Rubbish!

Richard Girling

About the Book

We can no longer cope with our waste. *Every hour* in the UK we throw away enough rubbish to fill the Albert Hall – a statistic quoted so often that perhaps we've stopped imagining what it means. And every year the flow accelerates. Yet our systems for disposal remain as crude as ever. Plan A: chuck it in a hole. Plan B: dump it on someone else's doorstep.

The story of our rubbish – a mucky saga of carelessness, greed and opportunism, wasted opportunity and official bungling – is at the heart of Richard Girling's book. But *Rubbish!* is also a plea for us to reconsider other kinds of waste: our trashing of the landscape; our defilement of towns and cities with tawdry architecture and thoughtless planning; our obliteration of wildlife; the unstoppable floods of junk that clog our mailboxes, litter the skies and foul the airwaves.

'Rubbish!' may not be a conventional battle cry but this is unmistakably a call to arms. Not simply for the three 'R's – Reduce, Re-use, Recycle. But for us to fight for investment in new ideas; to put brave initiative ahead of reliance on systems that might once have been innovative but which are now crumbling before our eyes. Hard-hitting, passionate, provocative, Girling is also persuasive, often funny and always entertaining.

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Rubbish!

Dirt on Our Hands and Crisis Ahead

Richard Girling

eden project books

For Caroline

Acknowledgements

THE USUAL FORM with acknowledgements is to thank everyone else for their help and encouragements, and to accept personal blame for all mistakes. This is honourable but disingenuous. Help I had in plenty, and my gratitude to those who gave it remains heartfelt. But there were hindrances too. A promised official briefing from Defra never materialized, so it is difficult to accept responsibility for any failure to perceive the cogency of that department's policies. And of course, in the nature of politics, it is the straightest questions that receive the most serpentine answers.

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Richard Girling
Norfolk, 2005

Introduction

TO THOSE OF us who survive into the second decade of the twenty-first century will be 'delivered' the benefits of a new official target. The year 2012 is the deadline for crematoria in England and Wales to halve the amount of mercury escaping into the atmosphere from their clients' fillings. It may be the first policy to confound a basic rule of the market. When a waste product is regulated, and thus made harder and more expensive to get rid of legally, the result in the past has always been an increase in fly-tipping. 'Coming to a ditch near you' could pass as the preamble to most European waste directives. One hopes that the amended *Secretary of State's Guidance for Crematoria*, issued under Regulation 37 of the Pollution Prevention and Control (England and Wales) Regulations 2000, will be the first exception.

The poisonous effluence of our rotted teeth is a small example of a larger truth. Waste is as necessary to life as air and water. Just to be born into our own bodies is to create lifelong problems of disposal. Waste, after all, is what life itself becomes when it's over. The invitation to write this book came after I had written for the *Sunday Times Magazine* a pessimistic piece about the looming problems of the national garbage mountain. Much of what follows is about that same issue, and echoes the horror of everyone from Greenpeace to House of Commons select committees. The cover-notes assert that what I have written is 'often funny'. So it may be, but the laughter is of the nervous kind, a thin lubricant in the jammed mechanisms of disbelief.

Rubbish is more than just discarded waste. It is the hideous inflictions on land and sea of the common agricultural and fisheries policies; the rubbishing of historic town centres by criminally complacent local planning committees; the grid-patterned, rubber-stamped architectural wastelands that people have to live in and look at; the sacrifice of deeply rooted local communities to superficial, tick-box ideologies; the persecution of everything wild and untameable; the penny-pinching, self-harming neglect of the railways and public utilities; the hatred of history; the demeaning of political language with its ludicrous lexicon of holistic stakeholders and sustainable delivery; the smug god-awfulness of television. All these find a place in the story. And yet . . .

Let us not forget our amalgam fillings, or the dust and ash we shall become when the clock ticks its last. To create, to *be*, rubbish is as basic a freedom as speech, or education, or water. Without the freedom to write bad books for the pulping plant, there would be no good ones to be kept in the library. There is no apple without a core; no nourishment without the consequent flush of a cistern; no shelf-life without a sealed and stackable pack; nothing made or grown without its necessary margin of scrap. The economics of waste are often the negative image of what we might expect. Even in basic terms of energy and materials, 'excessive' packaging may save more than it costs. Local authorities with apparently good recycling records may depend for their green credentials on energy from garbage incinerators, or low-grade compost used in landfills. 'Green' initiatives by governments may be a shade so dark that they are indistinguishable from black.

Yes, the fridge mountain was a bit of a laugh; but it wasn't a joke. The same goes for the 'disappearance' of toxic waste after a long-awaited but still unprepared-for change in European landfill regulations. Unless you have shares in Tesco, there is nothing funny about what has happened to

the farmed landscape or the high street. There is no humour in a fishless sea. The book is not, or tries not to be, a counsel of despair – that in itself would be a waste of ink and paper. But its optimism is hard won, and based upon the possibly naive assumption that, having allowed problem to become crisis, the government will not allow crisis to become catastrophe.

