr/>			1,136	3	8

The same for the Year ending 1st July, 1847.

Paid for lighting the town . . .	478	15	3			
„ repairs of roads and footpaths . . .	204	12	2			
„ scavenging and cleansing . . .	128	11	4			
„ repairs of pavements . . .	52	15	5			
„ watering the streets . . .	55	3	6			
„ construction and repairs of drains . . .	24	7	2			
„ repairs of pumps and wells . . .	40	17	8			
	<hr/>			985	2	6

The same for the Year ending 1st July, 1848.

Paid for lighting the town . . .	455	12	8			
„ repairs of roads and footpaths . . .	243	12	3			
„ scavenging and cleansing . . .	139	0	0			
„ repairs of pavements . . .	30	15	4			
„ watering the streets . . .	42	2	6			
„ construction and repairs of drains . . .	53	3	7			
„ repairs of pumps and wells . . .	4	0	0			
	<hr/>			968	6	4

The same for the Year ending 1st July, 1849.

	£.	s.	d.	£.	s.	d.
Paid for lighting the town	280	3	6			
„ repairs of roads and footpaths . . .	446	11	4			
„ scavenging and cleansing	166	19	6			
„ repairs of pavements	122	4	8			
„ watering the streets	31	7	0			
„ construction and repairs of drains .	88	1	6			
„ repairs of pumps and wells	9	12	8			
	—————			1,145	0	2

There are 96 public lights which the Commissioners pay for within the old borough.

CORNELIUS EVANS,

Newport, August 22, 1849.

Clerk to the Commissioners.

25. Poor-rates are levied twice annually, amounting in the old borough to about 3s. in the pound per annum, producing 6,450*l.* In the parish of St. Woollos, nearly co-extensive with the new borough, the annual poor-rates amount also to 3s. in the pound, and produce about 4,460*l.*; beside a loss on excused lists, void houses, and defaulters of about 600*l.*

26. The highway-rate in the old borough is included in the Improvement Rate. In the parish of St. Woollos it is 2*d.*, producing about 200*l.*

27. The valuations of property as assessed for the rate are, old borough, 19,000*l.*; new, 24,000*l.*

28. The classification of the houses is as follows:—

	Old Borough.	New Borough.
Rated above £10 rental	1,295	1,237
At and under £10	700	691
Defaulting and excused	272	241

In the old borough about one-half of the 700, at or under 10*l.* rental, are compounded for by the landlords at two-thirds of the assessed rental. In the new borough 232 of the 691 are compounded for at the same rate.

29. POPULATION.—Newport is a place of modern and rapid growth. Its increase is chiefly due to the influx of population from the surrounding districts.

The census returns gave for—

	Families.	HOUSES.			Population
		Inhabited.	Building.	Void.	
1831.					
St. Woollos and Newport	1,375	1,256	29	77	7,062
1841.					
St. Woollos Parish . . . .	..	462	3	10	2,951
Newport Borough . . . .	..	1,666	38	63	10,815
Total . . . .	..	2,128	41	73	13,766

The borough, besides a part of Christchurch, with a very small population, includes the "town," with 8,225 inhabitants; and Pillgwenlly, with 2,590; total, 10,815. The present population is, however, certainly very far above this. The area of the borough is 3,120 acres.

30. MORTALITY.—Mr. William Downing Evans, clerk to the Board of Guardians, having paid much attention to the statistics of mortality in Newport, I requested him to bring forward such evidence as he possessed upon this subject, and, in consequence, I received from him the following elaborate statement, which exhibits, in the most striking point of view, the deficiencies of the present system, and the necessity for the compulsory powers of house drainage and house improvements which are conferred by the Public Health Act.

31. NUMBER AND SANITARY CONDITION OF THE INHABITANTS OF NEWPORT.

" August 22, 1849.

" I. Number.

" In 1841 the population was 13,244.

" The proportion of births to deaths throughout England (and nearly so in this country) is as three to two, so that communities are increased by the excess of births over deaths, supposing that individuals do not emigrate.

" Immigration increases the population of towns, and it has been observed, that where a considerable increase takes place from this cause the increase is small from the excess of births over deaths.

" This is the case with Newport. From observations and calculations which I have made, I find that the births and deaths since 1841 have been nearly equal. The months of April, May, and June, 1846, included the healthiest period we have had here during the last eight years, in which quarter the births were 120, the deaths only 60; whereas in the three months ended June, 1847, the births were 150, and the deaths 245.

" The following is the number of births and deaths registered since 1841 :—

	Births.	Total Births.	Deaths.	Total Deaths.
1841—September . .	123		107	
December . .	115		131	
1842—March . . .	78		109	
June . . .	99		92	
		415		439
September . .	101		101	
December . .	107		85	
1843—March . . .	101		80	
June . . .	109		80	
		418		346
September . .	110		75	
December . .	120		130	
1844—March . . .	95		85	
June . . .	115		75	
		440		365

		Births.	Total Births.	Deaths.	Total Deaths.
	September . .	115		87	
	December . .	155		103	
1845—	March . . .	110		90	
	June . . .	105		80	
			485		360
	September . .	125		100	
	December . .	118		90	
1846—	March . . .	105		75	
	June . . .	120		60	
			468		325
	September . .	135		115	
	December . .	140		155	
1847—	March . . .	120		145	
	June . . .	150		245	
			545		660
	September . .	130		170	
	December . .	120		210	
1848—	March . . .	145		180	
	June . . .	155		125	
			550		685
	September . .	160		170	
	December . .	115		119	
1849—	March . . .	140		135	
	June . . .	150		160	
			565		584
	Total . . .	..	3,886	..	3,764

Increase of Births over Deaths . . . 122

“The sub-district to which the foregoing numbers refer includes the greater part of the municipal borough of Newport, (that portion within the parish of Christchurch only excluded,) and that part of the parish of St. Woollos outside the parliamentary boundary.

“It is quite possible, indeed probable, that some births have escaped registration, but the number must be small, as a reference to the figures will indicate, if the proportion of births to deaths be examined in quarters of those years when extraordinary sickness did not prevail. The result shown gives an increase of births over deaths of 122, and supposing it to have been a trifle more, when the infantile mortality is taken into account, it cannot be assumed that the population is now more numerous than it was in 1841 on this account.

That the population of Newport, however, is now greater than it was in 1841 there can be no doubt. The trade of the place has much increased, and with the commercial advancement the population has necessarily been augmented. It is nevertheless extremely difficult to ascertain the present number of the inhabitants of Newport upon an estimate of numbers produced by this cause. One thing is certain, viz., that emigration cannot be mentioned here as a set off against immigration, because, assuming, as we fairly may, that the births registered in the last year bore a similar proportion to the inhabitants as the births registered in 1841 bore to the then population, we find that the number of the population is greater now than it was then by about 4,000.

Without therefore going into a more elaborate statement on this point, I assume that the present population of Newport is 19,000.

"As to the density of numbers in circumscribed localities a judgment might best be formed by a personal inspection.

"II.—*The Sanitary Condition of the Inhabitants of Newport.*

"The number of deaths in proportion to persons living in the *district* (or *Union*) of Newport (which includes 40 parishes) is about 1 in 45, (22·2 per 1000); the average throughout England is 1 in 46, (21·7 per 1000). But the average of the district must not be taken to express the average of the town of Newport.

"If a calculation be made upon the figures before given it will be found that the proportion of deaths to the population is 1 in 33, (30·3 per 1000). In 1841 the mortality in Pillgwenlly was exceedingly high, even above that of Liverpool. The mortality for the four years following was not so large, but since 1846 the deaths have very much increased, showing that an accumulating population without proper accommodation must necessarily subject itself to irretrievable loss.

"In 1845 I delivered a lecture on *The Economy of Public Health*, and foretold the consequences of the state to which matters were then progressing. The localities which were then singled out as the nurseries of disease, have more than any others been the theatre of death.

"From the 1st of June to the 30th November, 1848, out of 270 deaths registered there were 69 of diseases of the bowels, chiefly dysentery and diarrhœa, 35 cases of scarlet fever, 1 of measles, and 3 of small pox. The town is scarcely ever free from fever of the low continuous form, but cases of primary typhus rarely occur, although the indigenous disease often terminates in a typhoid character.

"I regret that I have not had time to refer to the mortality of infants during the past seven years. I have, however, referred to the registry between the 24th May, 1848, and the 9th April, 1849, and I find that out of 500 deaths, 204 were of children of five years of age and under.

"During the prevalence of the epidemic cholera here, the deaths have been, from the 31st of May to this date, (August 22nd,) 112; all of which have occurred in the localities marked on the map as unhealthy.

"The mortality from this fearful scourge would assuredly have been much greater had it not been for the effective manner in which the provisions of 'The Nuisances Removal and Diseases Prevention Act, 1848,' have been stringently and continuously applied. The Board of Guardians, in October, 1848, appointed local Committees throughout the Union, to carry out that Act, and nearly ever since the local Board in Newport has sat nightly, and through its agents, effected reforms in drainage, the use of water, street cleansing, and the adaptations of various appliances for the furtherance and security of health, by which means a vast amount of good has been accomplished, all of which, to a reflecting mind, only proves the desirableness of conferring increased authority to carry into perfection that which already has but partially been done. The Committee of Guardians and Associates have, during the last 10 months, issued 1,750 notices for the removal of nuisances, all of which nuisances referred to therein have been or are in the course of being removed.

"The cost of applying the recent Act throughout this Union has not yet amounted to 300*l.*, a sum which, in all probability, will have been saved, by staying the progress of malignant cholera.

"On referring to the pauperism of Newport and St. Woollos, I find that the proportion is as nearly as possible the same as the proportion of deaths to the population, viz., 1 in 33, excepting the casual and vagrant poor. The average number of fixed paupers the last half year was 500.

"From these observations I infer, that the condition of Newport is capable of being highly improved. The situation of the town invites the adaptation of all that is essential to the security of health; its growing importance demands that public interference essential to its permanent prosperity; and the voice of its inhabitants having claimed that protection which they not only deserve but must have or perish, I conclude by expressing a hope that the statistics here given will have some weight in securing the object now sought to be attained.

"W. DOWNING EVANS."

32. LOCALITIES OF DISEASE.—The map appended to Mr. Evans's paper, illustrates also what follows upon this branch of the subject.

33. With reference to the seats of particular diseases, Mr. Brewer, medical officer to the eastern division of the Newport Union, in a report for the year 1839, from which it appears that, out of 216 deaths, 116 were due to fever, observes:—

"A great majority of these cases of fever have occurred in the *Friar's-field*, which is situate in the lowest part of the town of Newport. It consists of two or three rows, and several courts of miserable dwellings, which are generally the resort of beggars, prostitutes, and Irish vagrants. The whole neighbourhood is in the most unhealthy state; the drains are stopped, and accumulations of filth present themselves on every hand. Many other cases of fever occur which do not appear in this return, as medical relief is in some instances afforded by a neighbouring dispensary."

It will be seen afterwards, that the interval of 10 years has produced no sensible improvement in the condition of *Friar's-fields*.

34. Mr. Woollett, surgeon to the Dispensary, laid before me the following statement relating to the seats of a particular class of diseases:—

"The evidence I have to offer upon the sanitary state of Newport is based upon the experience of ten years official connexion with the Dispensary of the town; during which period upwards of 10,000 persons have required medical aid.

