



The History of The Institute of Wastes Management 1898–1998

Celebrating

100

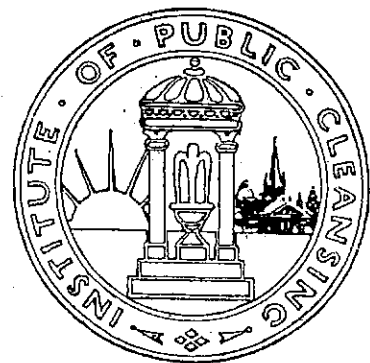
years of progress

By Lewis Herbert

Institute logos throughout the years



Introduced in 1908



Introduced in 1928



Introduced in 1981



Introduced in 1998

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THE HISTORY OF THE INSTITUTE OF WASTES MANAGEMENT 1898-1998

Celebrating 100 years of progress

By Lewis Herbert

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DEDICATION

To the unsung heroes of the waste industry. I hope you enjoy it, and use it to show others that what we all contribute is so worthwhile.



ABOUT THE AUTHOR

From 1981 to 1986, Lewis Herbert was the Greater London Councillor responsible for waste management, and during his time in this role he expanded recycling, and initiated effective waste regulation and plans for new incinerators. He is now Principal Engineer at Essex County Council with responsibility for waste strategy and contracts, and is current Chairman of the East Anglian Centre of the Institute.

Lewis has a degree in Economic History and Politics from York University.

His next project will be to write a more complete history of waste, so he would welcome offers of further material and photos, particularly if old or amusing. You can contact him on 01223 721027.

ACKNOWLEDGEMENTS

The author would like to thank the following people for all their help in compiling this history: for reading the draft, George Cooper, Jemma Little and Richard Hawkins, magnificently devoted editors; for memories and historical accounts, Jack Ambrose, Ben Heath, 'Higgy', David Jackson, Philip Patrick, Jack Skitt, Ron Stanyard, Bob Whewell and Ron Wood; for background material, Harry Barton, Peter Daniel, Jonathan Davies, Mick Johnson, and Bob Evans, Peter Johnston, Lorna McBean, Colin Palmer and Bill Townend; and for photos, the Corporation of London, Peter Ager (City of London), John Holmes (Coventry Incinerator), Lancashire Evening Post and Adrian Phillips (Preston Incinerator), Stuart Sim and Tom Smith (Tyseley Incinerator), and Bob Whewell (Manchester Corporation).

Finally, thanks are extended to all those at IWM HQ who have given of their time, and to David Porteous and Pat Jennings for the design and final editing of this publication.

PUBLISHER'S NOTE

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ISBN 0 902944 495

Printed in England by Warwick Printing Co Ltd

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PREFACE

SHOULD WE CARE ABOUT OUR HISTORY?

Our preoccupations with present day problems, practices and equipment are such that we are completely unconcerned with what happened in the distant past, particularly in the period before written records.

Archaeology does not make the slightest appeal to cleansing officials. It is too dry, musty, and far removed from their work. There is no reason why it should not be, save that it would not be a best seller."

When Mr A.L. Thomson (see page 38) penned this contribution for the Institute's journal in June 1937, he may have doubted the interest of waste managers in history, but this did not stop it being a constant theme in his prolific writings.

So, how much does it really matter where we have come from and how we arrived here?

While the complex issues surrounding waste, both in terms of its composition and management, may be very different to a hundred years ago, many aspects of the service our industry provides are remarkably similar to the past. Modern waste management methods have often been used somewhere before, contrary to occasionally incorrect claims of 'state of the art' discovery.

The prime movers are also the same - the public and customers who expect our industry to solve their waste problems, collect from their homes and businesses, clean the streets and dispose of the waste residues, preferably with little fuss and at the lowest cost.

As an Institute and an industry, our first priority is to protect public health, balanced with our other objectives:

- ☐ to provide competitive, quality services;
- ☐ to achieve the highest standards of environmental protection;
- ☐ to be efficient and effective;
- ☐ to meet the demands of wider legislation and public expectations;
- ☐ to use the best available technology and methods to achieve all of the above.

The most significant benefits that Institute members enjoy in the 1990s are also little changed from the 1890s:

☐ the opportunity to build links and alliances with others in the waste management business;

☐ the opportunity to advance wastes management practice by sharing information and ideas (though the pace of change is now very different).

Over the decades, the Institute has made a consistently effective contribution. It has delivered a professional and high quality service to its members, has represented professional wastes management on the wider stage, and has expanded to meet continually expanding requirements.

For example, educational and technical standards have progressed significantly. No one today can claim the background of Mr John Terry, the Institute's Treasurer from 1906 to 1937, who started work at the age of nine and educated himself in his teens during the evenings. The Institute's long lasting examination system, the Testamur (see page 29), continued this tradition of self-education which had to be fitted around earning a living, and today, wastes management is establishing itself as an important subject for study, at both undergraduate and post-graduate level, in over 100 UK universities.

What has not changed, however, is the fact that the Institute is only as strong as its membership. The knowledge, drive and determination to set and maintain the highest possible standards which was the driving force behind the establishment of a professional Institute 100 years ago is just as strong today as we approach the 21st century. All members must continue to work together to ensure that the Institute remains the foremost professional institute in the world concerned solely with wastes management.

The practical experiences of our predecessors can sometimes be just as valuable and illuminating as those of our present day colleagues. I hope that you enjoy reading this history and that, despite Mr Thomson's misgivings, you gain something that is of use in facing the complex issues surrounding modern waste management.



VICTORIAN
BOY
SWEEPERS
Street
cleansing
was very
primitive
back in
the 1840s

WHY THE INSTITUTE OF WASTES MANAGEMENT WAS CREATED

This history charts the three distinct phases which naturally divide the first hundred years of the Institute of Wastes Management (IWM):

1. the first three decades, which saw the establishment of the Institute from 1898 to the 1927 as described in Chapter 2;
2. the continuing growth of the Institute as the national professional organisation for local authority waste managers, from 1928 to 1972, described in Chapter 4; and
3. the last 25 years, from 1973 to 1998, which have seen the expansion of the Institute to encompass waste managers and professionals across the whole range of waste management and related engineering industries and organisations, described in Chapter 6.

Continuing Institute themes are considered in each of the three phases:

- the Institute's development, objectives and central organisation;
- the Institute's membership, meetings and

Annual Conferences;

- the Institute Journal, educational work and services to members;
- other Institute publications and technical work; and
- the growth of the regional Centres of the Institute.

Legislation and developments

Wider waste legislation and waste industry developments are also then assessed for each time period, in odd numbered Chapters, including:

- contributions by the Institute to new waste and environmental legislation, and the effect those changes had on the waste industry;
- social changes that altered waste composition, notably the replacement of coal for both domestic cooking and heating (*see the graph on page 22*);
- council refuse collection and street cleansing services, and waste transport arrangements;

Introduction

- salvage, recycling and waste processing;
- disposal by incineration and landfill.

Key figures in the Institute's history are described in the appropriate chapters. The Appendices then detail office holders, conferences, and the Institute's expansion (pages 51 to 58).

First, however, it is necessary to set the creation of the Institute in context, by looking at the environment in which the Institute was created, and how it assisted the earliest British waste managers to respond to the harm that rapid urban growth had caused to public health.

Cleansing Superintendents

The Institute of Wastes Management was created because Cleansing Superintendents employed by expanding local authorities in the late Victorian period foresaw the benefits they could gain from their own association.

Cleansing Superintendents were a new breed of council manager:

"The Superintendent must be a man of peculiar talents. He must be a born controller of labour, he must be well educated, have a thorough knowledge of accounts, know much about horses, rolling stock, sanitation, building, stores of various descriptions, exercise skill and practical economy, have a cast iron constitution and be prepared to work in the office or out of doors for twenty four hours if necessity demands."

"His office is no sinecure, and his work is always under the eye of the public and open to criticism to such an extent as no other work of a Municipal official."

Superintendents had to deal with the waste *"rapidly, scientifically, hygienically, and very often so as to create a commercial commodity."* (Source: Journal Editorial, August 1910.)

The first Institute meeting

On 25 June 1898, approximately 30 Superintendents and Councillors from the larger towns and cities in northern England and Scotland met in Manchester. As an early Journal article noted, the Association of Cleansing Superintendents of Great Britain added collective strength to the individual efforts of leading urban councils and cleansing teams, helping them tackle the public health crisis that much of urban Britain was still experiencing.

The roots of this collective action lay back in the 1840s, half a century earlier, a mark of the time that Victorian Britain took to address issues affecting the new urban areas. It required a combination of public health legislation and local authorities with sufficient funds to invest in engineering solutions like mains sewerage, developed by Mr Bazalgette and others. Investment in wider wastes management infrastructure was to prove equally important.



**VIEW OF A
VICTORIAN
DUSTYARD**
Waste was
sorted to
recover
anything
of value

RESPONDING TO URBAN SQUALOR – THE CALL FOR EFFECTIVE SANITATION

As a consequence of the Industrial Revolution, the newly enlarged cities of Britain had, by the 1840s, gained unprecedented concentrations of people and waste, before they were ready for either. With no effective sanitation, living conditions were often appalling, as eyewitness reports from the time reveal.

Dr William Henry Duncan described a visit to Union Court in Liverpool: *"The whole place was inundated with filth, having a most intolerable stench, and I found that it proceeded from two ashpits in the adjoining courts having oozed through the wall... There were sixty-three cases of fever in that court in twelve months. In another small court, the smell arising from the uncovered ashpits, the ruinous privies, and the filthy state of the court was such that an Irishman, one of the inhabitants, said the smell was bad enough to raise the roof off his skull."* (Source: Evidence to the 1840 Select Committee on the Health of Towns.)

Another doctor observed in Glasgow in 1844 that *"many of the streets in which cases of fever are common are so deep in mire, are so full of holes and heaps of refuse, that the vehicle used for conveying patients to the house of recovery cannot be driven along them and patients are obliged to be carried."*

Housing for most was overcrowded and unventilated. Urban air was filled with smoke, waste was dumped randomly, and many water courses grossly polluted. People brought their rural habits into the new industrial areas. Their animals were often left to scavenge the streets for food. Businesses such as abattoirs flushed their noxious waste into the streets. Add to that the tons of dung from thousands of horses and the true picture of the insanitary state of the new cities emerges.

Thousands died from disease

The Plague, which had down the ages decimated urban populations in Britain, was in

TABLE 1: POPULATION GROWTH (000s)

	1801	1901	1991
Greater London	1117	6586	6889
Birmingham	71	760	1006
Liverpool	82	685	480
Manchester	75	654	438
Glasgow	77	904	688
Total - Britain/Ireland	14700	41500	61300

(Source: *Handbook of Modern British History 1714 to 1995*,
Chris Cook and John Stevenson, 1993, Longman.)

remission by the 19th century. Cholera, however, caused major loss of life in Victorian England and was made worse by inadequate sanitation. In 1832 the mining area of Staffordshire recorded 1301 deaths from cholera and, in 1848/9, the death toll was 2683. Across Britain, over 250,000 died from cholera between 1848 and 1854. (Source: *Journal*, October 1992.)

Other epidemics, including smallpox, typhoid, enteric fever and typhus, were also potentially deadly. In the 1840s more than 15 children out of every 100 died in infancy. Table Two shows how life expectancy has since improved.

TABLE 2
ANNUAL DEATH
RATE

1850s	– 22.7 per 1000
1890s	– 18.7 " "
1930s	– 12.0 " "
1970s	– 11.7 " "

AVERAGE MALE LIFE
EXPECTANCY

1870s	– 43 years
1900s	– 50 "
1930s	– 61 "
1960s	– 68 "

(Source: *Endangered Lives – Public Health in Victorian Britain*, Anthony Wohl, 1983, J.M. Dent)

While factors like a better diet, medical advances and housing were important in increasing life expectancy, improved wastes management and sanitation have both made major contributions.

In the 19th century, medical scientists argued to and fro as to the causes of various diseases, in sometimes futile debates. Successive governments resisted the call for change, despite the threat that cholera

posed to the whole population, not just the labouring poor in the worst areas of towns and cities.

British reformers pressed for sanitary improvements to help prevent thousands of unnecessary deaths. Sir Edwin Chadwick (b.1800; d.1890) is perhaps the best remembered. His contribution was recognised when

he became the first President of the new Association of Nuisance Inspectors in 1884 – a predecessor to today's Chartered Institute of Environmental Health (CIEH). He was the leading voice during the

Victorian period calling for cities to adopt effective wastes management methods.