CHAPTER ONE

History

YOU HAVE TO wonder about history's sense of smell. It was fine in the beginning, when our earliest forebears came down from the trees, gave up being apes and set off across the savannah in search of god. There were not many of us about then. Earth and sea were infinite, like the heavens. We no more had the power to despoil or to desecrate them than we had the ability to change our own natures. There was no need for thought: driven by instinct, we did what came naturally. Our food waste rotted harmlessly where we left it, feeding the soil from which it came. Our dung and urine were dropped like animals', wherever we felt the need. We abandoned our dead to beak and claw and lived like scavengers on our senses. Selfishness and greed were the tools of our survival. Not knowing where our next mouthful would come from, we insured our futures by packing our bellies with everything they would hold. Hunter-gathering was a tough calling. To consume was to live another day, survive another night and pass on our genes. Altruism, like a fatherless child, had a hard start in life.

Years passed in their thousands, and still it didn't matter. If a cave or a patch of land had been fouled, a travelling group would simply move on and find another one. There always *was* another. No need to think about anything but ourselves. No responsibility for, nor any concept of, anything that might be called 'the environment'. Only when

we congregated in permanent settlements, and learned to put roofs over our heads, did we have to meet the challenge of living with our own stink. In a way, we were rather good at it. If excrement was a fact of life, then so was the smell of it in the gutters, and who were we to turn up our noses? When food and industrial waste threatened to overwhelm us, we hit on the policy that has served us ever since: chuck it in a hole in the ground. It worked and, in the long-term accumulation of its effects, it has left us both a gift and a curse.

The gift is to archaeologists, whose sifting of pits and middens has told us much of what we know about our ancestors' lives. By their leavings, from horse-bone to silver teaspoon, do we know them. The curse is in our natures. We may have the stink under control but we have not buried the profligacy of our habits. Every hour in the UK we throw away enough garbage to fill the Albert Hall. A gathering tsunami of rubbish – organic and inorganic, active and inert, electronic, aural and visual – pours into our lives and out again, into a world no longer infinite. No more do prophets look to the Bible for signs of The End. We carry Armageddon in our shopping bags. It is not just environmental pressure groups, supposed enemies of modern life, who argue that the planet can no longer afford what we are costing it. In universities and centres of government – even in company boardrooms – there is recognition that we have exceeded our credit limit. We can no longer cope with, or afford, the volume and toxicity of our own wastes. We know we have to change, and yet restraint – the idea of taking less than we can grab – puts us in conflict with the very essence of our genetically driven urge to consume.

WASTE HAS ALWAYS been a badge of affluence; every possession a piece of junk in waiting. Unsurprisingly, the earliest waste-disposal systems belonged to the people who had the most

to throw away. At the Minoan palace of Knossos in Crete, as early as 3000 BC, landfill sites layered with earth were taking the strain of an abundant royal lifestyle. Two-and-a-half thousand years later came the first municipal rubbish dump, a mile outside Athens. Recycling had an early start, too. Uneaten greenstuff was fed to animals, whose own waste fertilized the soil; and Bronze Age Europe well understood the importance of scrap. Britain's first dustmen were the Romans. Addicted to order if not to hygiene, they were as fastidious as they knew how to be. Although they did not follow the ancient Athenians in carting their garbage out of town, they at least buried it in pits. Like modern waste contractors they knew the value of a hole in the ground; and like modern municipal leaders they thought more of public services than they did of high culture. How many city fathers now would love to follow the example of Roman St Albans and dump their rubbish in the theatre? For sewerage, the trailblazer seems to have been the city of Lincoln, which had a proper street-by-street network connected to individual houses. Other towns scent-marked the future, and set the standard for centuries to come, by swilling everything into the street.

If cholera and plague had gods to look after them, then medieval England was the answer to their prayers. Never has history offered a richer or longer lasting playground for disease. In terms of hygiene, medieval England would stretch well into the nineteenth century, where it would find Charles Dickens waiting for it. Anyone who has felt the need of a lavatory, in a place where none exists, can imagine the state of England's cities. To some extent it was an issue of social class. At the top of the lavatorial hierarchy, thirteenth-century castle-folk in their garderobes voided themselves directly through a flue into the moat (an improvement over the eleventh-century prototype that let everything trickle down the wall). In towns, well-to-do professional and

merchant families had scaled-down, middle-class versions falling into streams and rivers. But the common folk shoehorned into their tenements were not so lucky. They had either to queue for shared privies (and you can imagine the state of those) or walk to a public latrine.

