

"Sanitation and Ventilation as required in a Modern House": a review of by-laws in the 1890s relating to toilets in New Zealand Housing

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ABSTRACT: Good public sanitation has a long history in New Zealand, with Joseph Banks recording on 21 October 1769: "Every House or small knot of 3 or 4 has a regular necessary house where every one repairs and consequently the neighbourhood is kept clean." Although piped water was in main city centres (e.g. Dunedin, Wellington) by the 1860s, it was not until the 1880s that it became common in houses. By the 1890s "earth" or "water" closets were built onto laundry outhouse or at the farthest corner of the garden. As the population of cities increased, public health issues became more important, requiring the introduction of by-laws. As well as issues of sanitation, the by-laws were concerned with fire and public decency. The paper will review the evolution of council by-laws dealing with privies and toilets in Wellington in the 1890s.

Introduction

Good public sanitation has a long history in New Zealand, with Joseph Banks recording on 21 October 1769: "Every House or small knot of 3 or 4 has a regular necessary house where every one repairs and consequently the neighbourhood is kept clean."¹ However, the arrival and increasing settlements of a significant European population did not maintain this record. This paper will examine the approaches to private sanitation in Wellington in the 1890s.

The 1890s were a critical time for the management of sewerage in Wellington. 1889 had seen the son of the Governor General fall ill, and nearly die, from typhoid. There had been 548 deaths in the six years prior to 1892,

leading to a proposal for a city sanitation plan to be funded by borrowing £165,000² (equivalent to \$40 million in 2023). Although the scheme was not completed until 1904, it was in use by the end of the decade.³ The conditions in the city were so bad that in 1893 the Beauchamp family, including daughter Katherine (later Mansfield), moved from their Thorndon house to Chesney Wold, Karori – a suburb self-described as the "natural sanitorium of Wellington, pure air, good water and lovely scenery."⁴

This paper explores the various by-laws put in place by the Wellington City Council from 1873 to 1908, as well as their impact on the inclusion of toilets inside and outside houses during the decade of the 1890s. Prices have

been converted to 2023 using the Reserve Bank of NZ inflation calculator.

Terminology

Scatological references have never been well received in polite society. The 1893 edition of the *Dairy of Samuel Pepys*, transcribed by the Reverend Mynors Bright, is unable to even mention the word for human excrement in the edited dairy item for the 20th October 1660:

going down into my cellar to look I stepped into a great heap of— —by which I found that Mr. Turner's house of office is full and comes into my cellar, which do trouble me.⁵

In New Zealand, *Brett's Colonist's Guide* doesn't mention any issue relating to the disposal of night-soil (human excrement) in any of its three editions (1883, 1897 and 1902),

¹ Beaglehole *The Endeavour Journal of Joseph Banks* v 1, p 418.

² "The City Drainage Proposals" p 2.

³ Yska *Wellington* pp 75–78.

⁴ Yska *A Strange Beautiful Excitement* p 66.

⁵ Pepys *The Diary of Samuel Pepys* v 1, p 178.

possibly expecting while the user may need guidance on treating a boil or making whitewash⁶ they should be capable of dealing with their own waste.

In the twentieth century, Professor Alan C Ross in his famous essay on "U and Non-U" (Upper-class and Non-Upper class) language, noted that the term WC (water-closet) was non-U (not acceptable) while "lavatory" was U (acceptable) to the English upper classes.⁷

The sanitation by-laws of the 1890s also have their own distinctive language which is important to understand, so the following definitions are from contemporary publications:

Cesspool: A small well sunk below the mouth of a drain to receive the sediment which might otherwise choke up its passage, in its course to its outfall. A cesspool is also a well sunk to receive the soil from a water-closet, or kitchen sink, drain hole to a path, &c. It is sometimes built dry so that the water percolates through the joints of the stone or brickwork into the surrounding soil; or it is built in mortar, and a drain formed to carry off the surplus water from near the top of it. When found to be full, the cesspool; is emptied and the contents carted away, or used for garden manure, &c.⁸

⁶ Leys *Brett's Colonists' Guide* pp 687, 767.

⁷ Ross "U and Non-U" p 27.

⁸ Gwilt & Papworth *An Encyclopædia of Architecture* p

Privy: A term often used as synonymous with water-closet. Strictly speaking, it refers to a building or closet detached or separate from the house, as when placed in the backyard or in the garden. In this arrangement the construction is of the simplest, water, with its necessarily more or less complicated mechanical arrangements, being but rarely used.⁹

earth-closet, water-closet, pan-privy, and every place for the reception of human faecal matter.¹⁰

Pan-privy: A privy in which provision is made for the reception of human faecal matter in a movable metal receptacle.¹¹

Water Closet: A term applied to a small room in which is placed an apparatus for conveying away exuviae and slop refuse, by means of a flush of water.¹²

Wellington Sanitation By-Laws

Although, as noted above they were not fully successful in their application, Wellington City had sanitation by-laws since at least 1872 when regulations made under the Municipal Corporations Act 1867 limited the removal of night-soil to between the hours of 11 pm to 6 am, and it was then to be conveyed to the

1240.