Chadwick also co-ordinated the General Report of 1842 on the Sanitary Condition of the Labouring Population of Great Britain. Its wide-ranging conclusions included that:

1. all types of disease were "*aggravated throughout Britain, not just in London, by bad sanitation including the absence of town cleansing*";
2. more people died from "*filth and bad ventilation*" in Britain than in any recent wars;
3. public health legislation was needed and the state had a role in enforcing change; and
4. "*all new local public works [should be] devised and conducted by responsible officers qualified by the science and skill of civil engineers*".

Setback for sanitation reform

Chadwick was an impatient person. He had important messages to communicate, but they were ideas that many influential Victorians did not like to hear, including that more money needed to be spent on wastes management.

His 1842 report paved the way for the 1848 Public Health Act, but in 1854 he and fellow health progressives were removed from the new national Board of Health, in a backlash against reform. Several leading journals opposed new sanitation measures. The Times even said in an editorial that it preferred the risk of cholera to being 'bullied' by health reformers.

Eventually, the reformers won, but only through the combination of many new controls and the parallel creation of effective urban and other local authorities. It was a massive change of direction from the self-help, non-intervention philosophy that prevailed early in Queen Victoria's reign. A steady flow of legislation followed (see box on opposite page, top right).

Victorian waste management

Waste management was very basic in the days before the Association of Cleansing Superintendents was created. The mid-Victorian waste industry consisted largely of individual operators and small-scale private contractors, existing more on what they could make from the value of waste than from charges to councils or trade customers. The boards of city vestries (parishes) and other rating bodies spent only enough to clean up the worst affected areas. They occasionally employed their own cleansing staff in the commercial and affluent districts, but rarely provided effective supervision.

Contractors often delivered materials and street sweepings they had collected to dustyards like those featured in Charles Dickens' 'Our Mutual Friend'. The dustyard rightfully belonging to Mr Harman was one of hundreds where waste was sorted to recover anything of value, including:

- ☐ metals, glass, crockery, hardcore, rags, leather and paper;
- ☐ cinders and small bits of coal, known as breeze;
- ☐ ashes and dust, reused in brick-making;
- ☐ edible vegetables;
- ☐ bones for rendering; and
- ☐ organic waste for manure.

There was virtually no residue left for final disposal.

Dr Sedgwick Saunders, a Medical Officer of Health for the City of London, vividly described the unhealthiness of these earliest Material Recovery Facilities:

"When the dustcarts arrive at the wharf their contents are tipped into heaps at a place most convenient to the people who are engaged as sorters. About seventy persons, chiefly women are engaged in this degrading and loathsome work, most of whom are paid by piecework; but female sifters received seven shillings and a little coal and wood weekly.

"The appearance of the women is most deplorable, standing in the midst of fine dust piled up to their waists, with faces and upper extremities begrimed with black filth, and surrounded by and breathing a foul, moist, hot air surcharged with the gaseous emanations of disintegrating organic compounds. I shall not forget visiting some of those creatures in a hospital, and witnessing the condition of their skins." (Source: quoted in 'Disposal of Towns'

VICTORIAN PUBLIC HEALTH LEGISLATION

- **1846 to 1860** Nuisance Removal and Disease Prevention Acts – began the process of modern waste regulation
- **1848** Public Health Act – gave local areas optional rather than compulsory public health powers
- **1853 to 1856** Smoke Abatement Acts for metropolitan areas
- **1855** London Metropolitan Board of Works established
- **1871** Local Government Act established Local Government Board to carry out public health engineering works
- **1872** Public Health Act – made Medical Officers of Health compulsory and established urban/rural sanitary authorities
- **1875** Public Health Act (*more on page 21*) – landmark legislation which consolidated previous Acts and made local authorities responsible for regular removal and disposal of refuse, created penalties if they failed, and required households to put waste into moveable receptacles (Section 45)
- **1894** Local Government Act created Urban and Rural District Councils, with responsibility for waste collection and disposal
- **1897** Public Health Act (Scotland) extended the 1875 principles north of the border. The 1892 Burgh Police Act had already given further cleansing powers to Scotland's local authorities
- **1899** Local Government Act transferred waste powers of vestries to the new metropolitan borough councils.

Refuse', W.F. Goodrich, 1904, Archibald Constable.)

Sanitary inspectors

In the second half of the 19th century, the initial policy of central government and local councils was one of inspection of streets and premises to change habits, and occasional enforcement. This would be achieved through a steady increase in the number and powers of local Sanitary and Nuisance Inspectors.

As early as 1843, Glasgow had appointed an Inspector of Cleansing with the power 'to make regulations for watering, sweeping and cleansing closes, thoroughfares and areas'. (Source: Mr McColl's Presidential Address, 1899 Annual Conference.). Liverpool also appointed an Inspector of Nuisances in 1846 through one of the many local Acts.

The waste generated by Victorian cities was an unpleasant mix of the dry, mainly ash, and the wet, human waste. There was inade-

VICTORIAN WASTE FACILITIES

- **Ashpits** – holes for ash and cinders that had to be emptied by shovelling, one for each property or communal.
- **Middens** – communal waste heaps where wet nightsoil as well as dry waste could be indiscriminately tipped – a major public health problem.
- **Privies or Privy Middens** – took all kinds of liquid filth as well as ashes if households had no ash-pits. They had to be emptied by pail. Some were brick-lined but many leaked badly.

quate investment in waterborne sewage. Instead of our modern flushable toilets, people then had privies for their liquid waste. Instead of dustbins, the luckier areas had organised ashpits, emptied when they had to be. The less fortunate had communal middens where wastes of all types accumulated until they were carted away. In the early days, waste staff and contractors had the

highly unpleasant overnight job of removing the liquid nightsoil. It was not a pleasant task for the first Cleansing Superintendents or their



staff, but by organising it properly they immediately reduced the threat posed to public health.

Scotland takes early lead

The provision of effective public cleansing services, including organised collection and disposal, made earlier progress in urban Scotland. There, different legislation had given the police powers to organise and enforce cleansing and had steadily, if fitfully, improved urban conditions through the 19th century.

Greenock had a Cleansing Superintendent employed by its water trust from 1859 who was paid £95 a year, after whom private contractors took over for a while. The Police Board assumed responsibility before, in 1874, Greenock appointed Mr Roderick McLeod as one of the first Cleansing Superintendents (see profile left).

The new Scottish Cleansing Superintendents were largely self-educated engineers, practical men, "*indefinable qualities that are absolutely essential in the management of large bodies of men.*" (Source: Journal, 1911.)

Glasgow appointed its first Cleansing Superintendent in 1868, the same year as Manchester. The public sector was taking on the task of progressing cleansing standards, with the largest local authorities leading the way. However, it was not until the late 1890s that a significant number of Cleansing Superintendents were appointed.

PERSONALITY PROFILE:

Roderick McLeod

One of the first Cleansing Superintendents

- Lived from 1840 to 1931, reaching the age of 91.
- A Highlander born in Argyll, he went from school to farm then to the Caledonian Railway, moving to Greenock after reaching the status of Station Master.
- Greenock Cleansing Superintendent from 1874 to 1892.
- Institute President 1902.
- Bristol Superintendent of Hauling and Scavenging, then Cleansing Superintendent 1892 to 1910.
- In his first Annual Conference presentation, 'Suitable Plant for Cleansing Purposes', Roderick McLeod detailed the latest innovations in four-wheeled horse-drawn carts.
- Able to subdue the wildest horses, he specialised in the feeding and training of horses and shared his skills with other Cleansing





FOUNDING
FATHERS
Members
of the
Institute
pictured
in 1909

THE ASSOCIATION OF CLEANSING SUPERINTENDENTS

The preliminary meeting of the Association of Cleansing Superintendents of Great Britain was held at Sheffield on 7 May 1898. This informal meeting was organised by Mr James Jackson, who spoke on the advisability of forming some kind of an Association. The meeting agreed to establish the Association and appointed Mr F.W. Brookman and Mr Jackson to effect the necessary preparations.

The first official meeting was held in Manchester on 25 June 1898. Mr R.D. Callison, Manchester Cleansing Superintendent, was in the chair at the Town Hall when the motion was moved by Mr D. McColl of Glasgow, seconded by Mr J. McTaggart of Bradford, and carried, to create the Association. The Association adopted two initial Objects:

- to encourage and advance all matters connected with cleansing, and refuse collection and disposal; and
- to facilitate discussion and the interchange

of opinions.

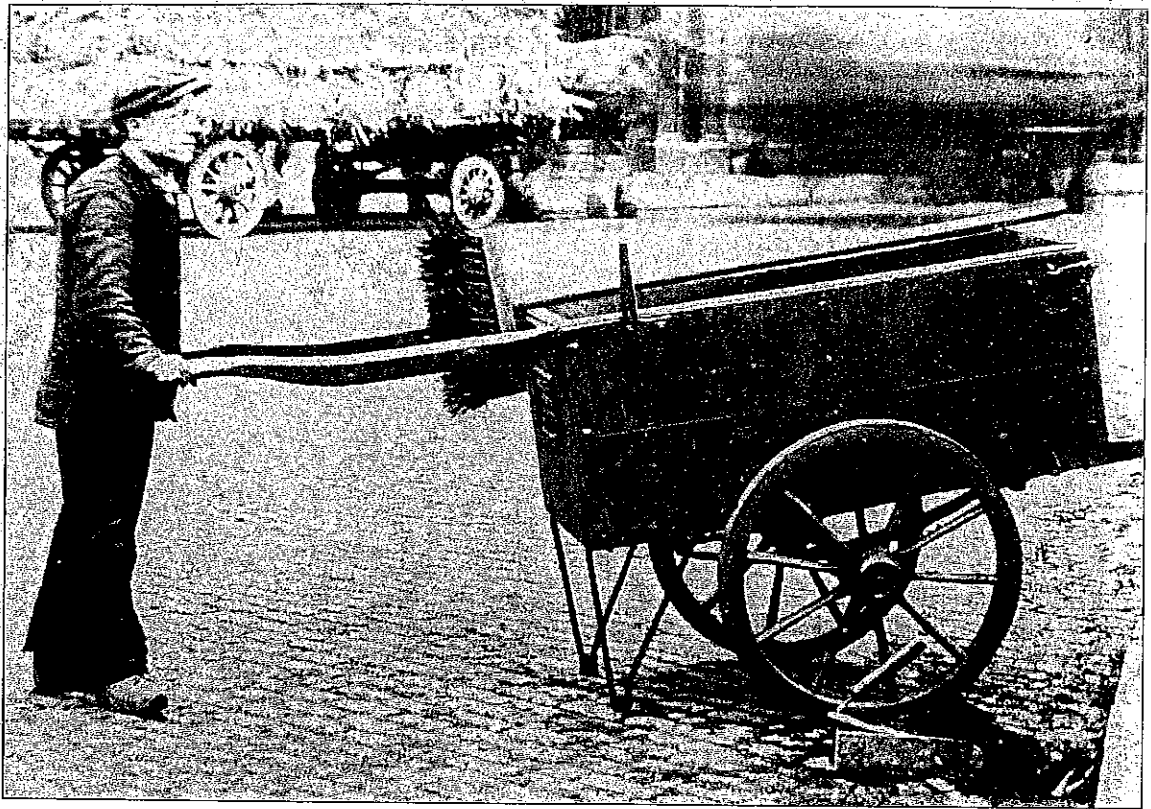
The officers elected were: President - Mr McColl; two Vice-Presidents - Mr W. Holt of Birmingham and Mr Callison of Manchester; Honorary Secretary - Mr Brookman; and Honorary Treasurer - Mr Jackson. While the early intention was that Vice Presidents would then become President, this succession did not occur until much later in the Institute's life, leaving the Vice-President position as a nominal position in the early years.

A photograph taken in 1909 (*see above*) shows many of the people that were present at that first meeting. Some were dressed immaculately in silk hats and frock coats with bright button-holes, their attire showing what important occasions the conferences were to them.

The first meeting closed with a smart luncheon, followed by afternoon visits to the recently opened Manchester Ship Canal by steamer, and by railway to the Chat Moss tip-

EARLY STREET CLEANSING

At the turn of the century, cleansing staff could expect to work into their 70s – there were no pensions then



ping site. These social and educational traditions have continued throughout the Institute's life.