Sanitation was seldom a priority for slum landlords, and many provided none at all – not even a bucket. In one typical case in 1421, it was recorded that ‘all the tenants threw their ordure and other horrible liquids before their doors, to the great nuisance of holy church and of passers-by’. A century-and-a-half later, little had changed except, perhaps, the sharpening of the stench. In 1579, 85 people living in 57 households in London’s Tower Street had only three privies between them. In affairs of the gut, necessity is all. Not everyone with a seething mutton pie inside them could be bothered, or had the time, to find their way to a public latrine. What horses did in the street, so did their human masters.

More caring individuals headed for running water. In London the Walbrook, a natural stream through the middle of the city, was a public sewer into which householders, carters and tradesmen tossed whatever they wanted to get rid of, and over which richer citizens built their privies – every act of nature a gift to the downstream neighbours. Everyone else had to improvise as best they could. Families in top-floor tenements, far from any privy, could hardly be expected to resist the temptation of the window, while others showed varying degrees of inventiveness in fouling anyone’s doorstep but their own. In 1314, a woman named Alice Ward was ordered by the mayor to dismantle a wooden pipe connecting her ‘privy chamber’ at Queenhithe to the gutter in the street below. A few years later, in 1347–8, an Assize of Nuisance dealt with the case of two men who had piped their sewage directly into the cellar of their downstairs neighbour. Not even this was the worst of it. At about the same time, according to Ernest L. Sabine in his

classic paper of 1934, ‘Latrines and Cesspools of Medieval London’, ‘certain citizens . . . had constructed divers latrines, in Ebbegate upon gratings, and in Dowgate projecting beyond the pathway, so that in each lane the filth fell upon persons passing through’.

Where there was no running water close by, better-off householders would dig cesspools to act as holding tanks. These brought horrors of their own – some of them immediate and dramatic; others slower and more insidious. Of the immediate kind, no case is more tragic than that of Richard the Raker who, one day in 1326, dropped his breeches and settled down comfortably on his privy. It is hard to imagine a nastier or less dignified way to die. The rotten floorboards collapsed beneath him, plunging him straight into the cesspool, where he drowned in his own waste. Elsewhere, death would come more stealthily in the form of water-borne disease. The worst and most persistent hazard was the leaching of sewage into neighbouring buildings and groundwater, and thence into the wells for drinking. Sabine records a case in 1328–9, when ‘Adam Mere and his brother William . . . were summoned before the assize on the complaint of William Sprot that they had a cloaca next his tenement, which was full of filth to overflowing, so that the dung together with the urine from the cesspool penetrated his wall, entered his house, and collected there, making a great fetor.’

Great fetors throughout the city must have been as hard to escape as the swarms of flies. London’s other stream, the Fleet, though wider and deeper than the Walbrook, was in much the same state of degradation, and the Thames itself was the immediate destination of what both streams carried. Where public latrines existed (on London Bridge, for example), they discharged straight into the water, making it less an artery of trade than a tideway of filth carrying the raw sewage of forty thousand people. The better class of citizen did take the trouble to have their cesspools emptied

by privy cleaners and taken away by dung-boat, but others – lacking either the means or the will – simply dumped this and every other kind of muck in suburban lanes or along the banks of the river.

Muck there was in plenty. Horses fed dunghills that were frequently big enough to obstruct the highway, and were reinforced in their endeavours by dung and urine from the city's pigs, cattle and poultry. It might have been possible to pass beyond the reach of putrefaction but it would not have been easy. The stink from discarded butchers' offal, never mind the fishmongers', would turn even stomachs accustomed to rotting meat. It was not just vileness that was the problem. There was the sheer bulk of the city's leavings: straw, sawdust, rushes (used, in vast quantities, to carpet the floors), earth from cesspools and other diggings, builders' rubbish, dead dogs – everything the city was unable to eat, sell or recycle.

It was not that nobody in authority noticed or cared. Stung by complaints from the king, the mayor and city authorities issued ordinance after ordinance, banning one kind of misbehaviour after another and forever seeking new remedies. In 1312, fishmongers were ordered to throw their dirty water into the Thames and not into the street; in 1366, poulterers were banned from plucking chickens in the highway. In 1343, under threat of prison if they failed, the aldermen were commanded to ensure that the streets were cleared of dung and rubbish. The job was done by city 'rakers', supervised by 'scavengers' who carted the stuff away in tumbrils. People who left rubbish in front of their houses were to be fined – a fact that might explain a violent incident in 1326, when a pedlar dropped a couple of eel-skins and an apprentice rushed out of a nearby shop and struck him dead.