⁹ Burn *A Technical Dictionary of Terms* p 111.

¹⁰ Department of Public Health, Hospitals and Charitable Aid *Suggestions for By-Laws* p 2.

¹¹ Department of Public Health, Hospitals and Charitable Aid *Suggestions for By-Laws* p. 2.

¹² Architectural Publication Society *The Architectural Dictionary* v VI, p W-16.

"Corporation's manure depot."¹³

The following year, Building Regulations 1873 were promulgated, firstly establishing that a privy was "not deemed to be a new building within the meaning of these regulations," and that cesspools as well as being "lined with brickwork and cemented so as to be watertight," should be no closer than 9ft (2.7m) from any adjoining landowner.¹⁴

The Water Closet Regulations 1882 required the City Surveyor to report on the fitness of the premises for privy or closet for it to be permitted, and once installed it was subject to an annual license of 10s per year (\$108 in 2023).¹⁵

It was not until the Water Closet By-Law 1888 that the management of human waste was given its own comprehensive by-law. The 33 clauses set out not only current requirements for the WC installation, performance, and permit/licence costs but also a longer-term vision of night-soil carts being replaced by

¹³ City of Wellington "City Council Regulations" (1872) p 170.

¹⁴ City of Wellington "City Council Regulations" (1873) pp 128-133.

¹⁵ WCC Water Closet Regulations 1882 p 12.

direct connection to a sewer. More immediately, Part IV required if the WC was within 100ft (30m) of a "brick or earthenware pipe" it was to be connected within 4 months. Part II required the room to have at least one exterior wall with a window at least 2ft by 1ft (0.6m x 0.3m) as well as "effective ventilation" provided by an air-brick, air shaft, perforated zinc, wire, or other method.¹⁶

A year later, the Sanitary By-Law 1889 provided more details as to the design, inspection, and licencing of toilets. As well as continuing the requirement for at least one external wall and a window, Part III included the statement that:

38. It is recommended that water-closets should be, in as many cases as possible, altogether detached from the house.¹⁷

Part VII of the Sanitary By-Law 1889 not only dealt with the disposal of night-soil ("No night-soil shall be buried in the city"), but also poultry (maximum permitted one per two square yards (1.6m²)) and the burial of animals ("No horses, cattle, sheep, dogs or other large animals shall be buried within the

¹⁶ WCC Water-Closets By-Law 1888 p 99ff (pt II).

¹⁷ WCC Sanitary By-Law 1889 pp. 408-413 (pt. 3).

city"). It also limited the placement of cesspools which had to be greater than 100 ft (30 m) from "any dwellinghouse, warehouse, factory, shop, or office, or public or private street or public place."¹⁸ Patent earth closets had to be over 10ft (3m) and other non-WC had to be at least 15ft (4.5m) from the boundary.¹⁹ Existing premises were required to conform to the new by-law by 31 July 1890.²⁰

The 1888 by-law had required work to be carried out by Licensed Plumbers and Drain Connectors²¹, but the 1889 by-law added that Drain Connectors must be approved by the City Surveyor and then subject to a fee of 10s per year.²² The income from water-closets was noticeable but not a huge part of the Council's budget. For 1890, income from rates was £39,875 and from the water closet fees £1,208 10s²³ – equivalent to 2,417 WC for a population of 34,213 (1901 Census)²⁴ or 1 toilet per 14 people.

¹⁸ WCC Sanitary By-Law 1889 pt VII.

¹⁹ WCC Sanitary By-Law 1889 pt IV.

²⁰ WCC Sanitary By-Law 1889 pt VIII.

²¹ WCC Water-Closets By-Law 1888 pt. I.

²² WCC Sanitary By-Law 1889 pt I.

²³ "City Finances" p 3.

²⁴ von Dadelszen *New Zealand Official Yearbook 1901* p 366.

In January 1890, the Council advertised for an Inspector of Buildings to be responsible for the "Building By-Law, Sanitary By-Law, Public Buildings By-Law, Lodginghouse Bylaw (when passed); also, that he be appointed a Water Inspector."²⁵ Selected from 53 applicants, Mr RM Hamilton, ARIBA was appointed to the role at a salary of £200 per year.²⁶

1890 and 1891 saw the passing of amendments to the 1889 by-laws extending the time for compliance to 31 October 1890²⁷ and then 30 September 1891.²⁸ A further Sanitary By-Law was passed in 1892 changing the license to a Water Closet Rate of 10s a year.²⁹ The Sanitary By-Law 1893 law added a requirement for plumbers to be annually licensed by the City Surveyor,³⁰ which gained approval from the editorial writer of the *New Zealand Times*.³¹

The Building By-Law 1896 exempted the

²⁵ "[untitled]" (25 January 1890) p 2.