First General Council meeting

The first General Council meeting on 27 August 1898 was attended by 22 members and approved a healthy addition to its membership. One of the founding members was Arthur May of St Luke's Vestry, London, but his membership lapsed after a year and there were no new members from London until 1900. Then, in 1903, Mr Kennedy of Kensington and Mr Vickers of Battersea were added to the General Council to represent London.

Election arrangements for, and the role of, the General Council have remained relatively unchanged throughout the Institute's one hundred years. Triennial elections began in 1905 when seven members retired in rotation each year. Past Presidents were soon made automatic Council members.

The Council appointed a Finance Committee, and in 1910 a Journal Committee. Both were combined in 1916 into a General Purposes Committee.

Much of the original Association constitution and structures were similar to those of the longer established Association of Nuisance Inspectors (now the CIEH). The Associations remained fairly close until well after World

War Two. Smaller councils, and some large ones, continued to combine sanitary inspection and cleansing which led to significant membership overlaps. However, by 1948 there were three times as many councils with separate cleansing departments than in 1898.

First Annual Conference

The first AGM and Annual Conference of the Institute was held on 29 September 1898 at Mason University College, Birmingham. Mr McColl as President gave the opening address and the Institute's first technical paper on cleansing, and James Jackson gave a paper on the aims and objectives of the new Association.

The purpose of the Association was, he said, "*to advance sanitary provision, which being defective in most towns and cities continued to result in excessive death rates.*" Improved cleansing standards meant extra council staff and also greater expenditure on contractors. Council backing and financial support was necessary for this to happen.

The Association was a collective response to:

- resistance from other local authority professionals who feared their territory was being eroded; and
- the need to improve working conditions, where the Institute occasionally adopted something of a trade union role.

Office and manual staff, including Superintendents, worked long and often unso-
ciable hours. Dustmen typically worked 60 or
70 hours a week, while many cleansing staff
and supervisors were required to work
overnight. There were no state pensions or
formal superannuation schemes in those days.

Many worked into their 70s only to face old
age in relative poverty.

Early membership

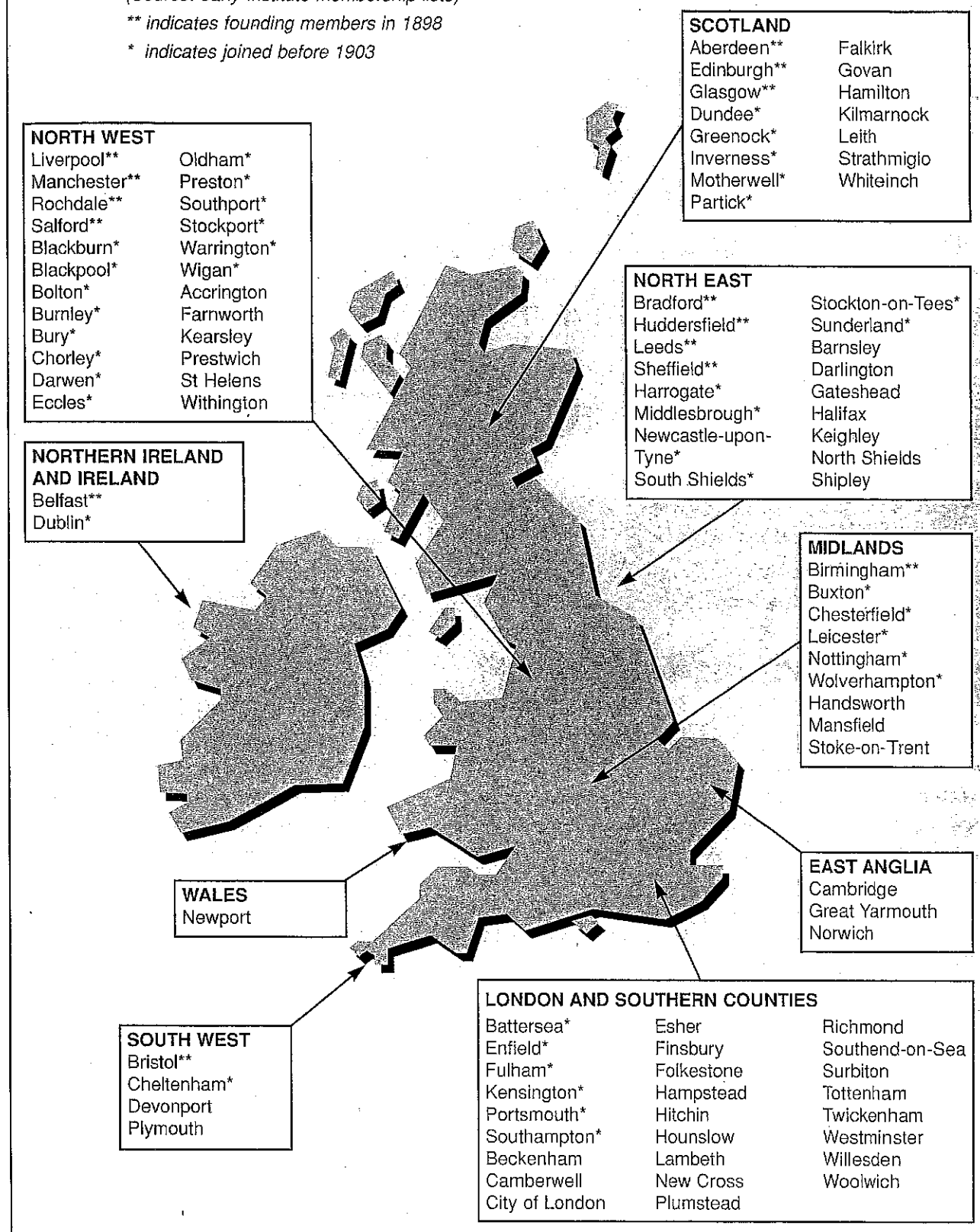
Table Three (see map below) shows the spread
of early Institute membership. The original
membership on 25 June 1898 was 31 – 26

TABLE 3: EARLY MEMBERSHIP OF THE INSTITUTE

(Source: early Institute membership lists)

** indicates founding members in 1898

* indicates joined before 1903



The Association of Cleansing Superintendents

were full members, and 5 were associates. In 1899, membership grew to 33 full members, 29 associates and 12 honorary members. Until 1908, the constitution stipulated a maximum membership of 100.

There was a clear hierarchy within the organisation. The three categories were:

Members: Cleansing Superintendents and, in cities with populations over 100,000, their immediate deputies.

Associate Members: described as gentlemen who had charge of any section of a cleansing department.

Honorary Members: limited to Chairmen and/or Deputy Chairmen of urban local authority cleansing Committees, provided they were approved by the Association's General Council, later changed to the full Association AGM.

The first Honorary Members were three Aldermen from Bradford, Manchester and



**HORSE
POWER
A municipal
dustcart
from early
this century**

Sheffield. This partnership with Councillors reflected what was happening in individual councils, namely the establishment of effective cleansing as a joint effort by Superintendents and their Committees. Several Councillors were appointed Honorary Vice-Presidents at early AGMs.

Nine years later, the 1907 conference programme gave three reasons for joining:

- ☐ "for the good of the Corporation;
- ☐ "for the good of the general public;
- ☐ "for your own good as a progressive official."

From Association to Institute

The Association became an Institute in 1908, and an incorporated body for the first time. It

was now a company limited by guarantee, as had been first proposed by James Jackson in 1902. Incorporation also meant Government registration and greater recognition of the unique role of the Institute.

The Institute widened its main objective "to provide an organisation for Cleansing Superintendents and their Assistants, in order to secure for them a more definite professional status by means of a system of Examinations and the issue of Certificates of Competency", words that still have a familiarity in the 1990s.

Membership

Membership grew in 1908 from 102 to 200 after the self-imposed limit on total numbers was relaxed. The definition of Associate Members was extended to anyone holding a senior position in cleansing who was over 21. The Association began to attract new Associate Members who were younger or from smaller councils. The Institute reserved the right to make some memberships subject to the requirement that applicants pass the Institute examinations, but these examinations took longer than planned to organise. Application forms had to be signed by three members, reduced in later years to two proposers.

The value of Honorary Members was recognised in 1908 with an extension to include "those interested in cleansing work, and who, by reason either of position or of experience, are able to render assistance in promoting the objects of the Institute." This began the widening of the Institute to include equipment manufacturers and others.

Honorary Members were eligible to stand for the General Council then, but only one, Alderman Hulton of Salford, was ever elected. In 1915, several of the founding members became the Institute's first life members, beginning this tradition for past Presidents in particular.

There were no female members in the early years but that was not unusual for such organisations at the time. However, a significant number of Sanitary Inspector Association members (now the CIEH) were women, and a few in smaller or rural councils had refused responsibilities. However, none joined the Institute or regularly attended early Conferences.

From 1898 to 1920, annual subscriptions were: one guinea per annum for Members and

10s 6d for Associates, except for a cut to half price from 1903 to 1908 due to the Association's healthy balances.

In 1899 the Association had £24 19s 8d in the Sheffield Hallamshire Bank and was owed subscriptions of £24 18s 9d. In the early years, annual expenditure on secretarial and printing costs ranged between £20 and £40. Advertising in Institute publications made a significant financial contribution from the out-set.

Early conferences

Regular quarterly open meetings were a feature from the beginning, together with Annual Conferences which were held at venues provided by the serving President. These were free to delegates as the President's council underwrote the cost. In 1910, the first seaside Conference was held at Southport. The main Institute publications until then had been the Annual Conference Programme, sometimes including a tourist guide to whichever industrial city was the host, plus the bound Conference technical papers. The first charge for an Annual Conference (10s 6d) was introduced in 1919, effectively to pay for the Conference Dinner which until then had been provided by the host city.

Institute examinations

Examination options were investigated by a board comprising Messrs Jackson, W.J. Heavey and Brookman, who sat from 1910 to 1913 and developed a scheme. Progress was interrupted by World War One before J.C. Dawes, then Keighley Cleansing Superintendent, updated the syllabus in 1916. It was published in advance of a particular need for training at the end of the war given the changes and staff turnover (many died on active service) in the previous four years. Originally proposed as a two-day exam – the first day written, the second oral – it was shortened to one day for the first full examinations held in June 1920 at the time of the Sheffield Conference.

At least seven out of eleven sections (see box right) needed to be answered, with a mark of 75 per cent required to pass. The original exam fee was a guinea, half for any resits.

The originators highlighted knowledge gained from practical experience:

"the examiners do not recommend any particular text-books as it is desired to make the



examinations a test of the candidate's practical knowledge of the subjects generally, rather than to ascertain his acquaintance with any particular book or books."

From then, the Institute was committed to professional training, a pattern that has continued, with regular modernisation and expansion, to equip waste managers with the most up-to-date knowledge available.

Journal launched

The Institute's official Journal was first published under the title 'The Cleansing Superintendent – The Official Organ Of The Institute'. It has been an integral part of the Institute's contribution since the first edition in August 1910, appearing monthly without interruption despite problems that were inevitable during periods of wartime restrictions or handovers

ORIGINAL INSTITUTE EXAM SYLLABUS

The eleven part syllabus was extensive:

1. General education test
2. Street cleansing
3. Collection of refuse
4. Disposal and salvage plants
5. Engineering
6. Materials used in cleansing
7. Municipal and local government law
8. Horses and their management
9. Mechanical traction
10. Agriculture
11. Book-keeping and statistics

PERSONALITY PROFILE: THE INSTITUTE'S FOUNDING FATHERS

F.W. Brookman

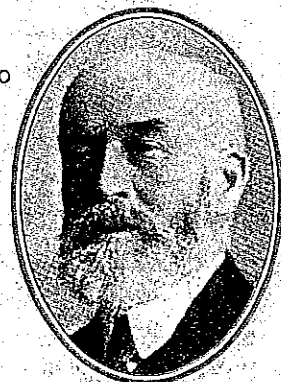
- Honorary Secretary 1898 to 1915.
- Founding Editor of the Journal.
- President 1910.
- Rochdale Cleansing Superintendent for 20 years.
- Technical education at the School of Science, Derby.
- Practical education at Standard Steel, Cranes' Oil Works, and with the Manchester, Sheffield and Lincolnshire Railway.
- Local authority experience included 8 years with Derby Destructor and Manure Disposal Department. Lived from 1858 to 1926.
- His son, F.W. Brookman Jnr, worked for Rochdale before being appointed Mansfield Cleansing Superintendent.