Although there was no real understanding of the vectors of disease, there was a vague realization that stench, like pain, was one of nature's ways of steering us away from

trouble, and that bad smells were bad news. Thought and deed, however, enjoyed only the most tenuous of relationships. In the plague year of 1349, Edward III wrote to the mayor ‘protesting that filth was being thrown from the houses by day and night, so that the streets and lanes through which people had to pass were foul with human faeces, and the air of the city poisoned to the great danger of men passing, especially in this time of contagious disease’. The king tried again in 1357, this time complaining of ‘noisome filth’ in the city streets and along the Thames. Fly-tippers now faced heavier fines than ever, and it was made illegal for anyone to throw rubbish, earth, gravel or dung into a waterway. What weighed more heavily with many people, however, was the imposition of fees at the official dumps beside the river. Resentment was such that householders preferred to risk the law, and carry on dumping illegally, rather than submit to the charges. This drew from the king a further writ banning dumping on Tower Hill, which was answered by yet more dumping in the river, which in turn provoked another ban from the city. The suburb of Westminster meanwhile complained of Londoners sending out cartloads of refuse and dung to besmirch its fields and streets.

Rats loved it. The plague returned again in 1361, and again in 1369, 1370, 1382, 1390, 1391 and 1407. It was a vicious circle of the worst kind. Disease made clear the need for better hygiene, yet the epidemics caused such chaos in city government that, in the years when the need was most acute, the squalor could only get worse. The city authorities did go on trying. First (in 1383) they imposed a levy of two shillings a year on householders with privies over the Walbrook; then (in 1462–3) they banned them altogether. After the plagues of 1390 and 1391, Richard II (a king with much else on his mind) decided that anyone dumping rubbish in the Thames should be liable to a ruinous fine of forty pounds. The one exemption was granted to the

butchers. So foul was their rotting offal, and so anxious the king and everyone else to be rid of it, that they were allowed to drop it into the ebb tide. Sabine argued that the never-ending flow of ordinances, levies and prohibitions meant that, within the parameters of its own understanding, medieval England did all it could to keep its head above the filth. You could go further and argue that its public policies were closer to the known 'best practice' of the age than they have been so far in the late twentieth and early twenty-first centuries. What you could not convincingly argue is that they worked. Kings came and went. So did mayors. Years rolled on into decades, and decades into centuries, yet still the streets swilled in waste and the population remained a soft target for any disease that liked a bit of dirt.

The mysterious 'English sweating sickness', known also as *Sudor anglicus*, struck first in 1485, then again in 1508, 1517, 1528 and 1551. Attributed variously to lice and ticks, or simply to 'filth', and possibly caused by a virus, it was as unforgiving as the plague itself. Death was preceded by headaches, high fever, muscle pain, profuse sweating, skin rash and laboured breathing. The court of Henry VIII was particularly hard hit, and the king himself took especial pains to avoid contact with it. In 1528, wrote the French ambassador, 'One of the *filles de chambre* of Mademoiselle Boleyn was attacked on Tuesday by the sweating sickness. The king left in great haste and went a dozen miles off . . . This disease is the easiest in the world to die of. You have a slight pain in the head and at the heart; all at once you begin to sweat. There is no need for a physician: for if you uncover yourself the least in the world, or cover yourself a little too much, you are taken off without languishing. It is true that if you merely put your hand out of bed during the first 24 hours . . . you become stiff as a poker.' No sooner had *Sudor anglicus* paid its last recorded visit in 1551 than bubonic plague reappeared to assert its place as reaper-in-

chief. Rat-borne fleas cost the lives of 17,500 Londoners in 1563; 23,000 in 1593; 30,000 in 1603; 40,000 in 1625 and 80,000 in 1665.

WHILE LONDON DURING the eighteenth century grew exponentially in size and elegance, the old problem was never far from sight. Here is Lord Tyrconnel in 1741, quoted by Roy Porter in *London, a Social History*, denouncing the 'neglect of cleanliness of which, perhaps, no part of the world affords more proof than the streets of London, a city famous for wealth, commerce and plenty, and for every other kind of civility and politeness; but which abounds with such heaps of filth, as a savage would look on with amazement'. Others complained of ordure lying in the streets, and of roads lost beneath stagnant lakes of liquid mud. Elsewhere it was much the same. Other towns, too, were wallowing in filth. The 1750s brought complaints of dung heaps in the streets of Southampton – this despite Messrs Warwick and Minshaw paying the mayor annually ten guineas plus a brace of capons in return for the right to collect the city's waste. If muck has often meant brass, it has just as often meant corrupt deals and opportunism, as well as a thin trickle of creative genius. In 1776, America discovered the value of recycling when New Yorkers melted down a statue of George III to make bullets.

Accounts of nineteenth-century London were very little different from those of half a millennium earlier. Porter quotes the surgeon John Simon, appointed Medical Officer of Health in 1848: 'Let the educated man devote an hour to visiting some very poor area in the metropolis. Let him fancy what it would be to himself to live there, in that beastly degradation of stink, fed with such bread, drinking such water . . . Let him talk to the inmates, let him hear what is thought of the bone-boiler next door, or the slaughter-house behind; what of the sewer-grating before

the door; what of the Irish basketmaker upstairs – twelve in a room; what of the artisan's dead body, stretched on his widow's one bed, beside her living children.'

