In 2016, Marilyn Palmer and Ian West published a pioneering book on the neglected topic of country-house technology (see CA 323), opening our eyes to the archaeology of water, gas, electricity, heating, and telephones in the homes of the wealthy. Now Marilyn Palmer and Paul Barnwell have edited a volume that shines a light on the opposite end of the social spectrum – the dwellings of the working classes – to reveal just how recently running water, flushable toilets, lighting, warmth, and privacy have come to many homes. Chris Catling reports.
In Monty Python’s ‘Four Yorkshiremen’ sketch, the characters compete to see who can claim to have had the most-deprived childhood. The grim stories of life up north become more and more exaggerated until the sketch ends with one of the characters reflecting that: ‘you try and tell the young people today that... and they won’t believe you’.

In fact, the sketch begins believably enough, with one character claiming to have been brought up in a ‘tiny old house, with great big holes in the roof’, while another ‘lived in one room... no furniture; half the floor was missing; we were all huddled together in one corner for fear of falling’. A third claims to have ‘lived... in a septic tank’, while the fourth says that home for him was ‘a hole in the ground covered by a piece of tarpaulin’.

If the social activists of the period can be believed, none of these is very far removed from the conditions endured by the poorest members of society from the late 18th century until as recently as the 1970s. The Reverend Andrew Mears described visiting slums in Southwark in 1883 where: you have to ascend rotten staircases, which threaten to give way beneath every step, and which, in some places, have already broken down, leaving gaps that imperil the health and lives of the unwary. You have to grope your way along dark and filthy passages swarming with vermin... walls and ceilings are black with the accretions of filth which have gathered upon them through long years of neglect.

As for living in a septic tank, a report about Leeds in 1842 said that the ‘necessary’ (or privy) drained into the two-room home of pauper Thomas Rooley, his wife, and their son, so that it regularly flooded in one corner to a depth of 10 inches. Meanwhile, in Aylesbury’s Castle Street, health inspectors found one house built on top of the communal cesspool and others constructed against it in such a way that the contents constantly oozed through the party walls.

People living in holes in the ground were described in a Manchester Nuisance Committee report of 1801, though the committee seems to have been more concerned with the risk of people falling into the unfenced holes than it was about the condition of the poor people living within them. In 1805, Dr J Ferriar described similar single-roomed cellar dwellings, lit by a small window level with the...
An earthenware storage vessel from Jersey Street, Ancoats, Manchester (see CA 357), part of a rubbish dump that had been used to level up the uneven ground.

The outer ground, which was piled high with heaps of putrid debris, refuse, and offal. The description is reminiscent of the cellar-dwelling family in the prize-winning South Korean film *Parasite* (2019), whose members wage a constant battle with drunks urinating in the street, because the liquid drains straight into their home.

The dumping of human and household waste in the street or on nearby open ground had been standard procedure for generations, and is the subject of much grim humour in *Monty Python and the Holy Grail* (1975). The reality was, of course, no joke. The absence of sanitary arrangements was the subject of numerous reports on public health in the 19th century, such as the Royal Commission report of 1845, which claimed that ‘there are nearly 18,000 cellar dwellings in Manchester, and not many less in Liverpool, with no means of removing night soil’. This was simply piled up outside, ‘causing a most disgusting and foul nuisance’.

A report published in the same year on the ‘Sanatory [sic] Condition of Merthyr Tydfill, Glamorganshire’ said that ‘the poorer inhabitants, who constitute the mass of the population, throw all slops and refuse into the nearest open gutter before their houses [so that] parts of the town are complete networks of filth, emitting noxious exhalations’. A General Board of Health Report published in 1850 said that the lack of sewers in Aughton Street, Ormskirk (Lancashire), meant that ‘the overflow from cesspools and middens finds its way over the surface and at times covers the whole street with a foul sediment’. In 1853, Thomas Price reported that even newly built housing in Aberdare (Glamorgan) lacked privies, so that ‘the inmates defecate and urinate in the streets’ with the result that ‘all sense of moral decency is lost’ and the town ‘especially in hot weather’ is in a ‘most offensive state’.

One could go on quoting similar reports – there are hundreds to choose from and, like the ‘Four Yorkshiremen’, the authors seem to have been competing to tell the grimmest tales. Michael Nevell, writing about the results of excavating working-class housing in a newly published volume of papers (see ‘Further reading’ box on p.51), sounds a note of caution, however: the archaeological evidence

**LEFT** Excavations in Hardman Street, Manchester, in 2002 revealed an 18th-century felt-hat factory (in the centre) and workers’ housing (right). None of these premises had proper drainage, and the soakaways lay close to the well from which the soda-water works (left) drew its supply.
does not always conform to the descriptions of 19th-century social campaigners, whose motives in sensationalising the deprivation they deplored are laudable but chosen for polemical effect. Archaeology shows us that the quality of urban housing in Manchester, cited by Frederick Engels in *The Condition of the Working Class in England* (1845) as having the worst living conditions in Britain, was not always quite as bad as portrayed. Engels himself concluded that the slums he described represented about 6 per cent of the housing stock.