- 1914 to 1933 – Birmingham Cleansing Superintendent, redesignated General Manager of the Corporation's Salvage Department.
- Adopted a scientific approach to wastes management, including the creation of a network of five Separation and Incineration Plants in Birmingham.
- Obtained the Sanitary Institute's certificate.
- Fellow of the Royal Sanitary Institute.
- He gave the Institute a Presidential chain of office.
- Lived from 1868 to 1933. His obituary in the Journal in 1933 stated that his maxim was that *"nothing was too good for cleansing"*.
- Remembered by the James Jackson Medal.

D. McColl

- Founding President 1898 to 1900, and again in 1909.
- Glasgow Cleansing Superintendent from 1892.
- Started work for Glasgow Cleansing Department in 1868, when the city took over cleansing from private contractors.
- By 1898, had worked in cleansing for 30 years.
- A strong organiser, assisted by his earlier commercial education.
- In 1909 he was responsible for 1536 employees, 320 horses and Glasgow's estate of farms, depots and tips totalling 1700 acres.



A. Findlay

- President three times – 1903, 1913 and 1914.
- Aberdeen Cleansing and Carting Superintendent from 1897.
- Previously an Aberdeen policeman, rising to Inspector.
- Tug of war specialist. Honorary Secretary and Chief Marshal of the Aberdeen Historical Procession that marked the coronation of Edward VII in 1902. Lived from 1864 to the mid-1920s.
- His five sons each served in World War One and were pictured in a 1915 Journal. A Findlay Jnr succeeded him as Aberdeen Cleansing Superintendent.



James Jackson

- President in 1905, and from 1926 to 1928.
- Honorary Treasurer and Secretary of the Institute Benefit Society during the early years, and member of every Institute committee.
- 1891 – Huddersfield Cleansing Superintendent.
- 1897 – Sheffield Cleansing Superintendent.



John McKechnie

- President 1907.
- Liverpool Cleansing Superintendent from 1900 to 1912.
- Worked for Liverpool on cleansing for 40 years. Known as the Snow King because of his determined enthusiasm for clearing snow rapidly from local streets.
- Implemented street washing in 1892 to reduce sweeping. Pioneer of both portable ashbins and destructors.
- He lived from 1848 to 1928. Described, in his obituary in the Journal as *"simple, courteous, unobtrusive and thorough. Tackled work with determination and enthusiasm."*



between the early honorary editors (listed in Appendix 3 on page 56).

For the first 80 years until 1990 it had an unpaid editor. Throughout its life it has been a substantial quality publication combining news about the Institute, its members, and their organisations with a wide range of technical papers, news and advertisements on the latest in waste equipment.

The original decision to start it as a 12-month experiment was far from unanimous, being carried by the Chairman James Jackson using his casting vote. Initial subscriptions were 3s per year. In 1917 this was cut to 4d an issue, but subscriptions increased to 6s per year in 1920 and later to 10/6 per year.

The original purposes of the Journal were *"for the members, and in the interests of public health, to improve cleansing methods and reduce ill-health. It is a self-help Journal, to assist Superintendents and their Associates in the efficient discharge of duty."* The spirit is the same today, maintaining a high level of technical content.

Early members were encouraged to write articles with the occasional incentive of half a guinea for articles. There was healthy disagreement from the beginning, and throughout the Journal's life, on at least two issues:

- the best technical way to achieve a defined job;
- which council, contractor or equipment supplier was the best at doing it.

The Journal took a self-critical line in the early years, the 1912 New Year editorial admitting that *"membership is not increasing, the attendances at the Congresses seem limited, the papers read have latterly somewhat lacked vitality, originality, and vim and even the discussions have been maintained by the same old folk."*

After one reader, Thomas Crookes, sent in a letter criticising it for reprinting text from other magazines, he was persuaded to become Editor in 1915, a position he held for the next 36 years, spanning 430 issues.

Circulation reached 500 during World War One. Early Journal short items included:

- June 1911: a proposal for a 'Municipal House' in London to house all local government institutes and trade unions;
- November 1917: an advertisement asking the gentleman who took the wrong umbrella from the Stockport meeting to please return it;



- December 1917: Ilford Urban District Council agreeing to pay a £3 a year bicycle allowance to its foreman;
- January 1918: the announcement that Corporal Foster, VC, who had worked at the Tooting Destructor before the war, was returning to service as a dusting inspector.

**HORSE-DRAWN
CARTS
Heavy lifting
for the
dustmen**

Wider Institute activities

Other Association activities included a benevolent fund which operated until 1911 when the Liberal Government implemented the National Health Insurance Act. The Association's Benefits Society had assets of over £108 in 1910, and paid an annual dividend. In 1906, a national cleansing essay competition was run for schoolchildren with prizes totalling £2 5s, more than a dustman's weekly wage.

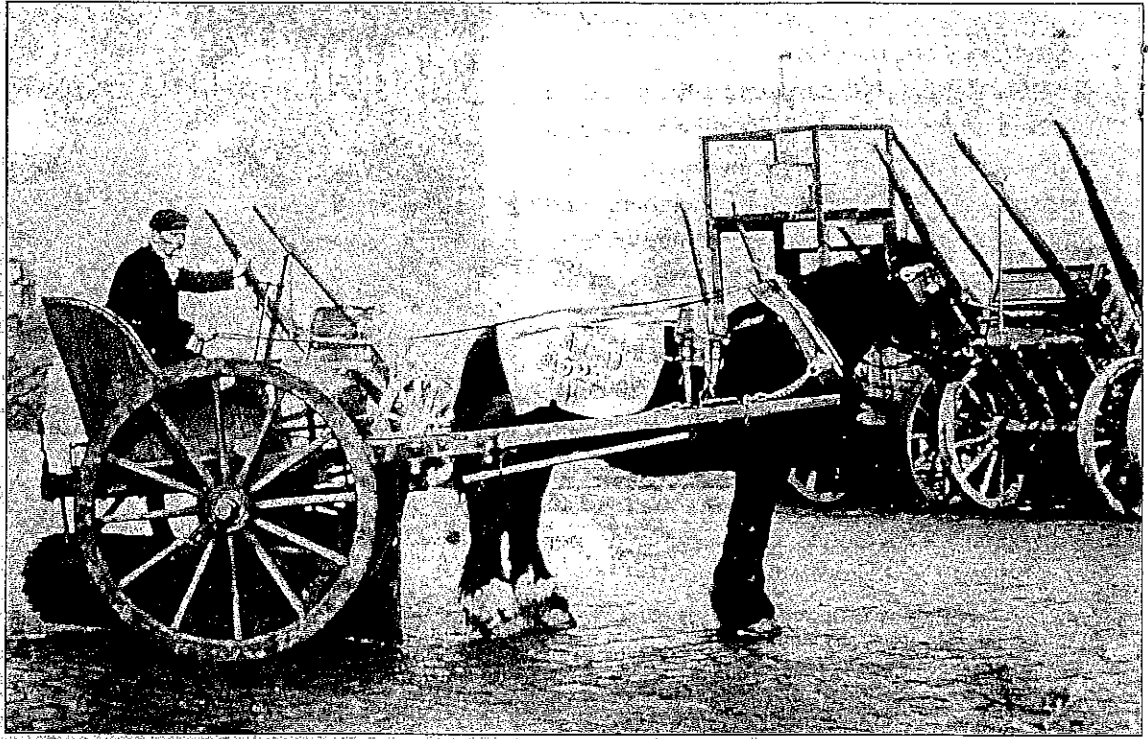
The first Institute Centres

The Scottish Branch was the first Institute Centre. It was inaugurated at a meeting on 25 June 1901 in Glasgow's City Chambers by officers from Glasgow, Edinburgh, Partick, Motherwell, Greenock, Grangemouth and Pollokshaws. Mr McColl of Glasgow was the first Centre Chairman (see profile on page 18).

The London Centre followed, holding its first meeting at Battersea Town Hall on 15 June 1907. It was then called the Metropolitan District, reflecting its smaller area than today's Centre. It was very active before

**PIONEERING
VEHICLES IN
MANCHESTER**

*Right: Street
sweeper.
Below: Street
washer. Both
date from the
1880s*

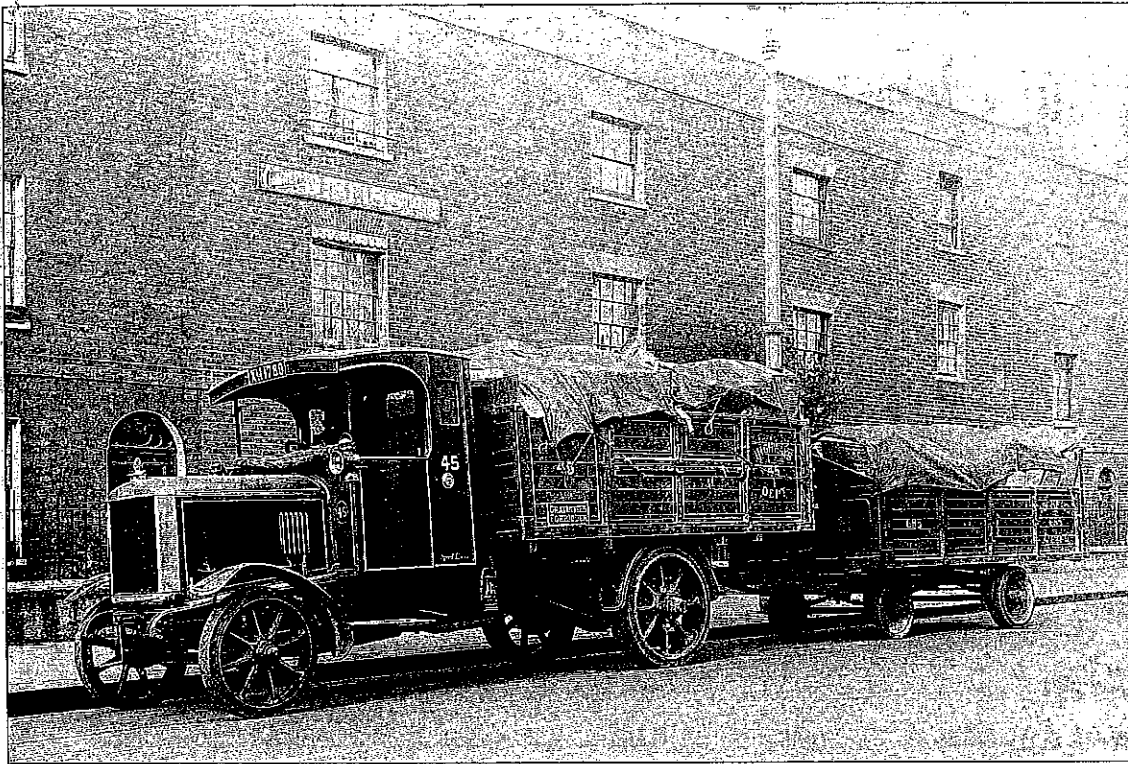


1914, with plenty of meetings and social events like whist drives and vocal and instru-

mental evenings. Interestingly, many Institute members in those early days were accomplished singers and entertainers.

William J. Heavey, Superintendent at the City of London (see profile on page 31) was the first London Centre Chairman, until 1910. The Centre had an Executive Committee and a Treasurer, Mr Eager, who was also from the City. Annual London Centre dinners started in 1908, being held in late spring. Centres were paid half of the membership subscriptions for their area for a few years from 1912.

The creation of the Centres increased recruitment to the Institute in the years leading up to World War One.



**EARLY
MOTORISED
REFUSE
COLLECTION
VEHICLE**
Motor
transport
gradually
replaced
the horse
for hauling
waste

WASTE INDUSTRY DEVELOPMENTS AND LEGISLATION 1890 TO 1920

Until 1936, waste in England and Wales was governed by the 1875 Public Health Act. Separate Acts made similar provision for Scotland and London, and for Ireland until it became independent. The 1875 Act had given local councils the power:

- ☐ to remove household waste, or contract for its removal, without charge. Household waste then included waste from hotels, pubs, restaurants, theatres and other places of entertainment;
- ☐ to provide/regulate receptacles for solid wastes e.g. dustbins;
- ☐ to remove trade waste at reasonable charge;
- ☐ to sell any salvage.

Councils could be penalised for failing to act, including if the Local Government Board required them to improve their service.