It was cholera now that made merry, fattening itself in polluted wells – wells whose bright water, made sparkly by ammonia and other organic contaminants, suckered its victims with eye appeal. From out of squalor and suffering, however, came the first glimmerings of lasting hope. The rapid development of rational science and medicine, and the technological red heat of the industrial revolution, brought forth a generation of men – self-important, perhaps, but possessed of a furious energy – who recognized the essential need for social as well as economic and industrial change. The motivators were philanthropy, horror, and the recognition that better health was an essential precursor of improved national prosperity.

The horror was genuine. In the summer of 1842 the secretary of the Poor Law Commission, Edwin Chadwick, presented to the House of Lords his *Report on the Sanitary Conditions of the Labouring Population of Great Britain.* It was, in effect, a nationwide gazetteer of degradation, putrescence and disease. You could look almost anywhere and find the same. This account, received by Chadwick from Mr Bland, medical officer of Macclesfield, is typical:

> In a part of the town called the Orchard, Watercoates, there are 34 houses without back doors, or other complete means of ventilation; the houses are chiefly small, damp, and dark; they are rendered worse with respect to dampness perhaps than they would be from the habit of the people closing their windows to keep them warm. To these houses are three privies uncovered; here little pools of water, with all kinds of offal, dead animals and vegetable matter are heaped together, a most foul and putrid mass, disgusting to the sight, and offensive to the smell; the fumes of contagion spreads periodically itself in the neighbourhood, and produces different types of fever and disorder of the stomach and bowels. The people inhabiting these abodes are pale and unhealthy, and in one house in particular are pale, bloated, and rickety.

Nineteenth-century Macclesfield or fourteenth-century London? Who could tell the difference?

A couple of pages further on, we find Mr Pearson, medical officer of Wigan:

> Many of the streets are unpaved and almost covered with stagnant water, which lodges in numerous large holes which exist upon their surface, and into which the inhabitants throw all kinds of rejected animal and vegetable matters, which then undergo decay and emit the most poisonous exhalations. These matters are often allowed, from the filthy habits of the inhabitants of these districts, many of whom, especially the poor Irish, are utterly regardless both of personal and domestic cleanliness, to accumulate to an immense extent, and thus become prolific sources of malaria, rendering the atmosphere an active poison . . . It may be also mentioned that in many of these streets there are no privies, or, if there are, they are in so filthy a condition as to be absolutely useless; the absence of these must, necessarily, increase the quantity of filth, and thus materially add to the extent of the nuisance.

Here is Mr Rowland of Carlisle: ‘on the south side at the foot of Botchergate, there is a gutter, perhaps a mile long, which conducts the filth of that quarter through the fields into the river Petteril. The stench in summer is very great.’

Mr Aaron Little, of Chippenham, on the rural parish of Colerne: ‘The filth, the dilapidated buildings, the squalid appearance of the majority of the lower orders, have a sickening effect upon the stranger who first visits this place. During three years’ attendance upon the poor of this district, I have never known the small-pox, scarlatina, or the typhus fever to be absent . . . There is also a great want of drains.’

Mr Parker, of Windsor: ‘From the gas-works at the end of George-street a double line of open, deep, black, and stagnant ditches extends to Clewer-lane. From these ditches an intolerable stench is perpetually rising, and produces fever of a severe character.’

Dr Edward Knight of Stafford: ‘There is not any provision made for refuse dirt, which, as the least trouble, is thrown down in front of the houses, and there left to putrefy.’

Mr William Rayner of Stockport: 'The street . . . is seven yards wide, in the centre of which is the common gutter, or more properly sink, into which all sorts of refuse is thrown; it is a foot in depth.'

Mr Robert Atkinson, of Gateshead: 'It is impossible to give a proper representation of the wretched state of many of the inhabitants of the indigent class, situated in the confined streets called Pipewellgate and Killgate, which are kept in a most filthy state, and to a stranger would appear inimical to the existence of human beings.'

The Reverend Dr Gilly, canon of Durham, on a peasant's hovel: 'It is not only cold and wet, but contains the aggregate filth of years, from the time of its first being used. The refuse and dropping of meals, decayed animal and vegetable matter of all kinds, which has been cast upon it from the mouth and stomach, these all mix together and exude from it.'

And so on, in town and village throughout the country, each local official struggling to convey the full horror of what he has seen, many of them apparently believing their situation to be so bad that it must be unique. The true horror, recognized by Chadwick and other reformers of the time, was that the squalor was ubiquitous. Even badgers cleaned their dens. We were worse than animals, preferring cholera and typhus to the chore of removing our rubbish, as ready to waste years of our own lives as to throw down the carcass of a rabbit. Between 1848 and 1854, the death toll from cholera alone was a quarter of a million, and 15 per cent of children did not survive their infancy. It was not just more regulation that was needed – there had been no shortage of that – but a complete re-ordering of local and national priorities. Though many of his own ideas were impracticable (the basis of his proposed economic miracle was the export of metropolitan sewage for use as agricultural manure), Chadwick himself was prominent in the clamour for reform. His *Report* caused deep shock, as he

intended it should, and he took care to send copies to opinion-formers such as John Stuart Mill and Charles Dickens, whose last completed novel, *Our Mutual Friend*, is rooted in the black economy of the dust-yard.