"It is proper here to observe, that none of these are recipients of parish relief, these forming a distinct class, and having medical officers of their own; nor do any of them belong to benefit societies, which are similarly provided with medical relief. They are a class of people removed from the former, and placed generally under the same circumstances as the latter; and it may be fairly assumed that amongst those

classes of the community there is the same average amount of epidemic disease.

"Almost the first matter for remark which presented itself to my notice was the continued prevalence of typhus fever, especially in the more crowded and dirty parts of the town. It was, and up to a late period it has continued to be, endemic in particular districts. In the unfinished and undrained streets; in Fothergill-street, Friar's-fields, Mellon's-bank, Club-row, Rees'-buildings, and other streets, with all the courts in their various localities, and in Pillgwenly generally, typhus fever as well as other epidemics rage with the greatest violence.

"Scarlet fever, measles, and small-pox, when occurring in these districts, are more malignant in their character, and meet with circumstances favourable to the prolongation of their stay. These circumstances being of so much importance, appeared to me to demand the interference of the local authorities. I accordingly took the opportunity in these reports of placing them prominently before the public; but as the evil complained of were situated for the most part in private streets and unfinished roads, over which the local authorities would not exercise any control, I did but reiterate the same melancholy facts, without being able to confess any improvement until the Nuisances Removal Act came into force.

"These reports, containing statistical tables from 1843 to 1848, inclusive, you have for your perusal, and you will there see how great has been the number of typhus fever cases, notwithstanding they are only a small portion of those occurring in the town, and that there is also in connexion with the Board of Guardians a fever hospital, which the frequency of the disease called into existence.

"In the report of 1848, I observed that when the Nuisances Removal Act came into operation, dysentery, which was then the epidemic of the season, changed its character, and became less frequent and less fatal. To the continued operation of this Act since October, 1848, through the indefatigable exertions of the Sanitary Board, may be fairly ascribed the comparative immunity we have enjoyed from the ravages of cholera, whilst other towns in our own neighbourhood not similarly prepared, bear fearful evidence of the evils which result from the neglect of sanitary measures. Since the introduction of that Act, fever in this town has considerably diminished, but I am of a strong opinion that its good effect can only be temporary, and that unless we have some more comprehensive measures of sanitary reform, we shall relapse into the same wretched state we were before."

35. It appears, from the annual report referred to by Mr. Woollett, that fever, especially of the typhoid type, has each year appeared to an alarming extent in the dispensary lists. In 1843, out of 860 cases, 149 were fever; in 1844, 247 cases out of 1,161; in 1845, 201 cases out of 1,210; in 1846, 163 cases out of 1,294; in 1847, 300 cases out of 1,285; and in 1848, 196 cases out of 1,169; being altogether 1,256 fever cases out of 6,979, or about one-fifth. In the report for 1848, *Mr. Woollett* observes:—

"Whilst on the eve of great and salutary changes in our laws relating to the public health, I may forbear for once to reiterate my suggestions

with reference to surface-cleansing and thorough draining, now everywhere acknowledged to have such an intimate connexion with the spread of fever and all other epidemic diseases, more especially as we are already experiencing beneficial effects from the operation of the Nuisances Removal Act. The great epidemic of the last year was dysentery; this, like all other epidemics, began soonest, and raged with the greatest violence, in those parts of the town unvisited by the scavenger; and in the worst localities the symptoms simulated very closely those of Asiatic cholera. This disease continued to spread with unabated vigour for several weeks, until the Nuisances Removal Act came into force, when there was observed to be a very marked decrease in the number attacked, until at length it lost the character of an epidemic, and occurred only occasionally. The good effects resulting from this Act can only be temporary, inasmuch as it is limited in its enactments, both as to time and power; but it shadows forth very strongly the advantages we may hope to obtain when the Public Health Act comes into operation, and argues well for the solid improvement we are to look for in the sanitary state of Newport."

And in a previous year, 1845, the same gentleman observed:—

"In presenting the annual report to the subscribers of this Institution, I have taken leave, in each year, to point out what I consider to be fertile and extending sources of disease in Newport; the neglected state of the drainage, and the exceedingly deficient manner in which the surface-cleansing over very many of our public streets is performed. It is, indeed, an unquestionable and lamentable fact, as discreditable to our rising town as it is productive of serious evil, moral as well as physical, that many of our highways are literally open drains, into which is carried, from the houses on either side, the refuse filth of the localities, there left to offend the senses, decompose, and produce such noxious effluvia, that it is absolutely a subject of astonishment that fever, already too prevalent, does not become more fatal in its ravages, and extend its devastating career amongst families of every class residing in the town. The places more particularly notorious for neglect in this disgusting way, comprise the tramroad, especially from Club-row to the Salutation; George-street, Cross-street, Fothergill-street, and its abominable court; part of Dock-street, Beynon's court, Queen-street (a place where disease almost invariably reigns); Friars'-fields, and the extreme end of Burton's-court, Pentonville. Though we are thus inattentive to our own vital interests, providentially we have wholesome rains, which, supplying the want of good scavengers, wash away much filth that would otherwise remain untouched, and dilute many a decomposing mass; whilst, from the absence of the sun's rays—as was the case during the late wet summer—evaporation has been considerably lessened. Had it not been for these sanative causes, our bill of mortality, under the head of Fever, would have presented an alarming aspect. As it is, we may congratulate ourselves that this year fever has been less frequent, virulent, and fatal; but if the wet season has been instrumental in preventing, it also has produced ill consequences; for, with our wet streets and stagnant pools, we may couple the fact of rheumatism having increased beyond former precedent. When I reflect on the serious evils that the present system, or rather the neglect of a proper

system, produces, and contrast them with the happy results I anticipate when those evils shall be removed, I cannot omit any opportunity of advertg to them, if, indeed, it be only to excite public attention in support of the Drainage Bill now under the consideration of Government. I feel that the constant reiteration of this subject will not be fruitless, as the truth of the adage, '*Salus populi, suprema lex,*' must be admitted by all."

36. In the following sections it will be seen that the actual present condition of a very large portion of the town fully bears out the references that have been made already to it.

37. INSPECTION OF THE TOWN.—In this part of the inquiry I was accompanied by the Rev. E. Hawkins, the Rev. David Dixon, Mr. T. Woollett, Mr. S. Homfray, Mr. Justice, and several other residents and official personages in the borough.

38. But very few of the streets are lettered. It will be seen from the Report on Swansea at how cheap a rate this sanitary preliminary may be carried into effect. Tinned iron or zinc should, however, be substituted for the slate made use of at Swansea.

39. In this part of my labour I was materially aided by Mr. English, who has been the agent in carrying into effect the provisions of the Nuisances Removal Act, which he has done in a manner which reflects very great credit on his zeal and activity. Everywhere I found evidences of recent cleanliness; new privies erected, old ones patched up and cleansed out, gutters swept, ash-pits emptied, rooms lime-whited, and quick lime thrown into the ditches. I can very easily credit the statement made to me by several persons, that the last eight or nine months have rendered Newport a much cleaner place than it ever was before.

40. The summit of the town, near the parish church, is very imperfectly drained, and very badly supplied with water. Here, upon the southern slope of the hill, one of the best situations in the town, is a group of cottages known as the *Rookery*, composed of 16 houses, built back to back, with rising ground above them. The open drain from the Fever Hospital passes close in front of one row, but does not receive the drainage of the houses. The want of back windows renders the rooms very close. There are two privies to the whole, which discharge into an open ditch on the border of the vicar's garden, as does the Fever Hospital drain, and together they produce a very serious nuisance. The rent paid is from 1s. 7½d. to 2s. a-week. The tenants state that they have offered to pay from 1½d. to 2d. a-week additional if the landlord will lay on the water. Eighty-six people live, or did very recently live, in these houses, amongst whom fever is very commonly prevalent.

41. *Stowe-hill*, leading from the church to the bridge, is a broad steep road, along which are 93 houses. Most of these

are of the better sort; the road, however, is without any covered drain, the house drains discharging beneath the raised footway into open gutters by the wayside. As these gutters are formed in steps, the offensive fluids collect and form small pools, much complained of. The houses on the north side of this road have privies in the gardens, the contents of which ooze into Bain's-well-lane. The public pump here, at the time of my visit, was dry. The burial ground, situated in this quarter, is elsewhere noticed.

42. Along the *Cardiff road* are several ill-conditioned places. The road itself is very badly drained, the gutter-grates are large, and give off unpleasant smells. The side of the road is used as a receptacle for all kinds of refuse from the houses opposite. Most of the houses in the main street are well built, and all have back premises and privies.

43. *Beynon's-court*, opening from Queen-street. Here are nine houses, of which six are without back windows or efficient drains; the court is but partially paved; the floors are rendered damp by the hill above. There are two privies, but without drains. Want of water is severely felt; the Salutation Pump, besides being so far distant, is by no means sufficient to supply the surrounding population.

44. *Rees's-buildings*. Here 13 houses have been made to lodge 18 families; of these six are on one side under ground, having a narrow area in front, and no back window or premises. They are very close and damp, and quite unfit for human beings to live in. There are two privies to the whole, which are in a ruinous condition, and the pump is out of repair. Some of these houses are let as low lodging-houses. Fever is constantly present. The Sanitary Committee have been very active, and have caused a stagnant ditch to be filled up, but it is quite obvious that such activity will not be always maintained, and then these places will revert to a condition even worse than that in which they at present are.

45. Near this is the spacious *Cattle Market*, and the sheds, &c., erected by the Tredegar Wharf Company, to whom they do credit. The market contains, however, only two pumps, and is only partially paved.

46. *Commercial-street* contains 176 houses, and forms part of the great street of Newport. On the west side most of the houses have proper drains, terminating in a sewer which falls into the Pill. On the east side the houses drain upon the low ground towards the canal, and the fall being deficient, a serious nuisance is produced. Much of the semi-fluid ordure which affects Friars'-fields comes from this source. The canal is at present the great obstacle to a perfect drainage.

47. *McCarthy's-court*, in this street, contains, with some good houses, others in a very bad state as regards drainage and ven-

tilation. *Gainey's-court* has eight houses with one privy and a surface drain.

"In *Charles-street* are 30 houses, most of them connected with the culvert in the street. Six are low lodging houses, sublet into different apartments, and very much overcrowded, as, for instance, the house in the occupation of the widow Bartlett, consisting of five rooms, is inhabited by 30 persons; each room used for all domestic purposes during the day, and as a sleeping room at night. Most of these lodgers are collectors of old rags and bones, which are heaped up in the rooms. In some of these lodging-houses large quantities of dried fish are kept until they are often in a putrified state. In others are vegetables, such as remain unsold during the day."

48. *Hill-street* contains 37 houses, and is without a sewer. The house-drains terminate in the open street, but it was stated that the Sanitary Committee compelled the owners of the houses at each side of the street to make a small drain into an adjacent culvert. On the south side of the street are privies without drains to them, and discharging into the fields, which are now becoming occupied as building ground, and quite within the town: these privies are very offensive. Several of the houses at the north side of the street have imperfect drains to the privies, but a number of the upper houses are without even these. The decomposing matter from the *Hill-street* churchyard finds its way into the wells in *Commercial-street* in its vicinity, and renders the water very offensive, and quite unfit for use.