Working conditions for waste managers and staff improved steadily. A welcome legislative change for many was the 1922 Local

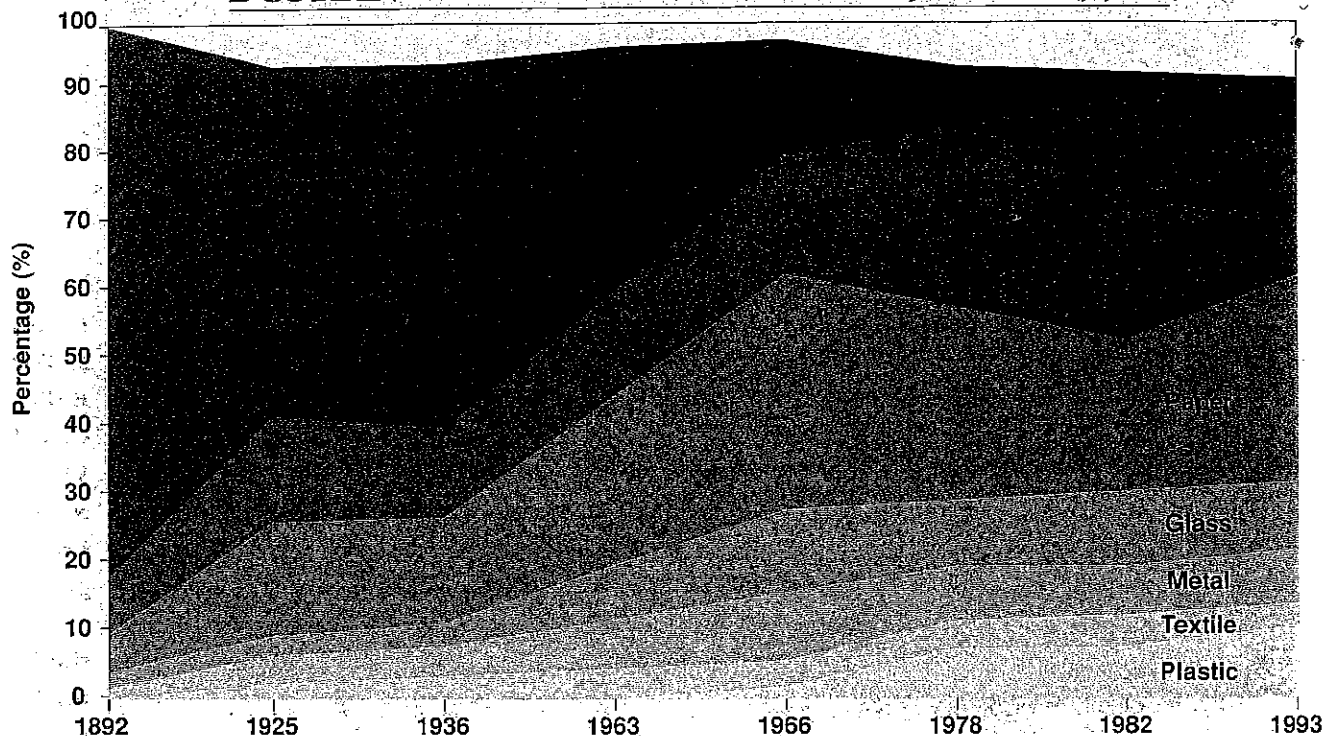
Government and Other Officers Superannuation Act which introduced a pension scheme for English and Welsh council waste managers and their other white collar employees.

However, the most influential change in the period was the recognition that national leadership was needed on public health and wastes management improvements. In 1919, the Ministry of Health was created and J.C. Dawes, then Director of Salvage, was appointed as Inspector of Cleansing and Salvage (*see profile on page 30*), a position which he used to lasting effect in advancing standards in the waste industry between the wars.

Waste composition

Household waste composition changed only marginally between 1890 and 1920 (*see graph overleaf*). After the burning of paper and food waste on kitchen fires, little was left to recycle or compost. In 1917, the National Salvage

DUSTBIN WASTE COMPOSITION 1890s TO 1990s



Council reported that the potential for diversion to help the war effort was limited, with less than 5 per cent of waste in domestic ashbins considered recyclable.

Household waste collection

The Burnley data (see box) is a typical picture

EARLY WASTES MANAGEMENT IN BURNLEY

	1874	1900
Ashpits	5004	18231
Privies	7218	near 0
Water Closets	586	20691

(Source: Paper to the Association's quarterly meeting in March 1900. See page 12 for descriptions of ashpits and privies.)

of the quantity of leaking and overflowing privies, and shared middens in a late Victorian town – insanitary facilities that had to be replaced before conditions improved for collectors and waste managers as well as households.

Dustbins were introduced before 1914 by many urban

councils for dry waste, although not universally welcomed. Householders took a while to get used to carrying their heavy ash containers out for regular collections. The weight of bins led most councils to introduce back door collections for the convenience of householders

Horse versus combustion engine

Every ton of waste was shifted by the physical labour of man and horse. Horses pulled carts sounding bells, trumpets or horns, and dust-

men calling phrases like 'dust oh'.

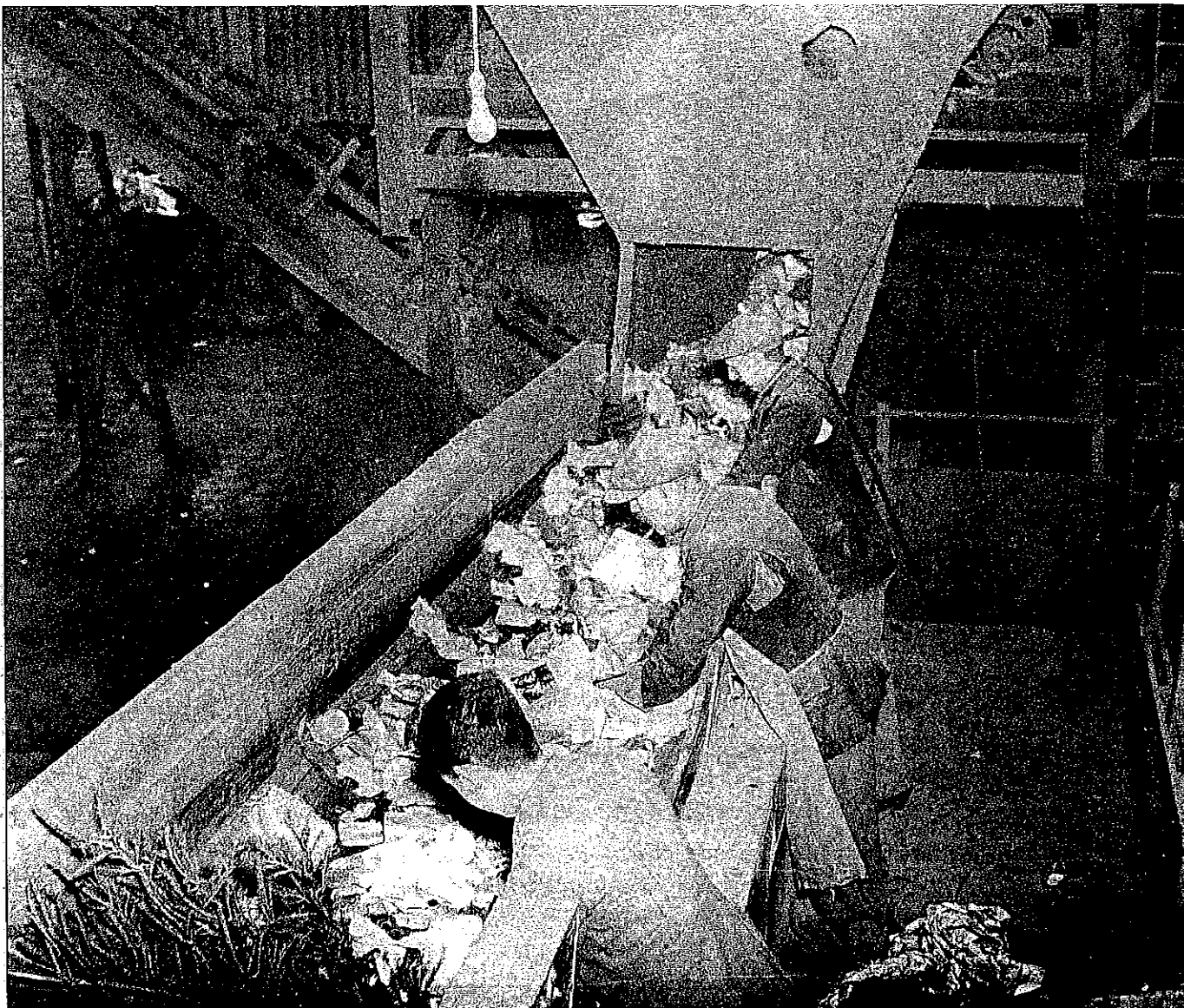
The Institute's founding fathers believed that the best way to shift waste was using horses. James Jackson and William Heavey argued in early papers that motors would not replace horses for collection on the short hauls common in transport to destructors (incinerators) or dumping sites.

Roderick McLeod (see profile on page 12) ran a typical cleansing operation in Bristol. In 1903, it employed 220 horses, including 70 on street cleansing, 85 for refuse collection; plus in summer up to 90 for street watering. Horses required stables with loose boxes, a shoeing forge, a wheelright shop, food stores, and over 200 carts and vehicles.

Compared to later years, the price of labour was relatively low compared to mechanical equipment. Dustmen typically worked 60 hour weeks and were paid 25s to 30s a week in 1903.

As early as the 1820s, a horse-drawn street scraper was patented by Messrs Boase and Smith in London, later updated by Sir Joseph Whitworth for use in Manchester from the 1840s. This was followed by a horse-drawn rotary sweeper manufactured by Charles Lack in 1896.

In 1900, Mr Shrapnel Smith gave a Conference presentation on the theme that petrol vehicles were good value. They already washed and cleaned major city streets more economically than horse-drawn appliances. In



August 1910, the Journal reported that a startling machine was being exhibited at the Brussels exhibition called The Guerrin Road Cleansing Machine. *"It will revolutionise the work of the Cleansing Department, and reduce the labour required by fully two-thirds,"* the Journal exclaimed enthusiastically.

Early recycling

Local council involvement in salvage was considerable before World War One. Little was disposed of unnecessarily. They were usually able to get a good price for processed 'night-soil' as manure for farms but it was an unpleasant if lucrative process. Rochdale made dry manure from night soil which in 1907 earned them £1500, a considerable sum at the time.

In 1907, Glasgow installed a detinning plant at its St Rollox destructor, earning £1900 in the first year. However, private contractors, assisted by low labour costs, were often more successful as recyclers. On the banks of the Thames, Charles Murrell, known as the Golden Dustman, recycled thousands of tons

of London waste annually by sieving off the ash and fines, with his staff then hand sorting the large fraction. He later added partly mechanised sorting beside his barging wharf. From 1918 onwards, similar processing was added to the front end of many destructors, with dirty hand-picking of the larger fraction from conveyor belts (see photo above).

Incineration by destructors

The first fully operational incinerator, or destructor as it was to be known, was engineered by Manlove, Alliott and Company of Nottingham at Manchester Corporation's Water Street Depot and operated from 1877, following earlier trials in Nottingham. It was designed by the suitably named Mr Alfred Fryer, effectively the founder of modern incineration. The effective recovery of heat was his objective from the start. George Darley commissioned it and, as Leeds Cleansing Superintendent, was later one of the first Presidents of the Institute.