One small but vital step forward came with Britain's first Public Health Act in 1848, which established a General Board of Health and handed to corporate boroughs the responsibility for drainage, water supply and 'removal of nuisances' (London got its own City Sewers Act). In Dickensian London, waste disposal was already an engine of profit. In his massive four-volume survey of 1861, *London Labour and the London Poor*, the maverick journalist and co-founder of *Punch* Henry Mayhew provides an obsessively detailed description of dustmen's lives, including everything from their wages to their drinking and sexual habits (dust*men* tended to live with dust*women*, with whom they would have dust*children* and create entire dust dynasties). Muck, as ever, was brass. The contracts for refuse collection in London's 176 parishes were shared between 80 or 90 contractors, who also had responsibility for cleaning the streets – contracts which, in Mayhew's estimation, were worth in total between £30,000 and £40,000 a year. Though modern waste disposal contractors would find it extraordinary *not* to be paid for their work, in the mid nineteenth century the idea was something of a novelty. Initially it was the contractors who paid the parishes for the right to cart away their dust (chiefly composed of ash) and to profit from its sale, either as fertilizer or for mixing with clay in brickmaking. As demand for dust declined, so the balance changed. The parish of Shadwell, for example, having once received £450 a year from its contractor, now had to pay him £240 to take the stuff away.

Mayhew's description of the collection round is a model of documentary precision. Two men – a 'filler' and a 'carrier' – tour the streets with 'a heavily-built high box cart, which is

mostly coated with a thick crust of filth, and drawn by a clumsy-looking horse’.

> These men used, before the passing of the late Street Act, to ring a dull-sounding bell so as to give notice to housekeepers of their approach, but now they merely cry, in a hoarse unmusical voice, ‘Dust oy-eh!’ The men’s equipment consists of a short ladder, plus two shovels and baskets. These baskets one of the men fills from the dust-bin, and then helps them alternately, as fast as they are filled, upon the shoulder of the other man, who carries them one by one to the cart, which is placed immediately alongside the pavement in front of the house where they are at work. The carrier mounts up the side of the cart by means of the ladder, discharges into it the contents of the basket on his shoulder, and then returns below for the other basket which his mate has filled for him in the interim. This process is pursued till all is cleared away, and repeated at different houses till the cart is fully loaded; then the men make the best of their way to the dust-yard, where they shoot the contents of the cart on to the heap, and again proceed on their regular rounds.

Mayhew calculated that most two-man teams would bring back five cartloads a day. In the yard itself, the dust was sifted and sorted in a treasure hunt of heroic energy. As well as the *fillers* and *carriers* who brought in the carts, four categories of worker were employed by the contractor: a *yard foreman* or superintendent; *loaders* of outgoing carts; *carriers* of cinders or bricks to their respective heaps; and a *foreman* or *forewoman* of the heap, also known as *hill-man* or *hill-woman*. This last was a powerful figure who employed yet more labourers of his or her own. By Mayhew’s account these were arranged into three more categories:

1. *Sifters*, who are generally women, and mostly the wives and concubines of the dustmen, but sometimes the wives of badly-paid labourers.
2. *Fillers-in*, or shovellers of dust into the sieves of the sifters (one man being allowed to every two or three women).
3. *Carriers off* of bones, rags, metal, and other perquisites to the various heaps; these are mostly children of the

dustmen.

Put all these together and you construct a scene worthy of Pieter Brueghel. A medium-sized yard would need perhaps twelve collectors, three fillers-in, six sifters and one foreman or -woman; a large one might need a workforce of 150. Mayhew's own account is unimprovable:

> Near the centre of the yard rises the highest heap, composed of what is called 'soil', or finer portion of the dust used for manure. Around this heap are numerous lesser heaps, consisting of the mixed dust and rubbish carted in and shot down previous to sifting. Among these heaps are many women and old men with sieves made of iron, all busily engaged in separating the 'brieze' [coarser lumps] from the 'soil'. There is likewise another large heap in some other part of the yard, composed of the cinders or 'brieze' waiting to be shipped off to the brickfields [where it might fetch perhaps three shillings a ton]. The whole yard seems alive, some sifting and others shovelling the sifted soil on to the heap, while every now and then the dust-carts return to discharge their loads, and proceed again on their rounds for a fresh supply. Cocks and hens keep up a continual scratching and cackling among the heaps, and numerous pigs seem to find great delight in rooting incessantly about the garbage and offal . . .
>
> In a dust-yard lately visited the sifters formed a curious sight; they were almost up to their middle in dust, ranged in a semi-circle in front of that part of the heap which was being 'worked'; each had before her a small mound of soil which had fallen through her sieve and formed a sort of embankment, behind which she stood. The appearance of the entire group at their work was most peculiar. Their coarse dirty cotton gowns were tucked up behind them, their arms were bared above their elbows, their black bonnets crushed and battered like those of fish-women; over their gowns they wore a strong leathern apron, extending from their necks to the extremities of their petticoats, while over this, again, was another leathern apron, shorter, thickly padded, and fastened by a stout string or strap round the waist. In the process of their work they pushed the sieve from them and drew it back again with apparent violence, striking it against the outer leathern apron with such force that it produced each time a hollow sound, like a blow on the tenor drum. All the women present were middle-aged, with the exception of one who was very old – 68 years of age she told me – and had been at the business from a girl. She was the daughter of a dustman, the wife, or woman of a dustman, and the mother of several young dustmen – sons and grandsons – all at work in the dust-yards at the east end of the metropolis.

From out of the grey mountain, the sieves would produce all kinds of bits and pieces that had a particular value of their own. Broken bricks, oyster shells and rubble could be sold for laying as foundations under concrete. Rags and bones went for paper-making and glue. Tin and other metals went to make fastenings or ‘clamps’ for trunks. Boots and shoes were sold to makers of Prussian blue, who had a use for them in the manufacturing process. Money and jewellery, as Mayhew put it, were ‘kept, or sold to Jews’.

Even without such ‘perquisites’, by the standards of the day dust-yard workers were not badly paid. A single man might expect to make fifteen shillings a week, and a ‘married’ man helped by his family could expect, on average, £1 or more – this at a time when a seamstress would be lucky to make more than sixpence a day, and an agricultural labourer eight shillings a week. This is not to say that the contractors were generous. While they were always cagey about their profits (‘they seem to feel that their gains are dishonestly large, and hence resort to every means to prevent them being made public’), they kept tight control over what went into their employees’ pockets – even to the extent of deducting from carters’ wages the ‘perquisites’, offered usually in the form of cash or beer, that the men received from grateful householders. This so depressed the men’s incomes that they took to demanding the ‘perquisites’ as a right, making their point by scattering dust, cinders and other rubbish outside the houses of non-payers.

In the kitchens and parlours of better-run homes, waste avoidance was a highly developed art. As Judith Flanders records in her meticulous portrayal of nineteenth-century domestic life, *The Victorian House*, nothing was thrown away that was not beyond all hope of further use. In the kitchen, fish-heads, plate-scrapings and vegetable water went into soups and gravies, and stale bread into puddings. Anything left would be recycled as pigswill. Soiled paper

went on to the fire, while clean was torn up either to serve in the lavatory or to be twisted into ‘spills’ for lighting candles or fires (a habit that persisted in some homes well into the second half of the twentieth century). Worn-out sheets became bandages. Rag-and-bone men took other textiles and bones, and the back door received a steady flow of dealers ready to buy paper, metal and anything else for which human ingenuity could devise a future. Only the careless, the drunk or the profligate would leave very much for the sifters to find at the yards.

‘Night soil’ was emptied from the cesspools by the same men who collected the dust and cleaned the streets, though by a somewhat different arrangement. For this there were no parish contracts, only private agreements between landlords and the contractors. Anthony S. Wohl, in *Endangered Lives*, suggests it was the very stench of cesspool-cleaning that deterred local authorities from accepting responsibility for it. For extra pay, ‘nightmen’ – or ‘shit-sharks’ as they were more popularly known – would go out after dark to perform the noblest of their deeds (luckily, one of the benefits of their calling seems to have been immunity to smells). Not every tenant or landlord, however, could be relied upon to spare the expense. Neither was it always the case that there was a contractor available. Wohl reports, for example, that the entire population of Ipswich – 45,000 people – shared the services of just four cesspool cleaners. Cesspools frequently overflowed or leaked, and the rivers – now also bearing the assaults of increasingly heavy industrial effluent – remained as polluted as ever. Poor drainage meant the consequences of a downpour could be far worse than a drenched hat and coat. Again it is Mayhew who paints the picture:

> Until towards the latter end of the last century . . . the streets even of the better order were often flooded during heavy and continuous rains, owing to the sewers and drains having been choked, so that the sewage forced its way through the gratings into the streets and yards, flooding all the

> underground apartments and often the ground floors of the houses, as well as the public thoroughfares with filth.
>
> It is not many months since the neighbourhood of so modern a locality as Waterloo-bridge was flooded in this manner, and boats were used in the Belvidere and York-roads. On the 1st of August, 1846, after a tremendous storm of thunder, hail, and rain, miles of the capital were literally under water; hundreds of publicans' beer cellars contained far more water than beer, and the damage done was enormous. These facts show that though much has been accomplished towards the efficient sewerage of the metropolis, much remains to be accomplished still.