49. *Victoria-place* is a row of well-built and neat houses, letting at from 35*l.* to 40*l.* each, per annum. Below the Rookery is *King's-hill Well*, a spring much in request in the neighbourhood. *Mr. Scott* states that—

"There were seven or eight small cottages on the right of *Hill-street* which, in addition to being badly ventilated, have most inefficient privy drainage at the rear, wanting fall, and better connexion of the privies therewith. There is also but a small supply of water on the premises; and sickness has been general there, throughout the prevalence of the cholera, of which one tenant died."

50. *Commercial-road*, the prolongation of *Commercial-street*, is one of the main thoroughfares of the town. It receives a culvert from *Hill-street*, which, however, is not intended to receive the house drainage. Close to the road are some open ditches, stated to receive house drainage, and rendered stagnant by the ballast heaps now being extended over the ground. I found the worst places saturated with quick lime. Like most of the principal streets, this is broad, and contains many excellent houses.

51. The *Baptist chapel burial-ground* is much complained of in this quarter. It is placed in the town, on a very wet hill side, and it is very full, and renders the drains offensive. Near

it is the *Tabernacle chapel yard*, behind the Bank, the water of which is affected by the exudation from the graves. All one side of *Llanarth-street* is more or less affected in the same way. This burial-ground is very full. Both are noticed elsewhere.

52. *Friars'-fields* include a considerable tract of land between *Commercial-street* and the river, and, though low, quite capable of being drained. This ground has been built on many years. The Sanitary Board called on the proprietor, Mr. Herbert, to make a drain; a difficulty presenting itself as to getting under the canal, a drain was made, which, at its lower end, is merely a little more than a surface-drain, the water from which empties into the canal. To drain the place effectually, an outlet must be made under the canal into the river. It is understood that Mr. Herbert would be willing to take a share with the authorities in defraying the expense of this work, but at present it cannot be carried out. Regarding these fields, *Mr. English* states:—

“There are 96 houses in *Friars'-fields*; 55 are without privies, and 41 with privies, but without drains.

“There has been a culvert lately made by orders of the Sanitary Board, through the fields extending from *Irish-row* to the canal, where there is a cesspool and a small drain to let off the surplus water into the canal, but under the existing law there is no power to compel the owners of the houses to communicate with the culvert.”

53. The culvert, in fact, was only made to drain this low and marshy tract, and render it fit for building purposes.

“These fields are neither paved nor macadamized; the rain water stands in pools on the surface. This place is always in a most filthy condition, and one of the chief evils existing there is the keeping of pigs in small confined yards with no drainage.

“There is an open ditch running all along *Union-row*, taking a course through the *Friars'-fields* Garden, about 200 yards long, and most of the inhabitants in the fields empty the contents of the chamber utensils in it. Fevers, nervous pains, and sickness of stomach, frequently occur here, which they refer entirely to the bad smells from this ditch, but which are no doubt aggravated by the intemperate habits of the class of persons residing here.”

54. This whole tract of ground is indeed at present in a very discreditable state. Here are courts within courts, close, damp, and very filthy, with typhus in an aggravated form continually breaking out. *Davies'-court* is a cluster of houses. *Rees'-court* is particularly close. The barrack is very foul; these are all noticed elsewhere. The cholera began here.

55. *Union-row* with 29 houses, *Nicholas-row* with seven houses, are both without back yards or windows; many without

privies. The house refuse is usually thrown into the street, which, in the case of the latter, is unpaved and very muddy.

56. There are 16 houses in the Old Barracks built back to back, very close, and surrounded by numerous open and very filthy drains, into which, and a large open pit, in the absence of a single privy, refuse of every description is cast. The people complained of the offensive smells, and of the utter neglect of scavenging.

“*Rees' Row.* – Here are five houses built back to back against other houses. The privy belonging to the ‘Boatman’s Rest’ beer-shop is set up against the bakery next door, and the drain from the privy runs along the bakehouse, and is only loosely covered with flags (but at the present moment is under alteration); a Mrs. Burke lives over the bakehouse, and there being no ceiling, the heat at times is suffocating; under this woman’s bed-room window there is a privy without a roof, now disused, but full of filth; the heat of the bakehouse causes this privy to smell dreadfully, and the woman is constantly ill, and receiving parochial relief. The other three houses have privies in a hole adjoining the kitchen. There is a drain to them, but it is now choked. The privies are all without ejects, and the smell, especially at night, is dreadful. The street in front is full of holes, and very dirty.”

57. Near this is *Irish Row*.

“Here are 22 houses, three of them are built up against three others in front; six have back yards, but no drains to take off the surface-water, which flows into the houses; these houses are each inhabited by several families; each family takes a room, and then sub-lets it. They are very much overcrowded. There is not a single privy to any of the houses. The street is at all times full of pools of water, and in the winter time is almost impassable. The remaining six houses opposite have very small back yards and privies, but the drains are so small that they are always stopped up. No communication has been made from these 22 houses in Irish Row to the culvert lately made in front of the doors; the Nuisances Removal Act not enabling the Sanitary Board to compel the owners of these houses to make drains to the culvert.”

58. *Cross-street Lower.* Here are 25 houses, of which 12 have a back culvert, but choked up towards the canal. The other 13 houses have no drains to their privies. This is reported as

“The dirtiest and filthiest street in the town, full of holes and hollows. All the domestic refuse thrown from the houses into the street, which is never properly cleansed; there is a tramroad running through it. The Sanitary Board were compelled last winter to employ men to scrape the street and carry off the filth in trams.

“A number of pigs are kept in this street to the annoyance of the neighbourhood.”

This part of Cross-street is beyond the jurisdiction of the Town Commissioners. One side is built on the property of

Mr. Herbert, the other side on that of the Tredegar Wharf Company. The Monmouthshire Railway and Canal Company have three tram-roads in the centre; neither cleanse it.

59. *Cross-street Upper* contains 25 houses, with a small inefficient drain. Eleven houses are without privies, and several are in a filthy state, and let as low lodging-houses, chiefly for Irish.

60. In *Floridas-court* are four Irish lodging-houses with two to three families in each; they have no back windows or yards, and the rooms are seriously overcrowded and close: the privy is in a bad state.

61. *Fothergill-street*:—

“There are 21 houses in this street, several consisting of four or five rooms, occupied by separate families, and again sublet by them to eight or ten, or sometimes twelve to fourteen persons, nearly all Irish, having but the limited accommodation of one room, in which they all sleep in beds made of shavings and rags, on the floor, with windows closed and the fire-places stopped up, breathing the same atmosphere over and over again; this very room having been used for all household purposes during the day, and in some instances having had wet clothes hung up to dry in it. Previous to the institution of the Sanitary Board, I seldom visited these houses unless in search of bad characters. Since then I have had recent experience of the misery, disease, and death generated by these ill-regulated and over-crowded dwellings.

“I found five beds in one room, six men in each bed, three with their heads in one direction, and three with their heads in the other, one had fever; these are mostly Irish lodging-houses of the worst class.

“In one instance I found 42 human beings sleeping in a room of 12 feet by 14 feet. The atmosphere was insufferable.

“It is no uncommon occurrence to find old women or children sleeping in cupboards with the doors closed, and in one case the straw bed had not been changed for two years, and in another the mother of the tenant was found with three grandchildren sleeping in a small cupboard 20 inches wide, and $4\frac{1}{2}$ feet long.

“The tenants are willing to pay 2*d.* or 3*d.* a-week for water, but the landlord refuses to make the necessary outlay for fittings, &c., although offered by the Water Company at a reduced rate.

“This street has no drains or surface gutters, and is always in a filthy state, as all slops and refuse are thrown into the highway. One side of the street is in the new, and the other side in the old borough, and this may account for the neglected state of the place.

“There is a slaughter-house here, lately erected, adding to the impurities of the place.

“These cottages are let by the week, and pay no rates, although a valuable property to the landlord. For example, Margaret Holland's house is divided into four compartments, each of which lets at 2*s.* 6*d.* a week, being 26*l.* per annum to the landlord, and no poor rates to be deducted.”

Such is Mr. English's account. When I visited the place I saw quite enough to bear out its leading features, although

something had been done temporarily to promote cleanliness.

62. *Jones' court*, in Fothergill-street, contains 11 houses of a bad description, very dirty and overcrowded, without back windows, and with but one privy, quite insufficient for the numbers resorting to it. The tenants said they would willingly pay $1\frac{1}{2}d.$ to $2d.$ a week for water, but the landlord refuses to lay the service pipes. The state of the lodging-houses here is described by the Superintendent as at times very bad indeed. *Kear-street* also contains lodging-houses. To describe this, would be merely to repeat the above account.

63. *Canal-side*.—Between Cross and Llanarth streets are 17 houses with a choked up drain, and cellars described as liable to be flooded. *Highley's court* is without back yards or windows; the houses are of a good description, and tolerably clean, but without water. *Toombs court* is of the same character. *Reform-buildings* contains nine houses, sublet and much crowded. The place is rendered close by the tramroad wall in front.

“In *Club-row* are 33 houses with privies to each house, but no drains to the majority of them; there is a high wall behind these houses about 10 or 12 feet high, and a wall in front dividing the tramroad from houses, which make the place close and ill-ventilated.

“There are several families in each house, and pigs are kept in almost every yard, vitiating the surrounding atmosphere.

“A few of the houses have the water supplied to them by the Water Works Company.”

64. In *Jones' court* and *Perkin's-buildings* the houses are very much crowded together without either back yards, back windows, water, or proper privies. The refuse is thrown into an adjacent open pit.

65. *Mellon's Bank* contains 23 houses without a sewer, and some without even a surface gutter. One of the privies oozes into the open road. Here are several Irish lodging-houses sublet, and much overcrowded. It is the custom in these places when a lodger is taken ill to place him near the door of the relieving officer. The Sanitary Committee have attacked the pigsties here with good effect.

66. *George's-buildings* also swarm with low Irish. The houses are dirty, without drains, and damp, from elevated back premises, and a high wall in front. The street is unpaved, cows are kept in one of the yards, and the privies throughout are in a disgusting state.

67. *Mellon's-square* is the seat of epidemic disease, and as such was brought under the notice of the Sanitary Committee by Mr. Buchanan, surgeon. The history of this place is instructive:—

“The sanitary officer, their agent, found it unfit for human habita-

tions; the owner was summoned before the magistrates, when he stated 'it was as sweet as a nut;' the magistrates visited the spot, and ordered the numerous nuisances, such as piggeries, heaps of dung, green stagnant water 2 or 3 feet deep, and large heaps of ashes with the usual accumulations of decomposing excrementitious and other matters, to be immediately removed. The landlord was afterwards compelled, at a considerable outlay, to make a culvert into George's-street, and since then the aspect of the whole place is altered. Fever has disappeared, and the comfort of the inhabitants very much improved.

"Some of the houses now are badly ventilated, being built back to back. It is due to the landlord to state that he has latterly made some improvement in the property."

68. *Caroline-street* has neither sewers nor surface-drains, except at the back of some "club-houses," where there is a good culvert extending as far as the end of Dock-road, but it has no outlet, and its contents ooze through into the Dock-road, and contribute to the unwholesome character of the stagnant accumulations there.