**EXPONENTIAL EXPANSION**

It is one of the great ironies of the Industrial Revolution in Britain that, while many people worked in gruelling jobs and endured insanitary living conditions, the population grew at a rate not seen in previous centuries. From 7.7 million in 1801, the number of people living in England doubled every 50 years, to 15 million in 1851 and 30 million in 1901. On the basis of five people per household, that meant that an extra 4.6 million dwellings were required. The increase was felt disproportionately in urban centres, especially after 1851, when more people lived in towns than the countryside for the first time.

Michael Nevell believes that archaeology has an important role to play in expanding our knowledge of how cities like Manchester responded to this phenomenal growth. The world's first industrial city had no mills in 1780 but many hundreds by 1850; the population grew from 75,281 people in 1801 to 303,382 in 1851; the number of dwellings rose from 3,446 in 1773 to 50,000 in 1851 (each housing an average of six people). Studying the impact of this through archaeological investigation began with a pioneering Workers' Educational Association project in the 1980s: the Manchester & Salford University.

*LEFT & BELOW* Those properties in Sergeant Street, Preston, were built in the 1840s on either side of an open cesspool that consisted of a trench 3ft wide and 140ft long, draining into a nearby brook that then flowed into the River Ribble. Condemned by sanitary inspectors, such arrangements were nevertheless ubiquitous – as large-scale Ordnance Survey maps confirm – until the sanitation reforms of the 1850s and 1860s.
Early Dwellings Research Group (MEDREG). This initiative set out to document all the surviving pre-1850 houses in the city, mainly through photography, but also through selective archaeological recording and historical research. This work led to the listing of some examples of workshop dwellings, terraces, back-to-backs, and cellar dwellings – though the scale of the threat to this aspect of our heritage is indicated by the fact that more than two-thirds of the sites recorded by MEDREG have since been demolished.

Since 2001, archaeological work ahead of redevelopment in Manchester and Salford has deliberately targeted workers' housing from the 18th and 19th centuries, with the result that 36 sites, and several hundred dwellings, have now been excavated – some of them in the areas that Frederick Engels described as 'hell upon earth'. The results suggest that the quality of housing in these areas was not universally poor: some houses lacked foundations and had earthen floors with no drains, but most had substantial brick foundations, paved surfaces, and external privies. There is, however, much evidence for the constant subdivision of properties by the addition of internal partitions and new doorways, corridors, and alleys.

The 1851 census returns give some indication of the extent of overcrowding in 19th-century Manchester: by that date, premises in Angel Street originally built as single dwellings were occupied by three families, on average. Courtyards, backyards, and open spaces were built up in response to rapid population growth and inward migration. Some of this was captured on early Ordnance Survey maps, but excavations in the St Michael's Square area in 2009 showed many more unrecorded backyard buildings and access alleys than are depicted on these maps – another valuable archaeological corrective to the documentary record.

At 69-77 Lever Street, for example, a row of five houses was built in 1788, with basements, ground and first floors, and attic workshops – good, solid houses, each designed as a combined workshop and dwelling for one family. These were then subdivided into tenements, with one family per floor; then, in 1790, the rear yards were partially built up; finally, in 1794, what remained of the yard space was used to construct a further row of two-room dwellings. The result encapsulated many of the
Rising wages meant that city-dwellers could afford better homes, but in the countryside the opposite was the case because of depressed agricultural prices and competition from the US and Canada. Not until the 1950s did many farmworkers' cottages reach the standard shown here in this recreated room in the Museum of English Rural Life, University of Reading.

characteristics of slum housing: small in size with poor lighting and lack of sanitation.

SETTING UP STANDARDS
Today we largely accept the fact that new buildings require planning consent and must conform to a voluminous set of building regulations, but the power of the state to intervene in property rights was hotly contested throughout the 19th and much of the 20th century, and it continues to resonate to this day. Laissez-faire - the absence of government regulation - was the dominant political creed of the early 19th century, promoted by Enlightenment philosophers such as Adam Smith who believed that people were naturally good and moral beings, and would behave well without government interference.