High pressure steam was first generated at Darwen, Lancashire, in September 1899, lead-

**SORTING-BY
HAND
Picking belt
at the
Preston
Separation
and
Incineration
plant in the
early 1940s**

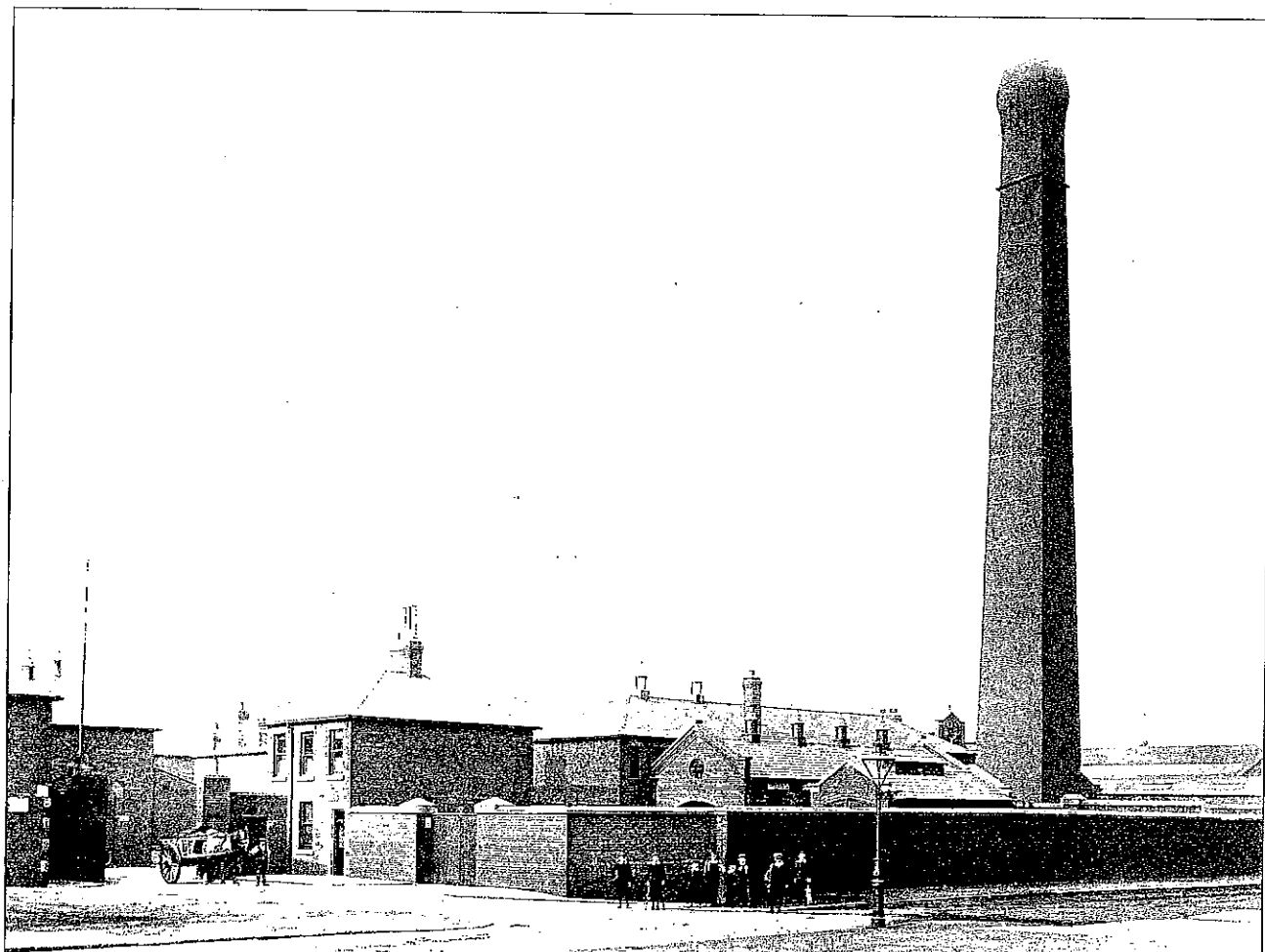


**PRESTON'S
REFUSE
DESTRUCTOR**
*Above: The
tipping bay
Below: View
taken in 1886*

ing to councils generating electricity to power trams, light their town, pump water or sewage and, later, recharge electric vehicles. Anyone wanting to see a destructor today can visit the facility in Cambridge which is 100 years old and still potentially in full working order.

Dustbin waste was low in organic content

in those days. However, given the current debate in the British waste industry on the European Union (EU) Landfill Directive, it is interesting to reflect that most towns and cities met the Directive's pre-treatment requirements before 1914. There were, in fact, 338 destructors in use, 295 with boilers to recover heat



from which 77 generated electricity.

Tipping of city waste became more expensive with expanding urban sprawl. The exhaustion of easy options forced refuse carters to travel further and further. Tipping was still the main option in rural areas.

Manure or screened fine waste often had a value, once transported to the nearest farms. Barging of waste was common from estuary-based towns and cities, including to dump waste directly into the sea.

Wastes management in WWI

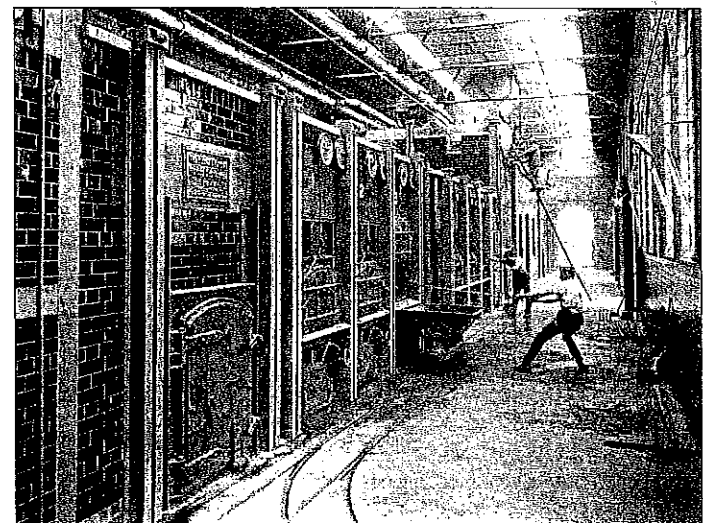
Between 1914 and the spring of 1916, over 2 million men volunteered for military service, 500,000 in the first month alone. The army also commandeered many council horses. From 1916, single men, then married men, were conscripted resulting in a substantial reduction in cleansing staff numbers. Women were employed extensively, particularly by North East England and Scottish councils. In 1917, Edinburgh paid 110 women street sweepers 6d an hour while the city's women vehicle drivers could expect to earn slightly more.

That apart, World War One had less effect on the waste industry than World War Two was to have. The Institute continued to meet regularly as older senior managers, the core of its membership, were not enrolled or conscripted. Annual meetings were still held, although without the frills. The purchase of new cleansing vehicles continued, despite the war economy. Arrangements for cleansing were surprisingly close to Churchill's phrase at the outset of war, 'business as usual'.

It was only late in the war that salvage became the number one national priority after the German U-boat blockade of 1917. Messrs Dawes, Priestley and Crookes became full time members of the National Salvage Council, and five other Cleansing Superintendents became Regional Advisers.

Municipal pig feeding became a wartime growth industry. During Christmas 1918, Bury Cleansing Department sent five tons of pork to local butchers, putting the town well ahead of other areas short of meat that season.

Doorstep paper collections earned good money but they just as quickly flagged in peacetime. Buoyant salvage prices and demand fell away in 1920, as wartime dislocation ended and the inter-war cycle of eco-



nomie slump and boom took over.

Country fit for heroes

Mr William Eccles, Institute President, wrote in the January 1919 Journal:

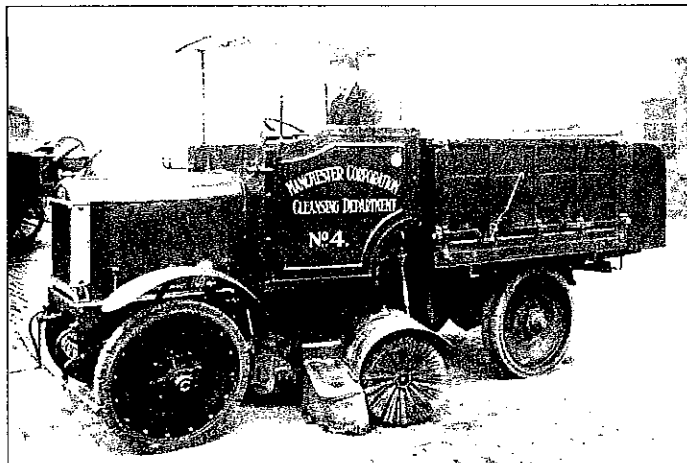
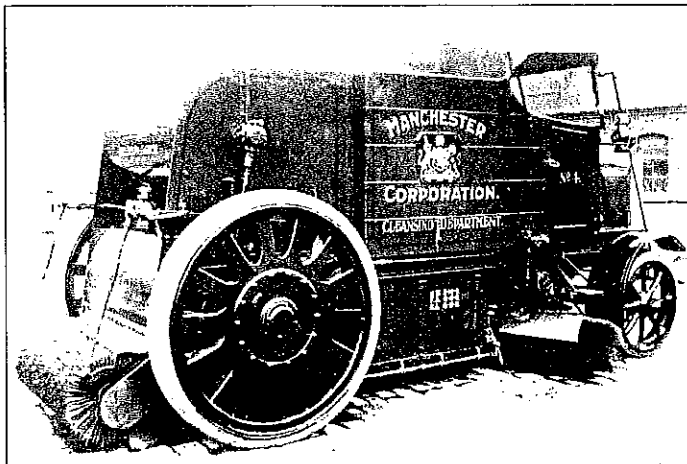
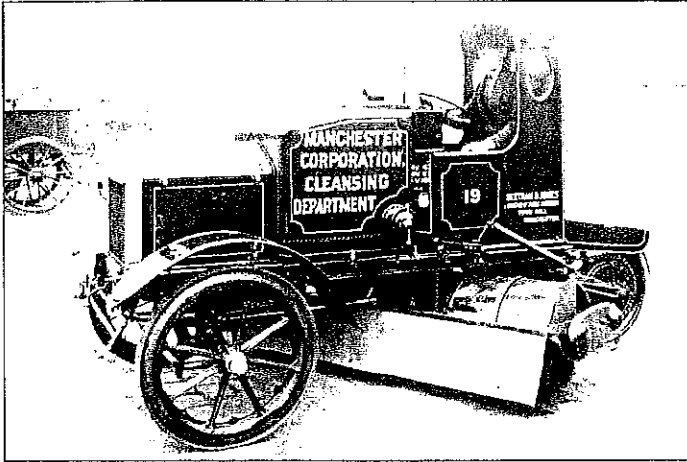
"We have now reached the end of the great Armageddon for which I am sure we all feel thankful. Many of our brave lads will come back to us maimed, crippled and nerve shaken. When these boys [many of them were still 21 or under in 1918] answered their country's

**COVENTRY'S
DESTRUCTOR
CIRCA 1920**

**Top: Tipping
floor**

**Middle:
Shovelling in
the waste**

**Bottom:
Hauling out
the clinker**



EARLY ROAD
SWEEPERS
Manchester
Corporation
cleansing
vehicles
circa 1918

WORLD WAR ONE POEM

'The dustman to the war has gone
Midst shot and shell you'll find him
His work has got to be carried on
By the few he's left behind him
You housewives ask what you can do
A lot, a lot depends on you
You'll stop the rates from going higher
By burning refuse on your fire'.

*(Poem exhibited at Enfield cinemas in 1915,
from the Journal - April 1915.)*

call, many Corporations promised them reinstatement on their return, it will no doubt in some cases mean creating positions for some of them."

Overall, there was a spirit that the waste industry and the Institute could look forward to a brighter future in the "country fit for heroes to live in" as promised by Prime Minister Lloyd George.

In 1917, Wimbledon's Borough Engineer, Mr C.H. Cooper, proposed four cleansing priorities in a paper to the Royal Sanitary Institute to:

1. improve the condition of the dustman, who is called on to perform work of a most degrading character;
2. prevent air contamination and the spread of infection by house refuse and dust;
3. improve refuse storage arrangements; and
4. reduce collection costs.

The Institute also began to consider how to reshape itself and expand further.



WELL
ATTENDED
Delegates
at the
Institute's
June 1947
Conference
at Blackpool

THE INSTITUTE OF PUBLIC CLEANSING 1928 TO 1972

In this second phase of its development, membership of the Institute of Cleansing Superintendents widened, but without fundamentally altering its primary focus as the professional organisation for local authority waste officers. The Institute's membership had been dominated by Superintendents but with Councillors also playing a role. Now, two new significant voices were added within the Institute:

1. equipment suppliers, with the admission of a growing number of their managers as non-voting Associates; and
2. civil servants, made possible by the creation of a Department of Public Cleansing at the Ministry of Health under J.C. Dawes (*see profile on page 30*) and a similar arrangement in Scotland under Thomas Crookes. The Institute's rules included the two Ministries within the definition of 'public authorities' for membership purposes.

The change of name to the Institute Of

Public Cleansing reflected wider changes. Cleansing had developed into an established local authority service. The way it had been reorganised meant there were now teams of white and blue collar staff in the big city departments. Despite mechanisation, these departments employed large numbers of people out in all weathers shifting the waste and cleansing the streets.

Cleansing managers wanted their role recognised with the creation of a separate department, headed by a Director, with the same status as other council departments. Preferably, they also wanted to report directly to the Town Clerk and a full council committee.