69. *Mellon's street* :—

"Has a culvert, and the owners of 13 houses have availed themselves of it, but it is in bad order. Its course is along the Dock-road to the 'Hope and Anchor,' near which it frequently burst out into the road; five of these houses are low Irish lodging-houses overcrowded, and the infantile mortality here is greater than any other part of the town. At the back of these houses a piggery was recently kept for the use of the Irish cattle dealers, and has been let for as much as 16s. 8d. a night."

70. *Ruperra-street* is unfinished and without drainage, with the exception of a culvert at the back lately made, but which does not appear to have sufficient fall to be efficient.

71. *New Market-street*.—Here are 37 houses without culvert or public covered drain. The New Market culvert crosses the end of this street. The roadway has recently, on the representation of the Sanitary Board, been coated with stones.

72. *George street* is also in an unfinished state, and the roadway in wet weather is very filthy. A few yards of culvert have been made by private persons in front of their own houses, but it has no outlet, and it is stated that its contents ooze into the cellars.

73. *Potter-street*.—There are 18 houses in this street, of which 15, known as Pyne's row, are built on the low original level of the land, and are also blocked up by the embankment of a tramroad in front. The back drain has not sufficient fall, and the houses are rendered damp by the water from the front street, which has no drainage. The houses are not supplied with water, and the privies are undrained. A culvert runs from the back of Pyne's-row to the Pill.

74. *Pottery Lock-terrace*.—Of the 12 houses in this road 4

are undrained, and the drains of 4 discharge into the canal. The road is dirty, unfinished, and undrained.

75. *Church-street*.—The houses here each occupy the usual space allotted to a “taking,” that is to say, 16 feet frontage, and 60 feet in depth. Frequently, in other parts of the town, the space thus allotted originally for one house has been sublet, and a second built upon it; an abuse which is one cause of the dreadful state of some of the South Welsh towns.

76. *Jones’ court, Pillgwenlly*, is one of a series of courts along the course of the Monmouthshire Canal Railway, in which cholera prevailed. They stand on the original very low level of the ground; the fronts are entered from the first floor, and behind is an entry on the ground floor, both being tenanted; these lower rooms are low, damp, filthy, and unhealthy. The rent is 2s. 4d. a-week for one room, and two cupboards used as bed-rooms. There is a public refuse pit in front. The public privy here is in a dangerous condition and very filthy. Fever and diarrhoea continually prevail among these people, many of whom are Irish.

77. *Commercial Wharf* contains 18 houses, 5 without privies or backyards, the refuse being thrown into the street. Here are nuisances created by stables and pigsties in a dirty state. A main sewer has been made, but the people are only allowed to join it on paying their share of the cost.

78. Behind the *Commercial Inn* are a number of cottage tenements, built upon ballast, but without efficient drainage or privies, and very filthy, and the road is unformed. *Clarence-street* contains 31 houses and is without a drain. Some of the tenants have sunk barrels into the ground to collect the surface water. The road is unformed.

79. *Temple-street* contains 27 houses without drainage or efficient gutters. The overflow of the privies escapes into the earth; ordinary house refuse is cast into the open street, the surface of which is incomplete and full of holes.

80. *New-street*.—Here are 25 houses without a sewer; a tramroad passes through the street, which is imperfectly formed and in a dirty and damp state; the back premises are very close and confined; the house owners cannot put in drains for want of a main sewer; at present holes are bored in the back premises to aid the water in soaking away.

81. *Court-y-bella Terrace*.—Here, where there is a main sewer, the house owners have neglected to make drains into it. There are several low lodging-houses in this street, usually much over crowded and always in a filthy state; the cellars, which are in several places occupied, are quite unfit for human habitations.

82. *David Morgan’s-court*.—This is a low ill-ventilated place, suffering from the effluvium from dung-heaps con-

nected with the adjacent stabling. There is no efficient drainage.

83. In *Tapson's-court* are five houses with one privy; the houses have no back windows or premises, and their refuse is thrown into the road, the surface of which is very imperfectly formed.

84. *Company's-row*.—Here, as in many other places, the front door is on the first floor, and the ground floor partially a cellar habitation. Six houses here have no back yards, and are liable to be flooded owing to a defective state of the culvert. The lower rooms are damp, of small dimensions, and without ventilation or direct light; these are among the worst premises in the town.

85. *Baldwin-street* contains 38 houses, without any drainage to one side, and there is a close place behind into which the house refuse is thrown out of the reach of a cart. The Tredegar Wharf Company have recently drained the other side, but the privies do not communicate with the drain. An open ditch behind Mr. Cavin's store is much complained of.

86. *Protheroe's-row*.—Here a blocked up drain, designed to discharge into the canal, receives the contents of the privies of eight houses. *Dock Parade* contains 14 houses without a culvert, excepting a very partial one crossing the street under Devonshire House. The road is incomplete and a nuisance. Here are seven houses back to back, close, without back openings of any kind. The house refuse is cast into the street, which is unprovided with drains. The inhabitants are forced to use canal water, which is often in a filthy condition.

87. *Quiet Woman's-row*.—These houses are without back premises. Their position is low as regards the dock, and they are damp. In front of them is a tramway in a filthy state, and they are badly off for water. There is a public open pit for house refuse.

“There is one privy to 14 houses, open to the road, without a drain, always full, and built against the side of the ashpit, the smell of which is very bad. The owner of these houses took no notice of the order of the Sanitary Board, and was obliged to be summoned before he would empty the privy and ashpit.”

88. *Dock-road* is described as possessing the best culvert in Newport. At the time of my visit it was in progress at a very considerable expense.

“*Granville-street*.—These houses have been lately built. Those on the left-hand side of the street have drains from each into Mr. Hunt's culvert in his yard. The yards are too small, close, and confined. Privies but no dust-bins or other convenience for domestic refuse, and situated where there is no system of scavenging, the people are consequently compelled to throw their ashes out into the street. The houses

on the other side of the street are better situated, but have no culverts or drains; there is a small surface drain now in progress."

89. *King's Parade* contains 53 houses, with only two short surface-drains running into the Canal. The privies also are without drains; they join those of the houses in Castle-street. Fifteen of these houses have only one privy to the whole. The street has never been finished, and is in a filthy state. All the house refuse is thrown into it.

90. *Wedlake's-court*.—Here, also, the lower floor is constructed as a cellar, with an entrance at the back. The floor stands on the original level of the soil. Fever has prevailed here. With reference to this court the Superintendent states—

"Here are 14 houses, 11 of them have no ventilation; are inhabited by low Irish, low in position, filthy, and unhealthy. The drain is covered with loose flags and a board, and has not sufficient fall. The privies also are filthy. The lower part of these houses are not fit for people to live in. Before the Sanitary Board came into operation this was one of the worst courts. In the middle of the court there was a large ashpit into which all the house refuse was thrown, and this was built up against two privies, the contents of which flowed into the ash-pit, and so impregnated the atmosphere, that it was most unpleasant for a person not accustomed to the court to enter it. The medical officer of the Union, when visiting a patient, could not remain in the court, the stench was so intolerable.

"Summonses were obtained against the landlord to remove these nuisances; he employed a solicitor, and, upon a clerical error in the summons, defeated the Sanitary Committee. Another summons was obtained, and the magistrate's order was at last complied with.

"There is no water in this court. The tenants are willing to pay 2d. or 3d. a-week for it, but the landlord will not make the necessary outlay for the fittings."

91. *Watchhouse Parade* is built upon the ballast-bank from the shipping, here from 6 to 10 feet high. The road is at present unformed, and without a sewer. The state of this street has been frequently complained of by the surgeon to the dispensary.

92. *The Barrack Cottages*, five in number, are built close to an unhealthy stagnant pool, connected with the Old Mill.

93. *Canal Parade*.—Here the sewer is out of order, and the cellars occasionally flooded. The privies are without drains.

94. *Llanarth-street* contains 44 houses. The street has a properly built culvert, but part of it is laid at a dead level, and will not discharge its contents. It is now blocked up, where it passes under the canal. The Tabernacle graveyard seriously affects the wells in this street.

95. *Union-street*, with 16 houses, has privies without drains. Water is scarce, and the condition of the highway is very bad. In *Jaynes-buildings* are eight houses, all with privies, though placed rather too close to the houses. The landlord has

made a street culvert, but for want of a proper main sewer it is not of much use. The houses are clean, and have a water supply.

"In *Union-court* there are 12 houses without back yards or windows; four once had back yards to each, and pieces of garden attached, but the landlord lately converted them into houses (now called *John's-court*), and stopped up the doors leading into the gardens. All refuse is thrown into the street.

"These tenants use the privies in the courts adjoining.

"Several cases of cholera have occurred here."

96. *John's-court* contains five houses without back yards or windows, the single privy is without a drain, and very filthy. No water. The entry is by a close-covered passage.

"*Taylor's-court*.—Here are five houses. They have no back windows or yards; the court is close and confined, and the inhabitants are obliged to open their bedroom windows at night, in consequence of the closeness of the atmosphere. The houses are built back to back. All clothes are dried in this narrow passage. No water here. Size of court, $5\frac{1}{2}$ feet wide, 28 yards long."

97. *Thomas'-court*, with five houses, is much in the same condition, and suffers besides from oozings from a most offensive privy. *No. 5 Court* is close to a slaughter-house; much complained of. Several fatal cases of cholera occurred in these close, damp courts.

98. In *Dock-street* are 19 houses of a superior class, but the street is unfinished and a pool of water is usually to be found in it. The owners of this street have not conformed to the local Act as regards its width, on which account the town authorities have refused to adopt it.

99. *Llanarth Cottages*; near these the magistrates have lately directed a culvert to be made in place of the open ditch, which is stated to have been very offensive before the order was given. *Dolphin-street* is a new street of 60 houses, but in a filthy condition,

"having a tramroad running through it. A magistrate's order was obliged to be obtained by the Sanitary Board before the owners would fill up the pools of stagnant water which the medical men reported as engendering disease in the neighbourhood."

100. *Griffin-street* contains 11 houses, of which three are employed as public, and one as a private slaughter-house. It is difficult to describe the nuisance thus created in the midst of a crowded population, with bad drainage, and no sanitary regulations in force, and a very imperfect supply of water.

101. *High-street, Pillgwenlly*, contains 46 houses without culvert or efficient covered drain. It has a tramroad through it, which is a source of much dirt. One side of the street is sub-let to low Irish, and is peculiarly crowded and dirty. Two

of the public-houses in this street are drained directly into the Pill.

102. *Castle-street, Pillgwenlly*, consisting of 45 houses, is chiefly the residence of the lowest class of Irish. It is unpaved, undrained, and very filthy, the house refuse being thrown into the gutter. The owners have been summoned, but they plead, and with great justice, the want of a main sewer laid by the town.

103. There are 17 houses in *Castle Precincts*, four of which have a public privy but no drains, and the other 13 have no privy at all; the refuse is thrown into the street. These houses are built against the Castle Brewery, very closely packed, and are without back windows. The railway wall in front has rendered them even more close and damp than formerly, and in nearly every house cases of cholera occurred. Four of these houses are below high-water mark. The whole ought to be swept away as unfit for the abodes of human beings, and as involving, by the production of sickness and pauperism, a heavy addition to the local taxes.

104. *Pentonville* is a very damp street, the condition of which is very bad indeed. It is noticed here on account of the large number of cases of cholera which occurred in it, and which were attributed to the contiguity of the Mill-street Chapel yard.