Some were: the history of working-class housing has some renowned examples of model dwellings, such as those of Richard Arkwright in Derbyshire and Robert Owen in New Lanark, or those built in London by philanthropists such as Lord Ashley (later the 7th Earl of Shaftesbury) from 1844, or George Peabody from 1864. These men hoped that others would follow their example, and among those who did were the Earl of Leicester at Holkham (Norfolk) and the Duke of Bedford across many of his urban and rural estates. Yet many dwellings continued to be erected that lacked a water supply and adequate drainage. Marilyn Palmer quotes the example of newly constructed cottages at Penshurst in Kent, built in Picturesque style as an adornment to the estate as late as the 1880s, without a water supply, leading two villagers to complain that their landlord clearly did not consider a pump 'quaint fashioned enough'.

"Cottages were built in the 1880s... without a water supply, leading two villagers to complain that their landlord did not consider a pump ‘quaint fashioned enough’."

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systems and water supplies, this being the largest element in the massive financial investment made by local authorities in Victorian England. Despite this, many people continued to live in substandard housing that pre-dated the various housing acts. Archaeology shows us that developers ignored new regulations, which were permissive, not obligatory: they gave city fathers the powers to set up improvement boards but did not require them to do so. Those who sat on the boards often included slum landlords who opposed all attempts to make them spend money. Historians, says Alan Crosby, tend to emphasise the successful social and environmental changes of the period and overlook the often vehement opposition to reform and the heated political debate within local communities and Westminster. Ultimately, though, unrestricted development was brought slowly under

The tipping point came with the Municipal Corporations (England) Act of 1835, the first of a series of acts empowering local authorities to set standards for new house-building and to undertake schemes for water supply and drainage. Over the next ten years, no fewer than 400 local improvement acts were passed by Parliament, marking the start of what Alan Crosby, in his chapter on sanitation in working-class housing, describes as ‘an immense collective national effort spanning more than seven decades’ to improve public health by providing effective sewerage.

In the end, the threat to public health from such poor housing could no longer be ignored. As Engels wrote:

the repeated visitations of cholera, typhus, smallpox, and other epidemics have shown the British bourgeoisie the urgent need of sanitation in his towns and cities if he wishes to save himself and his family from falling victims to such diseases.

BELOW Working-class households could not afford the substantial deposits – often three months’ advance payment – for a gas supply, until the pre-payment meter was invented in 1887. Gas companies then promoted the benefits of an all-gas household, with cooker, washing machine, lighting, water heater, and iron, as here in the recreation of a 1920s kitchen at Leicester’s National Gas Museum.

ABOVE An untouched and typical scullery kitchen – recorded in 1990 in Church Road, Westbury on Trym – added to the rear of an older house around 1871, with a stoneware sink on a brick plinth to one side of a cooking range and boilers.
control, with at least one significant Act of Parliament concerned with improving housing quality being passed every year between 1835 and 1977.

**LAYERED LAYOUTS**
In the 1850s, a typical working-class home probably consisted of a two-up, two-down dwelling with a front living room-cum-kitchen measuring 13ft by 13ft, a smaller scullery with sink and staircase measuring 13ft by 10ft, and two bedrooms upstairs. The living room/kitchen was the focus of everyday domestic life. The increased availability of cast iron from the 18th century meant that the fireplace was likely to be fitted with some form of cooking range. Tin baths were used for bathing, filled with water heated on the range, and, according to the Tudor Walters Report of 1918, they were also often used for the storage of bags of coal or potatoes when not fulfilling their primary purpose.

Lighting was supplied by oil, paraffin lamps, or candles, and it was common for working people to go to bed at sunset. Gas was available from the mid-19th century, but the advance payments required by gas companies were beyond the means of most families; the invention of the pre-payment meter towards the end of the 19th century was a landmark in extending gas-use for lighting and cooking to working-class homes. Many did not benefit from electricity until after the Second World War.

Privacy was a major cause of concern among philanthropists and evangelists, who were less concerned about the ability of a budding Virginia Woolf to enjoy 'A Room of One's Own' for writing and study, and more about the moral implications of sharing beds, especially when, in the words of Edwin Chadwick, ‘female children become young women and boys advance towards puberty’. The Reverend John Clay of Preston believed the lack of

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**ABOVE** The range or fireplace was the focal point of working-class dwellings, though cooking ranges combining an open fire, hotplates, side ovens, and boiler were by no means commonplace – as this sketch demonstrates. From the diary of Edward Snell, it shows porridge being cooked by a fellow lodger in the Swindon railway village in 1843. Meals were often bought from a cookshop, so the open fire was used as much to keep food warm as to cook from scratch.