²⁶ "[untitled]" (11 February 1890) p 2.

²⁷ WCC Sanitary By-Law Amendment Bylaw 1890 pp 50-51.

²⁸ WCC Sanitary By-Law Amendment Bylaw 1891 pp 243-245.

²⁹ WCC Sanitary By-Law Amendment Bylaw 1891 pt V.

³⁰ "Wellington City Council Sanitary By-Law" p 1.

³¹ "News of the Day" p 1.

erection of a porch or WC if "less than 30ft², timber framed, roof & walls corrugated iron or rusticated weatherboards" or other cladding if to match the existing wall.³² This exemption was continued in the Building By-Law 1899.³³

Increased details and requirements can be seen in the Building By-Law 1908. A Block Plan was required showing the "position of all closets, urinals, sinks, lavatories, down-pipes, traps, and other appliances connected with, and the position, levels, and grade of all drains" with sewer connections shown "red lines." Although the exemption for a porch or WC under 30ft² continued in the "Number 1 Building District" (broadly the CBD), in the "Number 2 Building District" buildings of similar uses but up to 140ft² were exempted from building fees but a permit was still necessary.³⁴

Model By-Laws Under the Health Act

In 1912 the Department of Public Health, Hospitals and Charitable Aid provided local

³² WCC Building By-Law 1896 s 13.3.

³³ WCC Building By-Law 1899 p 9.

³⁴ WCC By-Laws. 1908 No. 1: General and No. 2 - Tramways ss 172, 92, 104.3, 172b.

councils with the first set of Model By-Law.³⁵ Section F "The Structure and Cleansing of Privies" set out a range of requirements related to the cleaning of privies, but also to their location. A pan-privy must be located at least 10ft (3m) away from any living room, kitchen, public building, street or where people are employed. It must be more than 40ft (12m) away from any well, spring or stream, in a room on a suitable flooring which is well ventilated directly to the external air with a door "in the position best adapted to conceal its interior." It was also suggested that any pan-privy must have "sufficiency of dry earth, sawdust or other deodorizing substance" and the faecal material must be removed by an approved person.

In April 1925, the Department of Health issued a new set of model by-laws, updating the 1912 version. The first page set out the minimum acceptable site area for a dwelling (1/12th acre (337m²)). Although stated as being based on English Health Department rules, the Local Government Board for England and Wales rules for Government assistance with housing schemes for working

³⁵ Department of Public Health, Hospitals and Charitable Aid *Suggestions for By-Laws* pp 13-16.

classes permitted no more than 12 houses per acre, or in agricultural areas, 8 per acre (506m²).³⁶ Rules concerning toilets arrived in clause 13(i) which forbade any water-closet, privy, urinal or bathroom to "open directly off any kitchen" and Clause 15 required any sanitary fixture "for the reception of waste water" to be connected to a public sewer or private drain.³⁷

Practical Consequences

The previous sections provide a brief overview of Wellington City Council by-laws concerning privies and related sanitation from 1873 to 1908, with an extension to central Government recommendations 1912 and 1925. But what was happening to actual buildings?

A dataset of houses created for a separate project was made available for analysis. The dataset was created by selecting three years - 1893, 1896 and 1899 - from the 1890 decade, and extracting the house building permits held in Wellington City Archives for analysis. The data is preliminary and subject to revision, but the overall story is unlikely to change.

³⁶ Walters *Report of the Committee [...] to Consider Questions of Building Construction* p 13.

³⁷ Department of Health *Model By-Laws* pp 7-8.

It was found, as shown in **Table 1**, that (by year) 62% to 81% of permits were extant. For the purposes of analysis, it has been assumed that these permits are representative of the full year sample, with no pattern to the missing permits. Analysis based on suburbs found this to be a reasonable assumption.

Table 1 illustrates the development of the city during the decay, with growth concentrated in the eastern (Mt Victoria) and southern suburbs (Mt Cook, Newtown). Kelburn was not to be developed until the opening of the Cable Car in 1902, while Thorndon and Te Aro had been developed in previous decades.