105. The *Marshes-road* contains 78 houses, of which 63 are built 5 or 6 feet below the level of a large pond: the privies of all these houses, placed above them, discharge into this pond at its margin. Three or four of the house-drains discharge into an open nearly stagnant ditch in front of the road, and into which domestic refuse of every description is thrown. At the time of my visit it had been partially covered with quick lime by direction of the Sanitary Committee. The situation of these houses, between the pool and the ditch, is very unhealthy.

106. With reference to *Mill-street* the Superintendent observes—

“Here are 22 houses; 9 of them, adjoining the railway, have no privies, and there is a wall about 8 feet high at the back, leaving only a space of 4 feet for a back yard.

“The 13 houses opposite have privies, with a culvert running into the canal, made under the direction of the Sanitary Board, with the exception of five of them, which have no drains.

“There is a surface-culvert in this street, running into the canal. Before the operation of the Sanitary Board it was an open drain. Its contents, including the refuse of slaughter-houses and privies, now empty into the canal.

“Several of the houses are low lodging-houses for tramps, such as *gridlers*, *shallow-coves*, and *high-flyers*, and others who make a regular system of travelling all over the country. These lodging-houses are very frequently dangerously overcrowded, the rooms being close, confined,

and ill-ventilated, and males and females indiscriminately huddled together."

107. *Mill-street Welsh Independent Chapel* yard elsewhere noticed, is upon the wet hill side, and very full. The ground is higher than several of the houses, and the exudation is said to drain upon them.

108. SEWERS and DRAINS.—Newport is very insufficiently sewered. Parts of the town are without any sewers at all, and in others the sewers are intended solely for the removal of surface-water, the householders being strictly forbidden to drain into them. It is of course impracticable to enforce, in all cases, such a prohibition, and in consequence, the large, untrapped grates of such sewers give out most offensive stench in the streets, and their contents render the waters of the canal, into which many of them discharge, very impure.

109. Although the fall of the upper, or northern, part of the town is excellent, that of the lower part, across which the upper drainage is in great part led, is very defective, and the drains being under high-water level, can only discharge in certain states of the tide.

110. It appears from the surveyor's returns that there are, in the whole borough, of sewers 3 feet diameter, 2,167 yards completed; 30 inches, 290 yards; 2 feet, 624 yards; 18 inches, 1,869 yards; 16 inches, 366 yards; 12 inches, 104 yards. Many of these sewers are flat-bottomed, rudely constructed, and very inefficient; a few of the later ones have been built with more care, and after a better pattern.

111. The principal street-drains may be briefly described as follows,—one runs along Commercial-street, from Corn-street, southwards; receiving side culverts from Potter-street, Cwrt-y-bella road, and the back of Pillgwenlly, and discharging by a flapped-outfall into the head of the Pill.

112. A second drain descends from Baneswell-street, across High-street and Cross-keys-lane; receives drains from Thomas-street, a part of High-street, Friar's-fields, Corn-street and Skinner-street, Charles and Llanarth streets, Stowe-hill, Bake-house-lane, and Commercial-street passes under the canal and discharges by a flapped opening into the head of the town pill. This is said to be the best outfall in the town, inasmuch as it is kept clear by a steady flow of land water.

113. Another sewer drains George-street and the new market, and discharges into Jack's Pill, below which, near the Commercial Inn, are two unimportant culverts, each of which has a distinct outfall into the river.

114. Most of the culverts in the lower part of the town have been recently constructed by the Tredegar Wharf Company, and are intended not to drain the houses, but to replace the old

rheens and drains, filled up by their ballast heaps, and to discharge the surface-waters only.

115. **HOUSE DRAINAGE.**—It may be supposed that in a town in which there are few sewers, and most of those confined to land drains, the system of house drainage will not be very perfect. In fact, the inferior class of houses are without it. The filth is thrown into the privy, where there is such a place, but more commonly into the street.

116. The occupiers of the better class of houses complain of the want of main sewers and of the heavy expense to which they are in consequence put by the necessity for constructing long drains from their premises to some distant sewer, ditch, or outfall.

117. I called upon Mr. James Salter for the results of his experience concerning the condition of the town, acquired during engagement as surveyor to the Commissioners, agent to the Sanitary Board, and relieving officer to the Board of Guardians for Newport. His statement is as follows :—

“ Information given by me, James Salter, upon the sanitary state of the borough of Newport, from observations made, and circumstances occurring during the time (two years) I was surveyor under the Town Act, afterwards agent to the Sanitary Board, and at present relieving officer for the central district of the Newport Poor Law Union, viz., the district embracing the borough of Newport and the parish of St. Woollos.

“ The difficulties I experienced as surveyor, were an utter impossibility in having the streets kept in a state to satisfy myself, in consequence of the great deficiency of private drains from the houses of the poorer classes, and an absence of privies ; as for instance,—several houses on the left hand side from the top of Corn-street, where the inmates have no conveniences, they are under the necessity of emptying the filth from their houses on to an ash-heap at the corner of a public thoroughfare, the scavenger conveying it away twice a-week. In several small squares and courts which the cart of the scavenger cannot reach, are nuisances similar to that above described.

“ As surveyor, the Act gave me no summary power over private nuisances ; but upon being appointed agent to the Sanitary Board under the Act for ‘ the more Speedy Removal of Nuisances,’ I had an opportunity of discovering nuisances of which I had previously slight conception ; holes intended for cesspools at slaughter-houses, with light coverings, in densely populated localities, the sediment being but seldom removed, and in many places waggon loads of filth accumulating in small yards adjoining slaughter-houses, privies heaped up, and holes of stagnant water, pigsties filled with pigs, seldom cleaned out, and situated in confined back-yards, adjoining the doors and windows of their owners.

“ Mr. English and myself, being appointed in conjunction by the Sanitary Board, lost no time in commencing our arduous duties, and in the course of nine weeks had the satisfaction of knowing that thousands of loads of filth had been removed from the town ; waggons and carts

in all directions being engaged, night and day, carrying away the refuse from slaughter-houses, pigsties, cesspools, and holes; but without the greatest vigilance the same nuisances will of necessity perpetually recur, and the evil will be repeated until the cause be removed.

“On commencing my duties as relieving officer at Christmas last, I discontinued acting as agent to the Sanitary Board, but my duties gave me every facility in making observations on the sanitary state and condition of the town and neighbourhood, and I cannot but look upon the passing of the Nuisances Removal Act, as conferring a great temporary blessing upon the whole district, as the exertion used, and the work accomplished have evidently saved numbers from falling victims to the dire disease with which we have been visited; for the very places in our town, where it has prevailed and secured some victims, are generally the places where the filth had more especially accumulated, and from whence it had been carried, and where persons were densely crowded together, with but little ventilation to their houses, and an absence of water and other conveniences; consequently, had not the most stringent measures been used, instead of a few cases of death comparatively speaking, we might have had to deplore a great number.

“I must now remark upon the effect which the sanitary condition of the town has upon the poor-rates, as the greatest part of the casual relief given to the poor is required in consequence of diseases prevailing in the places before alluded to; thus showing that a liberal outlay, in effectually and permanently removing the causes of disease, will be true economy.”

118. WATER SUPPLY.—Newport derives its water from rain, from wells and pumps, and from the water-works. Rain-water butts are expensive and cumbrous, and the lower class of cottages have neither expanse of roof to collect, nor can they afford the expenses of storage arrangements.

119. There is a public spring or conduit at Pillgwenlly, fed from a source near St. Paul's Church. The public pumps are Baneswell, and the pumps in Mill-street, Corn-street, Stowehill, and Salutation. The supply is very insufficient for the wants of the town, and the cottagers suffer materially from scarcity. For ordinary purposes they have recourse to the canal, the water of which is very dirty, many of the houses draining into it. Near some of the burial yards the springs are tainted, and many of the ordinary springs fail in dry seasons.

120. The Newport and Pillgwenlly Water-works were established by Act of Parliament, 1846, and completed 1848, at a cost of about 27,000*l*. They are in the hands of a Joint Stock Company; to the chairman of which, Mr. Cordes, as well as to Mr. Morris, their surveyor, I am indebted for most of the following particulars.

121. The main reservoir is $1\frac{3}{4}$ miles distant from the town. It covers 14 acres, contains 146,000,000 gallons, and its top level is about 80 feet above the Newport Dock coping, which may be taken as high-water mark spring tides. The reservoir

is fed chiefly by springs; it also receives the drainage of about 500 acres of gathering ground. The water, according to an elaborate analysis by *Mr. Herapath*, of Bristol, is composed of—

“ Chloride of magnesium . . .	153	say	$\frac{1}{7}$	of a grain.
Chloride of sodium . . .	218	„	$\frac{1}{5}$	„
Sulphate of magnesia . . .	175	„	$\frac{1}{6}$	„
Sulphate of soda . . .	109	„	$\frac{1}{10}$	„
Sulphate of lime . . .	678	„	$\frac{2}{3}$	„
Carbonate of lime. . .	065	„	$\frac{1}{10}$	„
Carbonate of magnesia . . .	065	„	$\frac{1}{10}$	„
	<hr/>		<hr/>	
	1,463		$1\frac{1}{2}$	”
	<hr/>		<hr/>	

From the storage reservoir the water is led by an iron conduit pipe of 12 inches in diameter, to the lower service reservoir upon Stowe-hill. This is lined with masonry, and contains 158,000 gallons. Its top-water level is 66 feet above high-water mark.

122. By the side of this tank is placed a condensing steam-engine of 5 horse-power, by which the water is forced up by a 6 inch pipe into the second service reservoir, on the top of Stowe-hill, also lined with masonry, and containing about 50,000 gallons. The top-level of this reservoir is 196 feet above high-water mark. Besides this, is a small stand-pipe, not at present used, 20 feet higher, by means of which the highest service is laid on. The engine will lift about 170 gallons a minute, an ample supply for the limited number of houses, about 200, which, from their elevation, might require to be supplied from the upper reservoir.

123. Setting aside the upper reservoir and its area, it appears that the company possess a storage of nearly 150,000,000 gallons at an elevation capable of commanding nine-tenths of the town, the population of which cannot be much less than 15,000 persons; so that, supposing a daily consumption of 20 gallons a head, the storage would be sufficient for 500 days; a supply, therefore, quite sufficient for every possible want, public or private, of the town of Newport, even were the numbers of its population more than doubled.

124. The rates charged by the company at present, for domestic supply, are as follows:—

“ The Newport and Pillgwenlly Water-works Company is ready to supply water in the streets and places where the main is laid, on the following terms:—

FOR DOMESTIC USE.