**BELOW** Furnished from demolished workers’ houses, this kitchen in the Black Country Living Museum dates from c.1910, when gas lighting and mains water were becoming more common in the homes of better-off skilled workers. The turning point for progress towards better housing for the many was the end of the First World War, and the campaign to create ‘homes fit for heroes’, followed in the 1930s and 1950s by the council-housing movement.
separate bedrooms for male and female offspring brought 'a powerful tendency towards moral corruption'.

As the 19th century progressed, laws were passed that specified the minimum height and volume of rooms; the methods and materials to be used in constructing foundations, damp-proof courses, walls, and roofs; the provision of ventilation and sanitary arrangements; and the minimum sizes for rear yards. To the basic two-up, two-down plan, small rear extensions were often added to accommodate a basic scullery, allowing for a third bedroom above, while the kitchen/living room moved to where the scullery had been. Fireplaces were progressively added to more rooms, thus adding to domestic comfort and increasing the amount of warmed space that could be used. The front room acquired the status of a 'best room', in which fires were only lit on Sundays and special occasions.

"Often left in a disgusting state, communal yards and privies could be the cause of much quarrelling and neighbourly ill will."

TOILET TROUBLES

Perhaps the biggest improvement to the quality of life for the poor was the replacement of communal yards and privies with single household privies and yards, with their associated stores for coal, ashes, and household rubbish. Shared privies had long been the target of social campaigners on the grounds that they led to the 'loss of modesty and self-respect'. According to one commentator, shared lavatories served as 'the communal and social focus' of a building block or courtyard, which 'led to indecencies of which I should never have dreamed'. Often left in a disgusting state, they could also, on occasion, be the cause of much quarrelling and neighbourly ill will.

Connection to mains sewerage did not come until the end of the 19th century for newly built dwellings and much later still for existing houses. All the public health reports published in the 1840s and 1850s highlight the nuisance caused by the uncontrolled dumping of human and animal waste, rubbish, and offal, and it is clear that this practice was not confined to working-class households. Indeed, their lives were further blighted by the practice of middle-class home owners sending their servants to dump waste in the poorer parts of town, where there might also be slaughterhouses, stables, and cow-houses creating further refuse to be dumped in the streets or on waste ground.

From the 1840s, houses began to be built with communal cesspools, which
Joseph Bazalgette’s scheme for revolutionising London’s sewerage system, completed in 1875, set an example to other cities. The pride that many corporations took in providing such facilities is evident in the grandiose designs of such buildings as the Papplewick Pumping Station in Nottingham (1882-1884; LEFT) and the Abbey Lane Pumping Station in Leicester (1891; ABOVE).

are frequently described in health reports as inadequate and nauseating. The term ‘privy’ is used in the reports to describe a structure with a seat placed over a pit or chamber, often placed adjacent to an ash pit; the ashes then being shoveled into the pit to absorb the liquid and make the waste easier to remove. Some privies remained unemptied and uncleaned for years, and the repulsive smell was frequently remarked on. In Burnley, for example, a report compiled in 1909 showed that 41 per cent of households in the town relied on the ‘privy with ashpit’ method of waste disposal, and that the suffocating stench from these was part of everyday life well into the 1930s.

Emptying cesspits and privies and clearing middens was the task of night-soil men. The waste was scooped out using long-handled shovels, piled into carts, and taken away for use as agricultural fertiliser. The revolting nature of this procedure was often commented on, especially where there was no back-lane access to the privies and waste had to be carried down passageways or even through the house itself.

By the late 1870s, many larger towns had developed better systems. Bylaws allowed the local authority to enforce minimum widths for new roads, and to require the provision of a back lane for new streets wide enough to accommodate a horse and cart. Privies were equipped with a movable box or bucket. Night-soil collectors, working from 11pm to 6am to minimise public nuisance, removed the full buckets via a hatch in the rear privy wall. The contents were taken in carts to railway sidings or canal wharves and sold as untreated fertiliser at a price per ton that helped to pay for the collection system.

Rising prosperity played a part: during the closing decades of Victoria’s reign, real incomes rose and consumer prices fell, and tenants who could afford to pay more in rent moved to healthier and more comfortable accommodation, forcing standards to rise. Now as a result of concerted campaigns of ‘slum’ clearance and conversion, untouched examples of 19th-century working-class housing have all but disappeared. Those that survive in open-air museums or as visitor attractions (such as the National Trust’s Birmingham Back-to-Backs) tend to be sanitised and idealised. We can learn much from the written record but, as Michael Nevell concludes, excavation is now the major means by which we can recover and understand the housing conditions of the Industrial Revolution as a balance to the documentary record.

Further reading