Table 2 gives the count by suburb and overall for the indoor and outdoor toilets reported in the three years. It also gives the percentage of indoor toilets by suburb and overall, although in some suburbs due to the low number of houses this value can seem unusual – for example there were only two houses issued with a permit for Kelburn in 1899, one (50%) having an indoor toilet and one (50%) having an outdoor toilet. Over all the suburbs, the percentage of houses with an indoor toilet increased from 8% in 1893 to 21% in 1896 and 37% in 1899. For the architect-designed houses, indoor toilets increased from 21% in

Suburb	1893		1896		1899	
	Count	%	Count	%	Count	%
Aro Valley	17	11%	13	8%	23	11%
Berhampore	3	2%	7	4%	8	4%
Kelburn	4	3%	3	2%	2	1%
Mt Cook	37	24%	24	14%	21	10%
Mt Victoria	28	18%	18	10%	47	22%
Newtown	38	24%	63	36%	47	22%
Te Aro	12	8%	25	14%	26	12%
Thorndon	11	7%	11	6%	30	14%
Wellington Central	7	4%	9	5%	11	5%
Permits with Specifications	157	100%	173	100%	215	100%
Total permits	206		279		265	
% with specifications	76%		62%		81%	

Table 1: House Permits by Wellington Suburbs for 1893, 1896 and 1899

Suburb	1893			1896			1899		
	Outdoor Count	Indoor Count	%	Outdoor Count	Indoor Count	%	Outdoor Count	Indoor Count	%
Aro Valley	15	1	6%	13	-	0%	19	4	17%
Berhampore	3	-	0%	7	-	0%	5	3	38%
Kelburn	2	2	50%	-	3	100%	1	1	50%
Mt Cook	33	3	8%	19	5	21%	13	8	38%
Mt Victoria	23	4	15%	14	3	18%	25	21	46%
Newtown	37	1	3%	54	6	10%	33	14	30%
Te Aro	11	-	0%	19	4	17%	20	6	23%
Thorndon	11	-	0%	4	7	64%	14	15	52%
Wellington Central	6	1	14%	2	7	78%	5	6	55%
TOTAL	141	12	8%	132	35	21%	135	78	37%
Architect design	27	7	21%	28	23	45%	32	26	45%

Table 2: House Permits with Toilets by Location for 1893, 1896 and 1899.

1893 to 45% in 1896 and 1899.

The data shows some interesting aspects of the architect-designed houses, all of which had toilets although the minority in all three years were indoors. There were 32

architecture practices (individual and partnerships) active during this time, with 15 in each of 1893 and 1896, and 17 in 1899. Of the 143 architect-designed houses 56 (39%) had internal (indoor) toilets compared to 69 (18%) of the other houses for which data is

available. In the same period, there were 390 non-architect designed houses of which 69 (18%) had internal toilets.

Just five architectural practices were responsible for 52% (76 houses) of the houses with indoor toilets over the three years, but even these practices designed houses with either indoor or outdoor toilets (and one case, both). Only one practice had half of their houses designed with indoor toilets: Clere, Fitzgerald & Richmond (responsible for 11% of all indoor toilets yet only 50% of their 16 houses had internal toilets); William Crichton (13% and 32%); Francis Penty (and partnerships) (13% and 37%), McKay & MacGregor (8% and 45%) and W C Smith (8% and 27%). The designs from the other 27 practices or individuals were responsible for 48% of the indoor toilets in the remaining 69 houses.

Conclusion

This paper has examined the various Wellington City By-Laws dealing with privies or Water Closets from 1873 to 1908, as well as briefly examining the model by-laws offer by the relevant central government departments.

Over the years the various by-laws become

more specific and detailed, while the requirement for fees for inspection and then annual licencing also evolved. The requirement for the room in which the water closet was located to have at least one exterior wall and an opening window continued from its introduction in 1888. It is interesting that the 1889 Sanitary By-Law recommended that water closets be "detached from the house," which appears to have continued during the time covered by this paper.

Analysis of building permits for 1893, 1896 and 1899 revealed that there was a gradual shift to internal (indoor) toilets over the decade. Even so, over the three sampled years only 39% of toilets in architect-designed houses were indoors while for the non-architect houses it was just 18%. An examination of the inclusion of indoor toilets found that just five practices were responsible for just over half (52%) of the architectural designed houses with indoor toilets.

Overall, there was a steady increase in the proportion of houses having a toilet. 97% of the houses for which specifications and/or plans are available had a toilet in 1893 and 1896, while 99% had one in 1899. However, the major change was in the provision of an

indoor toilet – increasing from one house in 12 in 1893 (8%), to one house in 5 in 1896 (21%) and to just under one house in 2 in 1899 (45%).

The 1890s were a period of a revolution in sanitation, as increasingly more parts of the city (and more houses) were connected to mains sewers. These may not have led to a treatment plant, but the sewers removed the human waste from houses, their occupants, and the urban area in order for it to be dumped into a nearby waterway or the sea. The appropriate treatment of sewerage had to wait until the twentieth century.

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