House-Rent.	Water-Rate per Quarter.			House-Rent.	Water-Rate per Quarter.			House-Rent.	Water-Rate per Quarter.		
£.	£.	s.	d.	£.	£.	s.	d.	£.	£.	s.	d.
5	0	1	3	36	0	7	9	88	0	14	0
6	0	1	6	38	0	8	0	91	0	14	3
7	0	1	9	39	0	8	3	94	0	14	6
8	0	2	0	40	0	8	6	97	0	14	9
9	0	2	3	41	0	8	9	100	0	15	0
10	0	2	6	43	0	9	0	105	0	15	9
11	0	2	9	45	0	9	3	110	0	16	6
12	0	3	0	47	0	9	6	115	0	17	3
13	0	3	3	49	0	9	9	120	0	18	0
14	0	3	6	50	0	10	0	125	0	18	6
15	0	3	9	52	0	10	3	130	0	19	0
16	0	4	3	54	0	10	6	135	0	19	6
17	0	4	6	56	0	10	9	140	1	0	0
18	0	4	9	58	0	11	0	145	1	0	6
20	0	5	0	60	0	11	3	150	1	1	0
21	0	5	3	62	0	11	6	155	1	1	6
22	0	5	6	64	0	11	9	160	1	2	0
23	0	5	9	66	0	12	0	165	1	2	6
24	0	6	0	68	0	12	3	170	1	3	0
26	0	6	3	70	0	12	6	175	1	3	6
28	0	6	6	73	0	12	9	180	1	4	0
30	0	6	9	76	0	13	0	190	1	4	6
32	0	7	0	79	0	13	3	200	1	5	0
34	0	7	3	82	0	13	6	Above 200 at 12s. 6d. per cent. per quarter.			
35	0	7	6	85	0	13	9				

Mr. Cordes observes,

"There are in the borough of Newport 330, and in the parish of St. Woollos 500, houses rated under the poor's-rate at less than 10*l.* per annum; of which class, only 25 houses are supplied with water by the Water-works Company; *thus showing that the lower classes of the community are very scantily supplied, a circumstance arising from the indisposition of the landlord to lay out a few shillings for the comfort and convenience of the tenants*,—e. g., a landlord who owns 20 small tenements in a court, sheltering, on an average, 400 persons, objects to pay 1*l.* 16*s.* per quarter, for a constant supply to these tenements, and a charge of 35*s.* for the necessary fittings.

"The tenants of numerous Benefit Clubs in the town complain of being denied a supply of water from the Water Company, in the refusal of the landlords to incur even a moderate charge of simple fittings for affording a supply of water."

125. This indisposition or positive refusal on the part of the landlords of cottage tenements to lay on the water is manifested in every town which I have inspected, in which there are Water-works, and although this disposition to stand in the way of improvement in the comforts of the lower classes is most commonly exhibited in the refusal of water, it will be found to exist as strongly against improvements in house drainage and similar matters.

126. **STREETS AND ROADS.**—The highways in the Old Borough are under the control of the Improvement Commissioners, who provide for their repairs and scavenging out of the general rate. The roads, excepting the main street, are not in very good order. The Commissioners' control does not extend to private streets, or courts, and in consequence these in most cases have no metalled surface, and are in a damp and dirty condition.

127. The footways are very irregular. The Commissioners have only a power of repairing the footways, but they can neither make them nor call upon the inhabitants to do so, and as a necessary consequence the town is very badly provided in this respect.

128. The highways in the lower town are under the control of the Tredegar Wharf Company, who have not delivered them over to the parish. Most of these roads are badly formed, and in a dirty state. The houses have been built along the lines of the tramways, which collect dirt and damp. The footways are much broken and interrupted, and the courts and alleys are either unpaved or very badly paved.

129. **SCAVENGING.**—There are no provisions for public scavenging in the New Borough. Most of the streets are incomplete, and are in a filthy state from mud, house-refuse, and ordure. Very recently the Sanitary Committee effected the removal of a part of the accumulated filth of 9,000 persons, their measures however are but of a temporary character.

130. **LIGHTING.**—The Old Borough is lighted by 96 public gas-lamps, which are provided by the Town Commissioners. There are besides seven private street lamps. This number of lamps is obviously very insufficient for the 1,295 houses contained in this division. Even in the main streets the lamps are but few, and many of the bye streets and alleys are not lighted at all. The New Borough, containing 1,237 houses, is not lighted by any public lights. There are 20 street lights belonging to private persons. There are great complaints of the want of public lights.

131. Great part of Dock-street is unlighted, notwithstanding that there is much traffic here at all hours. The whole of the Commercial-road is in the same condition, though it has on each side deep open ditches with scarcely any fence. George's-buildings, Mellon's-bank. Caroline-street, Canal-side, Cross-street, Queen's-parade, Mellon's-street and square, George's-street, Rees's-buildings, Granville, Ruperra, Newmarket, and Dolphin-streets, Queen's-parade, Jack's Pill, Botany, King's-parade, Dock-parade, Quiet Woman's-row, Church, Castle, and High-streets, Pill, Clarence, Speedwell, and Potter-streets, New-street, Temple-street, Baldwin-street, Cwrt-y-Bella-ter-

race, Watchhouse-parade, and other highways too numerous to mention, are all absolutely without lights. Nevertheless several of these streets are very dirty and badly paved and the population living in many of them is of a low and drunken character, so that the assistance afforded to the police by a good system of lighting is particularly required.

132. The Dock is at present only lighted by five or six lamps, although more posts are set up; several persons have in consequence fallen in at night, and have been drowned.

133. BURIAL GROUNDS.—The condition of the burial-grounds in the town was generally complained of. These grounds are eight in number, all within the town, and several of them surrounded by houses.

With reference to the parish churchyard the Vicar states,—

“ In consequence of the great and rapid increase of the population of the borough of Newport during the last 10 or 12 years, the churchyard of St. Woollos (in which parish the borough is situated), and which is the only burial-ground within the parish where funerals are solemnized according to the rites of the Church of England, has necessarily become very much crowded, and although there is still some space unoccupied, and many of the graves and vaults therein are not filled, yet the annual average of burials is such as will make it incumbent upon us ere long to provide some additional place for the interment of our dead.”

134. Among numerous complaints on the subject of this burial-ground I select the following remarkably well supported statement:—

“ *Newport, Monmouthshire, 24th August, 1849.*

“ George Thomas Clark, Esq.

“ SIR,—We beg to call your attention to the state of the burial-ground in St. Woollos churchyard, which has for a considerable period been very much overcrowded, so much so, that they hardly know where to find room for a grave that has not been previously occupied, while the interments in one week lately has been from 20 to 25, and that they are likely in ordinary times to average from 300 to 400 per annum (the actual average for the last three years being 357), without taking into account the rapidly-increasing number of the population. That the smell at certain states of the weather on passing through the churchyard is so pungent as to be very offensive and injurious to the public health, and the situation of the burial-ground (being on the top of the hill surrounded by dwelling-houses), through which there are two public pathways, will, doubtless, if these things are allowed to continue, prove most injurious to the health of the town generally.

“ We beg further to call your attention to the fact, that by far the greater number of burials on the old ground are made in ground sloping upwards from the pathway towards the church at nearly an angle of 45 degrees, consequently the dead are placed in numerous instances considerably above the level of the pathways all round the church.

" In the lower part of the burial-ground they are positively prevented from digging to a greater depth than 5 feet in consequence of the obstructions caused by water, and in many instances graves have been cut where the coffin of the adjoining grave has been exposed to view, of course highly revolting to the feelings as well as injurious to the health of the public.

" One side of the embankment, running the entire length of the burial-ground, is solely supported by a wall averaging 10 feet high, perforated with numerous outlets for the drainage of the churchyard, which flows down the public turnpike-road in an uncovered drain; and, moreover, most of the wells in the immediate neighbourhood are more or less affected by the overcrowded state of the burial-ground.

[" And we beg further most respectfully to direct your attention to the fact that all the drains in the upper part of Stowe-hill are all surface-drains, and the exhalations from them on very many occasions are exceedingly noxious, and must necessarily be injurious to health, as there are many privies belonging to the surrounding houses emptying themselves into these surface-drains, as well as the refuse-water from each house in the immediate vicinity.]

" We remain yours most respectfully,

" Wm. Evans, *Mayor*.

Thos. Hughes, *Churchwarden and Magistrate*.

Wm. Williams, *Alderman and Banker*, Stowe Hill.

Wm. Williams, jun., *Banker*, King's Hill.

James Rennie, *Contractor for Public Works*.

Charles B. Fox, *Solicitor*.

R. J. Scott, *Surgeon*.

Henry Williams, *Gentleman*, Victoria-place.

J. H. Langdon, *Architect*.

Lewis Edwards, *Alderman*.

Thomas Turner, *Town Councillor*.

Edwd. Dowling, *Town Councillor, Editor of the 'Merlin.'*

Stephen Campbell, *Shipping Agent*, Stowe Hill.

Wm. M. Clapp, *Coal Merchant*, Clifton-place.

Edward Locke, *Engineer*.

Thomas Edwards, *Iron Founder*.

John Williams, *Coal Merchant*.

J. A. Sunomet, *Professor of Languages*.

William Reynolds, *Agent*, Stowe Hill.

Charles Cairns, Victoria-place.

William Jones, *Agent*, Stow Hill.

Llewelyn Jenkins, *Agent*.

Moses Wilde, *Pawnbroker*.

Amb. Miller, *Gentleman*.

J. H. Davis, *Agent*.

Thomas Howard, *Brewer*.

David Evans, *Cabinet Maker*.

William Allen, *Baptist Minister*.

J. Wildy, *Accountant*, Stowe Hill.

Charles Napper, *Confectioner, &c.*

F. R. Owen, *Agent*.

W. S. Cartwright, *Colliery Proprietor*, Stowe Hill.

T. B. Batchelor, *Merchant*.
 Thos. Powell, *Merchant*.
 Benjn. Evans, *Draper*.
 James Lewis, *Stowe Hill*.
 Jno. Cathcart, *Assistant County Court Clerk*.
 John Fraser.
 Henry John Davis, *Solicitor*.
 Robt. F. Woollett, *Surgeon*.
 W. H. Coulson, *High-street*.
 E. Beckingham, *Manager West of England Bank*.
 Chas. Smith, *Merchant*.
 Edw. Wm. Jones, *Merchant*.
 E. V. Jenkins, *Chemist, &c.*
 James Blew, *Accountant*.
 R. H. Nicholas, *Searcher, Her Majesty's Customs*.
 J. B. Seward, *Clerk, Her Majesty's Customs*.
 Henry Morse, *Merchant, Stowe Hill*.
 H. M. Partridge, *Auctioneer, St. Woollos House*.
 Jn. Handy, *Deputy Town Clerk*.
 Henry Shephard, *Grocer, Commercial-street*.
 Edward Morgan, *Draper, Commercial-street*.
 John Watkin Jones, *Surgeon, Commercial-street*.
 W. R. Matthews, *Tea Dealer, Commercial-street*.
 John H. Elliot, *Merchant, Skinner-street*.
 Edward Wells, *Accountant, Newport*.

“ Having read the above Memorial, I entirely concur in the opinion therein expressed of the necessity of providing as early as possible an additional place of burial for the interment of our dead.

“ EDWD. HAWKINS, *Vicar*.
 ROBT. PYNE, *Churchwarden*.
 OCTAVIUS MORGAN, *M.P.*
 JAMES BIRCH.”

“ August 28, 1849.”

I have only to observe upon the above memorial that having inspected the place I fully concur in the statement as to the overcrowded condition of the greater part of the ground, and the damp and undrained condition of the whole of it. It is true, as the vicar has stated, that there is room for about 50 graves more upon ground not yet unbroken; nevertheless, looking to the general condition of the ground, I think the sooner it is closed the better.

136. Mr. J. W. Jones, surgeon, called my attention to the new portion of St. Woollos churchyard, and cited a funeral in May last, when, he states, “ I was so shocked at seeing the coffin literally deposited in five or six inches of water, that I immediately quitted the spot in disgust.”