The Institute, still an organisation of volunteers, extended the service it already provided to include:

- disseminating knowledge about new scientific, more mechanised and more complicated methods of wastes management, examined in more detail below;

- developing the Annual Conference into a showcase event, increasingly at seaside locations given its scale, length and the growing annual exhibition;
- expanding to include a greater number of smaller and rural authorities, who were able to benefit from the innovations and professionalism of the larger ones.

Change of name

In 1917, the move towards an Institute of Public Cleansing started with a sub-committee appointed by the Institute to revise its rules and bylaws. By the end of 1925, the Rules Revision Committee had approved a new constitution. Three alternatives were considered:

- the 'Institute of Public Cleansing Officers';
- the 'Institute of Public Cleansing Engineering', and
- the 'Institute of Public Cleansing'.

The latter was agreed, and the new constitution was approved at the General Council meeting in Birmingham on 1 March 1928.

The change included three new and wider objectives in the Memorandum and Articles of Association:

1. the promotion of the scientific, technical and practical interests of public cleansing as applied to the collection, utilisation and disposal of domestic or trade refuse; the cleansing and shingling of roads and streets; and the improvement of health in all matters of public cleansing and to the benefit of local councils;
2. the promotion of the professional interests, rights, powers and privileges of cleansing officers in the service of local authorities; the assertion, enforcement and defence of the rights, remedies and interests of any member; and the increase, promotion and extension of professional science, knowledge and practice, and the interchange of views thereon; and
3. the examination of persons in public cleansing subjects and the granting of prizes and certificates for the passing of the Institute examination.

Membership extended

The new Articles stated a membership of 500. Membership categories were extended to four:

- Ordinary Members – similar to before;
- Associate Members – more were recruited, assisted by the now regular Institute examinations;
- Non-corporate Associates – a new category

created to attract managers of waste equipment suppliers; and

- Honorary membership – widened beyond Councillors to include others with a potential contribution.

The Institute appointed its first Fellows in the 1920s, senior cleansing managers who had given distinctive service to the Institute.

After the change of name, subscriptions were increased in 1929 to £2 for Members and Associates, £1 for Associate Members. There was also an enrolment fee of four guineas.

Appendices 2 and 3 (*see pages 54/55 and 56*) detail the volunteer Honorary officers of the Institute. People like Harold Ardern contributed much of their time and energy to the

PERSONALITY PROFILE:

Harold Ardern

Effective Institute Secretary between the wars

- Secretary from 1931 to 1948 and President in 1947.
- After a technical training, he had worked first for Cammell Laird.
- 1921 – Joined Sheffield's cleansing department.
- 1926 – Appointed Blackpool Cleansing Superintendent.
- 1933 – Moved to Westminster as Director of Public Cleansing, where he stayed until he retired.
- Ran the Institute from his home until it was bombed, and most of the Institute's records were destroyed in April 1941 (making the historian's task more difficult!). He expanded the Secretary's role until it was necessary in 1947 to start appointing full time staff.
- Developed the tradition of top quality Annual Conference arrangements, steadily expanding the vehicle and appliance exhibition and demonstration.
- At Westminster, he was noted as a disciplinarian, referred to all his staff, including his deputy, by their surname only.
- Made the biggest single contribution to the workload of the Institute in its history, with some assistance from the City of Westminster. Was described by Dawes in 1948 as hard working, skilful and untiring. Unfortunately, he missed much of his Presidential year due to illness.

Institute between the wars. In addition to existing officers, the Institute extended its list of representatives on outside bodies, including a liaison representative with the National Association of Local Government Officers (NALGO), and a representative on the Electric Vehicle Committee.

The Institute appointed Mr Parker Morris, Westminster Town Clerk, as its Honorary Solicitor in the late 1920s, and again in the 1930s. Mr Parker Morris was later knighted for his services to local government.

The General Purposes Committee and Examination Board both continued to meet regularly from the 1920s to the early 1970s.

Conference and exhibition

The numbers of delegates attending the Annual Conference increased from around 200 in 1920 to over 700 in 1938. The conference exhibition expanded from being a side-show into a major attraction in its own right.

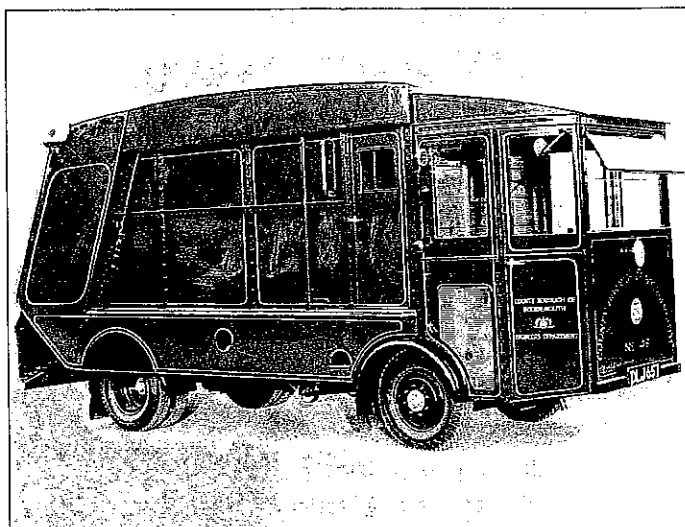
The social side was not neglected. Bowling, rifle shooting and golf were organised at the 1938 conference. Golf included a Scotland/England match, which was to become a regular fixture. But the inter-war conferences were certainly no holiday for those who organised them, including William Heavey and Harold Arden (*see profiles on pages 28 and 31*).

By 1939, vehicle exhibitors included Dennis Brothers of Guildford, Eagle Engineering of Warwick, Karrier Motors of Luton, Lewin Road Sweepers of Southport, Morris Commercial Cars of Birmingham, Scammell Lorries of Watford, Shelvoke and Drewry of Letchworth, John Thornycroft, Vauxhalls, and Walker Bros (Pagefield) of Wigan. Several are still in business today.

The Journal expands

Circulation of the Institute's Journal rose to 1077 in 1938 and around 2000 by the early 1970s. It was renamed 'Public Cleansing' in 1927, changed to 'Public Cleansing and Salvage' from 1942 until 1961, when it reverted back to 'Public Cleansing'.

The Journal was edited from Scotland for nearly half a century, first by Thomas Crookes and then by Norrie Wilson. Norrie Wilson injected new life into the Journal in the 1950s, altering it to A5 pocket book size, increasing the range of features and introducing the first



colour covers, followed later by the first colour advertisements.

Education and training

The examinations started in 1920, with eight members being awarded certificates, one with distinction, following an examination board the day before the annual conference of that year.

Passing the examination to obtain the Institute's Testamur played a major role then, at a time when far fewer people in society had the opportunity to go to University. It provided future waste managers with sound theoretical knowledge to add to two other essentials, their inherent practicality, and experience and knowledge gained in their particular working environment.

Institute membership, and whether candidates had obtained the Testamur, were increasingly recognised in local council job selection processes. The Institute Examination Board continued to review the Institute's syllabus and the achievement level required to obtain the Testamur.

The syllabus was improved by the James Jackson Study Circle, based at Birmingham City Council but with a much wider catchment and influence (*see James Jackson's profile on page 18*). Six of the Circle were Institute members, three full members and three associates.

Being the largest English authority, Birmingham had the largest wastes management section in England. In 1929, 16 specialists involved in the Study Circle, all senior Birmingham staff, turned their lectures into a high-quality reference book 'Public Cleansing'.

Post-war education

The core education for the waste industry was

SHOW MODEL

The number of vehicle exhibitors at the Institute's Annual Conference grew steadily in the 1930s and 40s

PERSONALITY PROFILE:

J.C. (Jesse Cooper) Dawes

The greatest influencer of modern methods

- President six times – 1924, 1930, 1931, 1932, 1945, and 1946.
- Arguably the greatest individual contributor in advancing British wastes management this century. A straightforward advocate of better practice and on a personal level, courteous and sincere.
- 1911 – Appointed Keighley Cleansing Superintendent and Sanitary Inspector.
- 1918 – Co-opted by the Government as Assistant Director of National Salvage.
- 1919 – Became Inspector of Cleansing and Salvage at the Ministry of Health.
- 1929 – Wrote the landmark Dawes Report on London's waste collection and disposal problems.
- 1931 – First President of the International Conference on Public Cleansing (INTAPUC), the predecessor of the International Solid Waste Association (ISWA).
- 1930s – Produced annual progress reports on the state of the industry, using financial returns from local councils.
- 1938 to 1952 – President of the Sanitary Inspectors' Association.
- 1939 to 1945 – National Director of Salvage and Recovery.
- 1949 – Technical Consultant to the World Health Organisation.
- 1951 – Retired as a part-time adviser at the Ministry, age 73.
- Conducted public enquiries into disputed waste proposals, when councils required loan sanction approval to proceed.
- Extensive writer, article contributor, and orator. Had a unique range of knowledge spanning old and new practices, assisting his writing, and his devising of examinations.
- Honorary member of overseas Cleansing Institutes including Germany, Netherlands and USA.
- Advocate of effective salvage, dramatically improved landfill (controlled tipping standards), and of the benefits of comparative performance statistics.
- Lived from 1878 to 1955. J.C. Dawes was remembered for a while with a Travelling Scholarship open to all members, which fell into disuse. Following the Institute's centenary, it is perhaps time for a new way to be found to remember him appropriately.



provided post-war at technical colleges around Britain. Several changes were made in 1948:

- the exam syllabus was changed and horse transport was dropped completely, reflecting the change in waste transport;
- student membership was created; and
- effective from 1952, candidates were required to obtain the Higher National Certificate in Mechanical Engineering.

Regular examinations continued, generally in November in London and in the Spring in Scotland and Northern England. They cost eight guineas to sit, four guineas for any resits.

Several councils developed their own extensive internal training schemes. Some had a tradition of apprenticeships. An indication of the professional qualities of the inter-war Presidents is given by the fact that they went on to train a number of subsequent Presidents. An indenture form was also promoted by the Institute.

Glasgow created its own series of voluntary evening classes in 1953, attended by 634 staff in the first 15 years. This enabled all staff to learn more about cleansing. It was used as a base for selecting supervisors, and was a step towards the full Institute examinations.

Publications

From the 1930s onwards, the Institute expanded the quantity of carefully researched technical works. Institute members wrote a wide range of publications between the wars. Appendix 4 (*on page 57*) lists some of them. The Institute developed its own publications, like 'Biology of Controlled Tipping' by A.L. Thomson, price 2s 3d (11p), and in 1936 issued an influential memorandum on the standardisation of refuse analysis (*see also page 34 and graph on page 22*). Mr Thomson was also a prolific article writer (*see profile on page 38*).

In 1933, the Institute launched a thesis competition on the science and practice of public cleansing with a prize of five guineas. The creation of a separate Institute Research Committee in 1957 enabled this work to expand substantially from the 1960s.

New Centres

The continued creation of Institute Centres:

- enabled members to network with people in their area;

- expanded opportunities for information sharing and self-education; and
- encouraged younger people and non-members to get involved and forge increased links with related organisations, nationally and at regional level.

Two centres were reborn in the inter-war period. The Scottish Branch became a full Centre in 1922. The first quarterly meeting of the reformed centre was held in Glasgow on 17 November 1923, attended by 15 waste managers.

The London Centre was reformed somewhat later, on 7 February 1935, after over a decade with no meetings. It now formally included most of south east England. The new Centre's first annual dinner was held in November 1937 in the Connaught Rooms, a tradition which still continues today.

Three wholly new Centres were established during this period:

North West Centre: held its first meeting on 20 April 1925 in Manchester, when Robert Williamson of Manchester became its first Chairman. Mr Nutter of Nelson was the first Centre Secretary.

North East Centre: their inaugural meeting was less than a month later, on 16 May 1925 in the Tramway Offices, Leeds. The closeness of timing with the north-west reflects the ongoing relationship between the two, one of co-operation but with more than a hint of friendly rivalry. J.C. Dawes presided at the first meeting for the area east of the Pennines, and Lincolnshire northwards. The 16 members present appointed a Management Committee with John Priestley of Sheffield as Chairman. He was succeeded, from 1926 to 1934, by Sam Thornley. Thomas Robinson of Newcastle was Centre Secretary from 1925 until 1932.