Neither was it just London's problem. As late as the 1880s one can find descriptions of Cambridge as 'an undrained, river-polluted, cesspool city'. Even at Windsor, the castle sewers would overflow and drench the lawns in excrement rendered no less offensive by its courtly origins. Towns everywhere shimmered in a haze of blended stinks that added rotting vegetable matter, dead cats, animal offal and blood to the gut-wrenching effects of human and animal excrement. According to L. C. Parkes, quoted by Wohl, the poor 'were in the habit of depositing their excreta in a newspaper, folding it up, and throwing it . . . out of the back window'. If the smells were medieval, so too was the prevailing view among medical men that it was from this foul 'miasma' that disease would spontaneously arise.

It was to rid London of the supposedly infectious cloud, rather than intentionally to purify the cholera-infected water supply, that Sir Joseph Bazalgette designed his justly famous London sewerage system. This was begun after the 'Great Stink' had forced the House of Commons to adjourn, retching and spluttering, in June 1858, and was finished in 1875 when it was opened at a grand ceremony attended by the Prince of Wales and the Archbishop of Canterbury. Bazalgette's aim was to get rid of open sewers and to prevent sewage flowing directly into the river, at least within central London (though by the end of the century, according to Wohl, the two outfalls at Barking and Crossness were releasing a torrent of 150 million gallons a day – one sixth of

the river's total volume of water). The 'miasma' duly relaxed its grip, but the real benefit was to the city's water supply. London's last serious cholera epidemic was in 1866. Nationwide, however, progress was not so fast. Wohl tells us, for example, that in 1911 two thirds of Manchester's working-class households were still using bucket lavatories, ash-boxes or privy middens. In seeking to explain the high rates of typhoid, scarlet fever and diarrhoea, the local medical officer of health had only to follow his nose.

Other improvements were double-edged. In 1874 Britain got its first prototype waste incinerator, the so-called 'destructor', at Nottingham. Another 250 would be built during the next thirty years – each one a mini volcano deluging its neighbourhood with a sooty lava of ash, dust and charred paper. (Thus began the long and bitter opposition to incinerators that has never ceased.) Victorian rakers would be replaced in the next century by hollow-faced men picking recyclable material from the conveyor belts that fed the furnaces. In 1875 came a further and stronger Public Health Act. Local authorities now had a *duty*, not merely the right, to arrange for the regular collection of household waste, and in 1907 this was extended to include trade waste. In 1898 the business of waste disposal acquired professional gravitas when its senior practitioners formed the Association of Cleansing Superintendents – an organization that would later metamorphose into the Chartered Institution of Wastes Management. It was a worthy body whose good intentions could occasionally lure it into over-optimism. In 1907 it predicted that the greatest advance 'in the near future' would be a change of emphasis from destroying refuse to salvaging it. We are still waiting.

There was a little flicker of hope with the birth, in 1921, of the Association of London Waste Paper Merchants (now transmuted into the British Recovered Paper Association), with its self-interested but nonetheless worthy ambition to recycle more paper. Despite Manchester's allegiance to

squalor, more and more households were enjoying the benefits of modern sewerage, flush lavatories and the historic absence of stink. In Burnley, for example, the number of WCs increased from 586 in 1874 to 20,691 by 1900. Robust old slang terms – *jakes, bog-house* – would give way gradually to genteel euphemisms: *convenience, toilet.* Just over the temporal horizon lurked lavatory cleaners ('kills all known germs!'), air and water fresheners, toilet-roll cosies and an excretal coyness that all but denied possession of kidneys, bladder and bowels altogether. Dustbins made their appearance before the First World War, and people gradually grew accustomed to using them. Horse-drawn dustcarts were being overtaken by motor-driven ones, and many urban streets for the first time flowed with pedestrians and traffic instead of sewage and the effluvia of rotted household waste. An historic problem had finally gone away, if only in the sense of being swept under the national carpet. Out of sight might have meant out of mind, but it did not mean out of existence.

The rubbish still had to go somewhere, which, to the cleansing superintendents of the early twentieth century, meant exactly what it had meant to the Romans – holes in the ground, or 'landfill' sites. These were hard on the eye, even harder on the nose, and carried the age-old threat of polluted groundwater. In 1930 an alarmed Ministry of Health protested that 'the system of dumping crude refuse without taking adequate precautions should not be allowed to continue' – this at a time, in the pre-plastic, pre-chemical, pre-electronic age, when garbage was a much more benign and less volatile commodity than it is seventy-five years later. Most houses were still warmed by open fires, which consumed the bulk of the paper, while the grimy endeavours of the rag-and-bone men kept down the volumes of metal, cloth and glass. Typically in the 1930s the average dustbin would justify its name by containing mostly dust or ash. A. E. Higgins, in *The Analysis of Domestic*