Mr. S. Campbell gives evidence as to the crowded state of this churchyard, and adds :—

"I have also further to state, that some seven or eight months since the water in a well situated on my premises became slightly discoloured, and had a very unpleasant taste and smell; and upon, having the water pumped out, I found that there was no drain running near the well, and that the only place from which there was any water running into it was from the direction of the burial-ground, separated from it only by a narrow roadway. The water still continues bad and unfit for use, although not so much discoloured as it was.

"In conclusion, I have to remark, with regard to inefficient drainage, that all the refuse water from my house, together with the overflowings of my cesspool, empty into the open drain, running down the hill. The same also applies to most of the houses in the upper part of the hill."

136. The following particulars concerning this churchyard were brought forward, at my request, by the vicar:—

"The annual number of burials from the year 1841, inclusive, as taken from the register of burials belonging to the parish of St. Woollos, in the county of Monmouth:—

1841	.	.	.	.	227
1842	.	.	.	.	217
1843	.	.	.	.	212
1844	.	.	.	.	182
1845	.	.	.	.	190
1846	.	.	.	.	218
*1847	.	.	.	.	539
1848	.	.	.	.	367
1849	.	.	.	.	295

to August 22, inclusive.

"The number of burials in the year 1848, it is evident, is above the average as it is compared with the former years. During the first six months of that year (1848), the monthly average of burials was about 34; during the last six months it was only 28, which was about the average of the first five months of the present year, until we were visited by the cholera; the first recorded case of which in my register is May 28. Since, the burials have been as follows:—

June	.	.	.	.	51
July	.	.	.	.	51
August	.	.	.	.	58

to the 22nd, inclusive

"As far as the data above given can serve as a guide, I should say we cannot place the average annual number of burials at less than 300; which, from some cause or other, is certainly a larger proportion than the increase of our population would warrant us in expecting. Up to 1846 it had not averaged more than 210. It may of course have arisen, from there having been a larger number of bodies brought to the church for interment, as compared with those buried in the other grave-yards in the town."

* The great increase in this year was, in a great measure, owing to the Irish immigration, which took place to a large extent in the winter of 1846 and the early spring of 1847.

137. I have also received from *Mr. Cornelius Evans*, clerk to the Improvement Commissioners, the following particulars concerning the burial grounds in the town:—

“ 1. *St. Woollos*.—Crowded. Thirty-three years ago, when I came to Newport, there was not a grave on the north side, and very few to the west of the church. The new piece of ground added to the church-yard a few years ago was then the old roadway from Newport to Cardiff. I have no hesitation in saying, that in consequence of the immense accumulation of burials in this place, it has for some time past become occasionally offensive.

“ 2. *The Cemetery*.—This is new ground, in good order, and under excellent arrangements. No grave, I believe, is less than 10 feet in depth.

“ 3. *Mill-street Chapel-yard*.—With the exception of *St. Woollos*, this is the oldest burial place in Newport. Thirty-three years ago it was nearly, if not quite full, and now it is very crowded. The last corpse which I saw interred here was not more than 2 feet 6 inches from the surface.

“ 4. *Tabernacle Chapel-yard*.—This ground is crowded, loathsome, and offensive; surrounded by a populous and respectable neighbourhood. The average depth of the graves I understand is from 4 feet 6 inches to 5 feet; the soil wet. Consequently the graves, to a certain extent, contain water. A part of *Llanarth-street* bounds it on the north; the pumps and wells of these houses are worse than useless, as the water in them is discoloured, and is so foetid that it cannot be used for any purpose. *Mr. Beckingham*, of the bank, informs me that about four years ago he employed the late *Mr. Thomas Watkins*, at an expense of about 20*l.*, to clean out his well, and to find out the cause of the bad quality of the water. After cleaning and getting to the bottom, it was found that the spring was excellent and pure; but, from the side of the well next to the burial-ground, water, &c. of a very offensive odour oozed out. *Watkins*, by boring under the walls and narrow road which separate the houses from the yard, found that this cause of the filthy water was in the chapel-yard. *Mr. B.* says they have never been able to use the water since for any kind of purpose. *Mr. Palmer*, the undertaker, says the water is so bad that his men cannot use it to wash the vehicles, &c. *Mr. Williams*, the timber merchant, says that he left the street chiefly owing to the water, and considering it a very unwholesome place to live in. His servant girl could not use the water for washing the kitchen, &c. *Mr. Ebenezer Jenkins* and the other tenants give the same testimony, and they believe the cause to be from the burials in the said yard.

“ 5. *West Baptist Chapel-yard*.—This is another burial place in the town; but part of the ground is not yet occupied, and the whole is kept in good order. The situation is objectionable, and, being on the hill side, the drainage from the graves flows towards *Commercial-street*. The depth of the graves is about 7 feet; some are deeper, but several bodies are buried in the same grave.

“ 6. *English Baptist Chapel-yard*.—This is small, very crowded, and liable to the same objections from the situation and wet character of the ground.

"7. *Mount Zion Chapel-yard, Hill-street.*—Small, but apparently in good order, and not yet much crowded; it is liable to the same objection.

"8. *Ebenezer Chapel-yard, near Salutation.*—The situation is objectionable, being surrounded by houses. It is of good size, and part is not yet occupied. In the other part the graves are numerous."

138. **SLAUGHTER-HOUSES.**—These are numerous, and all either within or near the verge of the town. There is no public slaughter-house. The following report upon these houses has been furnished at my request by the Superintendent of Police:—

"Hugh Morgan, Commercial-street: heaps of offensive matter and bad smell; badly drained.

"James Duckham, Canal side: very offensive smells; badly drained.

"John Parry, Griffin-street: very offensive smell, and privy attached; well drained.

"'Shipwreck,' Griffin-street: used by a great number of butchers; very offensive smell; good drainage.

"Frederick Clark, Griffin-street: very offensive smells; badly drained.

"'Blucher's Arms:' used by a great many butchers; in a filthy state and offensive smell; badly drained.

"George Landers: very clean and well drained.

"Richard Mockford, Cross-street: filthy and very offensive smell; no drainage.

"William James, Cross-street: filthy, and pigsty attached with several pigs; no sewers near.

"Albert Hicks, Fothergill-street: very offensive smell; bad drainage.

"Mrs. Ashfield: clean, but bad smell; bad drainage.

"Samuel Channing, Pillgwenlly: very offensive; badly drained. Pigs kept.

"Albert Hobbs, Pillgwenlly: filthy; bad drainage.

"Isaac Jones, Pillgwenlly: filthy, and very offensive smell; bad drainage, and offensive yard attached.

"Edward Morgan, Baneswell: clean.

"William Scandrett: very offensive smell, and pigstye attached.

"William Duckham, Pillgwenlly: very filthy and offensive; no drainage.

"The slaughter-houses are in general very much confined, and in a most foul and filthy state; some with a heap of dung attached, and others with pigs fed in some portion of them, causing them to be more offensive. The butchers, also, in general, cause a very considerable nuisance by boiling their offal in or near their slaughter-houses, which, in many instances, have been the subject of complaint by the inhabitants in the immediate neighbourhood."

139. **LOW LODGING-HOUSES.**—These houses are very numerous, and in many of them have been found characters of a very bad description. They are all reported as nests of fever and cholera. The following list, furnished to me by the Superintendent of Police, shows the crowded condition of the inmates of many of them.

STATE of the several LODGING-HOUSES in the Borough of NEWPORT.

Person's Name.	Where Situate.	Number of Rooms.	Number of Persons.	REMARKS.
Thomas Sullivan .	Fothergill-street .	3 small	25	} Filthy, and no ventilation.
John Drummy .	"	5 small	33	
Johannah White .	"	4 small	26	
John Horrigan .	"	8 small	49	
John Donovan .	Brick-yard . .	4	27	} No ventilation.
William Murphy .	"	2	9	
Patrick Cogan .	"	3 small	13	
Michael Brickley .	"	2 large	24	
Thomas O'Connell .	"	3	13	} Well ventilated.
Jeremiah M'Carthy .	"	2	14	
William Miles .	Mill-street . . .	6	16 to 20	
Thomas Stephens .	"	7	15 to 20	
John Griffiths .	"	4	16	} Bad roof, and no ventilation.
Mrs. Stephens .	"	4	10 to 14	
Mrs. Williams .	"	3	7	
Catherine Lantalum	Back Rees' Buildings	2	16 to 20	
Henry Thomas .	"	2	5	} No ventilation.
William Allen .	"	2	5	
Timothy Deasy .	"	2	6	
John O'Connell .	"	1	6	
Charles Williams .	Underground kitchen	1	4	} Facing tramroad.
Daniel Leahey .	"	1	8	
John Nichols .	Back Rees' Buildings	2	5	
William Rich .	Rees' Buildings .	1	5	
Thomas Jones .	Newmarket-street .	5	42	} Water and ventilated.
Thomas Dowd .	Kear-street . .	2	9	
Mary Barnett .	"	2	12	
William Hayes .	"	3	17	
Hannah Sullivan .	"	2	13	} All filthy Irish people, and no ventilation.
John Stanton .	"	2	17	
Patrick M'Carthy .	Pillgwenlly . .	5	17	
Andrew Carey .	"	5	19	
Peter M'Cloud .	"	5	6	} These houses are much larger than the generality of the lodging-houses, and not so much crowded, and better ventilated.
Edward Brickley .	"	5	10	
John Murry .	"	5	14	
William Whellen .	Cross-street . .	3	10	
Philip Coleman .	"	3	6	} No ventilation.
Cornelius Leonard .	"	6	14	
Daniel Larey .	"	2	7	
Mrs. Lancaster .	"	2	9	
Thomas Ryan .	"	4	16 to 20	} House badly ventilated.
Thomas Lanigan .	Canal side . . .	5	12 to 15	
John Donovan .	Mellon's-bank . .	4	27	
Patrick Hurley .	George's-buildings.	3	19	

NOTE.—The greater part of the above houses are without any sort of water-closets, without any drainage to carry off the filth, and without any supply of water for any purpose, and, in general, inhabited by the most filthy persons.

Police Office, Newport, Monmouthshire,
August, 1849.

140. REMARKS.—It will be evident from the preceding statements that the borough of Newport stands in need of a government whose powers extend equally over the whole area, and

that those powers must be of a much more stringent character than those of the existing Acts. The ground has been covered with buildings of an inferior description, placed often without any general plan, without raising the low and wet surface, without laying down any system of drainage, without limiting the number of houses to be built upon any given space, and consequently without any provision for ventilation, sewerage, or water supply, or those conveniences from which a house without a yard attached is precluded. The object in view has been to swell the rent-roll, with but little regard for the condition of the poor, and no regard for the pockets of those who pay the poor-rates. The canal and the tram-roads, as at present managed, are sources, the one of damp, by preventing drainage, the other of damp and dirt, inasmuch as the horse tracks and side spaces collect water and mud, and, owing to the mechanical arrangements of the tram-way, are difficult to clean; the nooks and corners by the sides of these tramways, and the level crossings of roads connected with them are filthy, being convenient places for the accumulation of rubbish. The system of "excused lists," also tends to increase the number of inferior cottages, and to place a larger number of persons under the debasing influences above described and consequently both directly and indirectly to increase the burdens of the rate-payers.

141. Mr. Evans's observations upon the mortality, and the local circumstances affecting it, deserve close attention, because they establish the connexion of disease and pauperism, and increased expenditure, with damp, filth, want of water, and want of drainage. The water supply, although ample, and offered at a cheap rate, so as to be quite within reach of the means of the cottagers, has not been generally taken advantage of. The objection is not on the part of the poor; they feel the want of water, and are quite willing to pay the penny or three half-pence a-week that it may cost, but they, with a tenancy from week to week, cannot be expected to pay the few shillings required to lay down the service-pipes; and this, though clearly the landlord's business, he refuses to do. Mr. Cordes's evidence on this point is precisely that of all those who have concerned themselves in the affairs of a water company.

142. The public lighting of the borough deserves attention and requires reform. At present a part only of the town is lighted, and the portion left in darkness is that in which, from various causes, persons of dissolute habits live, and in which the police find most employment. If not for the convenience of the inhabitants, yet for the selfish reason of keeping down the police-rate, these parts of the town should be well lighted. The condition of the burial-grounds, and most especially of the principal one, scarcely needs further notice after the mass of evidence adduced.

143. It is scarcely necessary to show that works carried out under a general scheme, and paid for by a general contribution, are better executed, and the cost is more conveniently distributed, than in the case of those executed by individuals. Mr. Jones stated, that he was obliged, at his own expense, to lay down 130 yards of public drain, at a cost of 26*l*. Mr. Latch and his neighbours subscribed 43*l*. to cover in a ditch, which ought to have been covered in at the expense of the whole community. Such cases are very numerous, and these private drains are only designed to meet a particular exigency; they are seldom so constructed as conveniently to become parts of a general scheme.

REMEDIES.

144. The immediate effect of the application of the Public Health Act to Newport will be to place the whole municipal borough under one government, and, as regards all sanitary expenditure, under an equable system of rating. This established, a proper water supply to every house in the borough ought to be secured, and a complete system of main and house drainage. Under the head of private improvements will be included the paving and draining of the yards, the erection of a proper number of privies or water-closets, and of bins for dust, ashes, and solid refuse.

145. All streets and roads will become public ways, and be vested in the Local Board, who will be responsible for their maintenance and cleansing. There will be a power of regulating low lodging-houses; of compelling the builder to provide each new house with a privy or water-closet and proper back premises, and, generally, of carrying into effect various regulations necessary for the public health and convenience of the borough. Excused lists will be done away with, and the landlords of houses under 10*l*. rental being made responsible for the rates, will have less inducement to erect such houses.

146. The tramways now traversing the lower part of the town much need regulation. The open wooden fence skirting many of them is objectionable. Dirt harbours beneath it, and is not easily removed. Perhaps a dwarf wall would be the most convenient boundary. The roads should be properly metalled, drained, and kept clean, to the satisfaction not of the owner, but of the town, for a degree of dirt that interferes little with the coal traffic is very injurious to the cottages adjacent. Also the level crossings should be properly paved and guard rails laid down, and, as far as possible, no nooks or corners allowed in the vicinity of a tramroad, so that if a waggon breaks down, or its load be overthrown, it will be absolutely necessary to remove it at once. The peculiar circumstances of Newport

render these matters of considerable importance. In considering the effect of these tramroads, it is, however, to be remembered that they are probably older than the houses, and that most of the filth collected about them is derived from the houses.

147. There is no evil noticed in this Report, as affecting the borough of Newport, to which the powers of the Public Health Act will not enable the Town Council to apply a remedy, and that at a very moderate outlay, and, as might I think be shown, at an annual expense much less than is at this time incurred, in consequence of that portion of the crime, disease, and pauperism, which may fairly be attributed to the want of proper sanitary regulations. I shall have to recommend to your Lordships and the General Board to entrust these powers into the hands of the Town Council, and I can only express a hope that that body will carry out the necessary measures with vigour and discretion. Although I have far more hope of Newport than of most other places that the future government will discharge its new duties fearlessly, yet, in reporting upon its condition, I am bound to state that I saw that which leads me to expect some opposition on the part of many of the sub-landlords of small tenements to any interference whatever between them and their tenants.

148. WATER SUPPLY.—It will appear from what has already been stated concerning the existing water-works that their means of supplying the town are very ample, and their arrangements being calculated for constant pressure, it is unnecessary to dwell further upon the subject. The Local Board will have the power of offering to the Company the whole supply of the town, and it will be their duty (no less than the interest of the Company) in such case to insist upon the rate of charge being so low as to place the water within reach of all at the cheapest remunerative rate. If left to their own exertions many years would probably elapse before the Company would have any very large proportion of the town as their customers.

149. SEWERS.—There are three reasons why no complete system of main sewerage has as yet been laid down in Newport. In the first place, a great part of the town is built upon ground, the natural level of which is below high-water mark, and which has been partially and irregularly raised by the discharge of ships' ballast. Secondly, the canal intervenes between the town and the river, and presents very serious obstacles, both natural and legal, to the construction of drains below its bed. Thirdly, the town has been in the hands of the Improvement Commissioners, and of two principal proprietors, and it was necessary that all three should concur before a system of drainage could be carried out. The application of the Public Health Act will, for the first time, render practicable the adoption of one general system, embracing the drainage of the whole town.

150. A considerable portion of the town admits of being drained directly into the river near the bridge, at or above high-water mark. The houses occupying the strip of land between the canal and river may also be conveniently drained in the same direction.

151. The remainder of the town being below or at high-water mark does not admit of a good natural discharge. Moreover, the position of the canal cuts off the direct passage to the river, excepting at a limited number of points.

152. Considering these circumstances, in the area to be drained, and the advantage to be derived from the employment of the sewage as manure, it appears advisable to employ artificial means. To carry out this plan it would be necessary to lay a main sewer down Commercial-road, which should receive at various points, by lateral sewers, the whole of the sewage of the town, and discharge it into a well at about 10 feet above low-water mark. A sewer so laid would be deep enough to drain everything, and would have a sufficient fall. Over the well should be placed a steam-engine calculated to lift its contents 40 feet. and to discharge it, when required, by means of pipes over the level lands immediately below. To assist the engine when not in full work, it would be advisable to lead a pipe, with a valve upon it, from the sewer-well into the river. By this means towards low water the sewer-well would naturally deliver its contents into the river, and thus be in some considerable degree independent of the engine.

153. The engine and sewer-well should be placed on the lower margin of the borough, and also on the margin of the marshes. The well might be closed and would not necessarily be offensive.

154. By this means a rapid and effectual drainage would be secured to every house in the town, and an excellent opportunity afforded of employing the sewage profitably as manure.

155. The existing culverts, all of which discharge, at different levels, into the river, should be preserved for their original use of draining the land and taking off the flood-waters.

156. The main culvert might perhaps require, at its lower end, to be of 3 feet, or even 4 feet diameter, but none of the sub-mains or lateral street drains need be above 16 inches diameter, which is quite within the reach of a stone-ware tube drain; 4 inches would be quite sufficient for the house drains.

157. The estimate provides for a proper number of gutter-grates, traps, &c., an engine and well, pipe enough to convey the sewage half a mile, and the expenses of working the system.

158. BURIAL GROUNDS. — The best remedy for the evils

already set forth under this head is to be found in the construction of a general cemetery, for all denominations, outside the town. It would not be difficult to select a proper place; the arrangements for this purpose will be one of the duties of the Local Board to take into consideration.

159. SEWAGE DISTRIBUTION.—The low lands between the borough and the mouth of the Ebbw present a locality admirably suited for the employment of the sewage for agricultural purposes. All that will be required will be to lay a main from the engine across the land, and to distribute the diluted contents of the sewers by means of branch pipes, with hose and jet-pipes, as at present employed at Fulham.

160. CHARGES.—It appears, from data furnished to me by Mr. Hughes and others, that a rate of 6*d.* in the pound, levied over the whole of the municipal borough, will produce about 1,100*l.*, a sum which, I conceive, to be sufficient to purchase from the Water Company an ample supply of water for the ordinary domestic uses of each house, including, of course, the water-closet. This sum would pay to the Water Company rather above 4 per cent. upon their capital, and leave to them that considerable share of profit which ought to be derived from the supply of the shipping, the railway station, hotel-keepers, brewers, and other great consumers in the town, as well as from charges for house-baths, or extra water-closets, and the like—sources of profit which would probably render the speculation a very profitable one. This rate of 6*d.* in the pound would be levied upon those houses supplied with water. It is to be borne in mind that under the Public Health Act there are no excused lists, and that the town is rapidly increasing, both circumstances which will tend to lower the rate.

161. The cost of a complete system of main or street sewerage, including outfalls, engine-well, and engine, and working expenses converted into capital, may very safely be stated at 18,000*l.* This sum, borrowed upon mortgage of the rates, and repaid by annual equal instalments, principal and interest, at 5 per cent., distributed over 30 years, is represented by an annual payment of 1,080*l.*, corresponding nearly to a rate of 6*d.* in the pound upon houses. This would, however, be levied by a *general rate* on houses, and a 1½*d.* rate on land, falling upon land in the proportion of one-fourth of the charge upon houses, and would, therefore, be less than a sixpenny rate.

162. The house service-pipes, house-drains, water-closets, dust-bins, yard pavements, &c., will be defrayed by a private improvement rate, levied upon each property according to its condition. The average outlay upon each house certainly need

not exceed 4*l.*, which will be equivalent to an annual payment of about 5*s.* during 30 years.

163. For an annual shilling rate, upon houses, and an annual average payment of 5*s.* per house, would be given a constant water supply, a complete system of street and house drainage, a proper number of privies and dust-bins, and a yard or court properly paved.

164. BOUNDARY.—The boundary to which it is proposed to apply the Act, and which is shown in the annexed map, is that of the municipal borough of Newport.

165. SUMMARY.—I have to observe, briefly, by way of recapitulation,—

1. That the annual mortality of the town of Newport is 30·3 in the 1000, that of the registration district of 40 parishes around it being only 22·2 in the 1000; that in 1841 the mortality of the lower suburb of Newport was as high as that of Liverpool, and, although less in 1842, has since been steadily increasing.
2. That the connexion between this mortality and the dirt and damp of certain parts of the borough is clearly ascertained, and that to these deficiencies in drainage, water supply, privy accommodation, and want of street and court paving, may distinctly be attributed much of the typhus fever and other epidemic diseases with which Newport has been afflicted, and which have, directly and indirectly, been the cause of considerable expense to the town.
3. That a complete system of water supply and main sewerage, and proper house accommodation, may be given for an annual shilling rate, and an annual payment of 5*s.* on each house.
4. That the town stands much in need of proper lighting arrangements, especially in the lower districts.
5. That the existing burial-grounds are badly placed, and quite insufficient for the wants of the population, and that one general cemetery is much needed.
6. That the facilities for the employment of the sewage, in the form of fluid manure, are considerable, and that a revenue may in due time be expected from this head.

166. RECOMMENDATIONS.—I have to recommend,—

1. That the Public Health Act be applied to the municipal borough of Newport.

2. That powers to establish gas-works, or to contract with parties for the lighting the borough, and to levy a lighting rate, be included in the Provisional Order.

I have the honour to remain,

My Lords and Gentlemen,

Your obedient Servant,

GEO. T. CLARK.

The General Board of Health,

&c. &c. &c.