Midlands: launched on 22 April 1933 at a meeting called by James Jackson, a few months before he died. President J.C. Dawes addressed the meeting at the Montague Street Depot, Birmingham. Originally included 40 members and associate members from Gloucester and Shropshire through to Northamptonshire, it met twice a year during the first decade. James Jackson was elected the first Chairman.

The contribution of Centre Secretaries was, and is still today, notable and deserves special mention. Supported by their Centre Councils, they have expanded the activities

available to members and provided an extra link between members and the Institute's hierarchy, all as volunteers.

The Institute's first staff

During World War Two, the issue of salvage dominated the work of cleansing managers and the Institute. Afterwards, the pre-war range of Institute services were resumed and the Institute quickly expanded, well beyond the scale it operated at in the 1930s.

The Institute's 1948 Golden Jubilee Conference at Margate was a major celebration of its contribution in the previous half century and was attended by over 700 delegates.

One change, from 1951, was that subsequent Presidents held the position for one year only, see Appendix 1. Appendices 2 and 3 chart the other volunteers who made a major contribution as honorary officers.

However, volunteers could no longer cope with all the work generated by the expansion

PERSONALITY PROFILE:

William J. Heavey

Organiser of the Institute's first International Conference

- President 1908.
- Secretary from 1920 to 1931.
- First London Centre Chairman – 1907 to 1910.
- From 1905, City of London Cleansing Superintendent for 30 years, having been selected originally from 402 applicants.
- Organised the first International Conference in London in 1931, putting in so much work that he ended up missing much of it through illness.
- With J.C. Dawes, he made a major contribution to the many meetings that developed international links in the late 1920s and 1930s.
- Earlier career included building sewage works and coal fired pumping houses for Wakefield RDC, and Walton le Dale and Featherstone UDCs, after working in Nigeria.



of services to members that Harold Arden and others had initiated and J.C. Dawes had led. In September 1947, the Institute appointed its first full-time employee, Mr K. Wyndham Brown, as Assistant Secretary. In the summer of 1948, he took over fully from Mr Arden who had been ill for several months. The Institute obtained its own offices for the first time in central London at 8 Orange Street, off the Haymarket near Piccadilly. Appendix Two details post-war Institute secretarial arrangements.

The General Purposes Committee changed to the Executive Committee to oversee the Secretariat and the business side of the Institute.

External links

The Institute significantly widened its power base throughout this period by increasing its external links.

- It exerted a significant influence on Government for the first time in the 1920s through reviews (e.g. the Salter Report on transport), and through the continuous dialogue with Ministry of Health officials on both sides of the border.
- It continued a strong relationship with the National Association of Local Government Officers (NALGO), the forerunner of UNISON, during the inter-war period, after it became a trade union in 1919. This recognised the need to promote the status and working conditions of its members and their departments.
- Cross-representation was developed with other professional bodies, particularly with the Royal Sanitary Institute, the Sanitary Inspectors Association (now CIEH) and the Institute of Municipal and County Engineers. Centres also began holding joint meetings with other organisations.
- The Institute participated fully in the bi-annual November conferences and exhibitions of the Public Works Congress from the 1920s through to the 1980s, a meeting place for a dozen local government organisations, and equipment manufacturers.
- A close relationship was established with the British Standards Institute throughout its work on refuse-related issues. For instance, a British Standard was first adopted for steel dustbins in 1938.
- International links were opened up from 1926 onwards, see Chapter 8.

First woman member

Women delegates were rare at Conferences as there were then virtually no women waste managers. The two to half a dozen women delegates at conferences were usually Cleansing Committee Councillors, and women Sanitary Inspectors who occasionally represented smaller authorities.

Attitudes to wastes management in the home were a little different compared to households today. In 1960, Councillor Isa Carter of Glasgow compared a housewife to a cleansing officer in her Conference paper 'Public Cleansing: A Woman's Point of View', stating that 'the primary duty of a good housewife is to keep her home sweet and clean and to dispose of refuse and it would appear that the cleansing official has the same task on a very much larger scale'.

However, the same year saw another woman from western Scotland make a different contribution to the Institute's history. Miss M.C. Hill, Assistant Sanitary Inspector at Motherwell and Wishaw, became the first woman to be admitted to the Institute's membership, after passing the Testamur exam.

Status of cleansing managers

Supporting cleansing managers was given priority from the 1920s as the workload and role of cleansing managers, and their relative position within local authorities, was changing in parallel with the changes within the Institute.

The Institute supported updated job titles, first in the bigger authorities where Directors of Public Cleansing were appointed, then in other authorities. A special committee of Council Committee Chairmen and Convenors met at the 1927 Dublin conference with the President and Secretary of the Institute. In the meeting, it was agreed that posts that had traditionally been designated Cleansing Superintendent should be renamed Director of Public Cleansing to take account of the change in functions.

The Institute pressed all councils to appoint appropriately trained and experienced staff. In 1944, the Institute wrote to all districts with 30,000 or more staff, pressing them to appoint a qualified cleansing officer. That advice was later followed by many Rural and Urban District Councils. Further circulars on this, and the benefits of Institute membership and the Testamur qualification, were sent to councils in the 1950s and 1960s.



**REFUSE
FREIGHTER**
During
loading, a
treadle was
used to
operate the
dustless
shutters

WASTE INDUSTRY DEVELOPMENTS AND LEGISLATION 1920s TO 1960s

Neville Chamberlain's less remembered contribution to British politics was to promote cleansing improvements as Minister of Health in the 1920s and the early 1930s, using knowledge he gained while Lord Mayor of Birmingham

The 1936 Public Health Act was the first significant legal change for 60 years, strengthening council powers and catching up on the social change since the 1870s.

Local Acts added to the range of council waste powers. Both Essex and Hertfordshire obtained special legislation to give them power to regulate waste tipping sites for the first time, including sites in their areas for London's waste. Fragmented small-scale local government outside the cities was to change little before 1970. This increasingly favoured tipping as the easiest household waste disposal method.

Uncontrolled landfill practices caused a stir in the 1920s. In 1925, following a London

County Council deputation, the Minister of Health directed J.C. Dawes, his Inspector of Public Cleansing, to conduct a comprehensive enquiry.

His 1929 Report recommended London-wide centralised collection, street cleansing and disposal on cost and environmental grounds. However, nothing was implemented until responsibility for disposal was transferred to the Greater London Council in 1965.

Local authorities and J.C. Dawes in central government formed a good team. Both relied on the co-operation of the other. The supply of detailed figures for the Annual Public Cleansing Cost Returns remained voluntary.

The Ministry of Health controlled the sanctioning of loans for waste capital projects, and the conducting of public inquiries where there was opposition.

Post-war legislation

The 1947 Town and Country Planning Act

established the framework of development plans, planning applications, consents and conditions that continues today.

The 1961 Public Health Act made fairly minor changes to the 1936 Act. The 1966 conclusions of the 1963 Working Party on Refuse Storage and Collection mirrored calls by Institute members for improvements to collection services, reflecting the changes in household needs since the 1936 Act.

In 1967, two of the problems identified, the dumping of bulky household refuse and abandoned vehicles, were addressed by the oddly named Civic Amenities Act, later updated in 1978. Districts expanded free bulky household waste collections. Other than that, little changed in waste legislation between 1945 and 1970. Waste management was only

slowly moving up the political agenda.

CHANGING ENERGY USE IN BIRMINGHAM

	1914	1927
Gas Fires	9000	92000
Gas Cookers	116300	195700
Electric Heater	945	7000
Electric Cookers	11	295

(Source: 'Public Cleansing' -
James Jackson Circle. In 1927,
Birmingham had a population of
961,000 and approximately
300,000 households.)

Social issues

The analysis of refuse was promoted and researched by the Institute as an essential tool for managing waste. This was important given the rapid change in the contents of dustbins that occurred by the late 1960s, primarily due to the move away

from coal for domestic cooking and heating.

Changes in waste composition started early in the century. For example, during the 1920s and 1930s, the convenience food industry expanded with the ready availability of crisps, ice cream and fish and chips.

Bigger changes in waste composition occurred in the 1950s and 1960s following the 1956 Clean Air Act. In December 1952 alone, the London 'pea-souper' smog had killed some 4000 Londoners prematurely. Cattle who survived the initial effects of the smog at that year's Smithfield Show had to be fitted with special masks.

The Clean Air Act created smokeless zones, restricting the use of open coal fires in most urban areas. This resulted in a reduction in cinders and ash, but a consequent increase in paper and organic waste, which was no longer burnt by households.

Further changes in waste composition came as a result of new shopping habits and the growth in packaging, all of which were more obvious as the practice of burning waste at home declined.

Refuse collection

Transporting waste has through the years involved manual, heavy, dirty labour. Until the 1950s, dustbins often weighed over 20 kilos (about 50 pounds) including the weight of the galvanised bin, and there was little mechanised lifting.

Dustmen in the 1930s, for instance, generally worked 48 hour weeks and were paid 50s to 70s per week. Although staff numbers had dropped by a third in the intervening 30 years, more work was being done. After the depression, pay rates rose, weekly hours fell to 44 in the 1950s, and annual holidays rose from 6 days in 1930 to 12 days in the 1950s.

Bins were often emptied into skips or skips. Baskets were used in Glasgow where tenement access was often tortuous. Municipal bin schemes involved councils making provision of bins their job and their maintenance by the council compulsory. Collection was a dusty business at all stages. Dust release was a major problem as bins were emptied into vehicles. In the 1930s, this problem was reduced with the introduction of new treadle operated dustless loading systems synchronised with the release of side shutters (*see picture on previous page*). These early technological advances were the forerunners of the highly sophisticated systems available today.

Street cleansing and litter control

Much basic street cleaning equipment, such as brooms and barrows, has changed little for hundreds of years. Changes that did occur from the 1920s were:

- ☐ improved road surfaces and drainage;
- ☐ less horses so less insanitary droppings; and
- ☐ increased litter, with more newspapers, cigarette and sweet wrappings, cigarette butts and fruit skins.

The shift in cities from horsepower to petrol vehicles made street cleansing much easier, with the spread of vehicles like mechanical sweeping machines. The 1925 Public Health Act gave councils the power to place orderly bins and other receptacles on streets. Glasgow installed its first 2000 litter

baskets in 1934, growing to 6000 receptacles by the 1960s. Manchester launched its first litter education campaign in 1930.

Cleansing changes after 1945

More roads were properly surfaced, matching the increasing numbers of cars but requiring less street washing. However, more cars also meant more obstructions to cleansing work, despite flexible vehicle designs like side loading vehicles.

Further mechanisation occurred, assisted by sweeping brushes and suction sweepers. Full carriage-width brush and paddle-type elevators were introduced, so that the suction could be concentrated on clearing the road-side channels. Litter legislation and the creation of the Keep Britain Tidy organisation led to the more effective prevention and control of litter.

Waste transport

The 1928 Municipal Yearbook survey of 93 towns and cities gave the following breakdown of transport usage for public cleansing:

- ☐ horse – 63.3 per cent;
- ☐ electric – 16.4 per cent (much higher in large cities);
- ☐ petrol – 15.7 per cent (higher in towns with populations under 250,000);
- ☐ combination of horse and petrol – 4.0 per cent;
- ☐ steam traction – 0.6 per cent.

The big theme thereafter was the declining use of horses. Vehicles had already proved themselves for street cleansing. Now it was their time, on cost grounds, for refuse collection and transport as well. There followed an effective partnership between the Institute's members and the specialist vehicle industry to make the most of this change.

A paper in 1923 by Mr Green, Durham City Engineer, had costed inclusive collection and transport to the tipping site two and a half miles away:

- ☐ horse and cart – 9s 2d/ton;
- ☐ a range of petrol trucks – 5s 3d/ton.

Several other innovations, however, intervened to slow the changeover:

- ☐ the Container or Pagefield System combined local horse collections with petrol refuse-tipping lorries;
- ☐ electric vehicles, commonly charged using DC from incinerators, were the dominant col-

lection option in Birmingham, which had 200 electric vehicles by 1939, in Glasgow, which had 71 electric vehicles in the 1930s, and in several other cities, but they had limited speed, range and carrying capacity;

☐ relay systems were used so crews were continuously busy.

Vehicle design also changed continually, with trends including:

- ☐ increased popularity of rear end loading vehicles with higher payloads;
- ☐ greater use of compression;
- ☐ the addition of bin hoists, with electrical winding gear;
- ☐ increased complexity of rams and plate designs; and
- ☐ fore and aft or dual tippers, using gravity to assist compression.

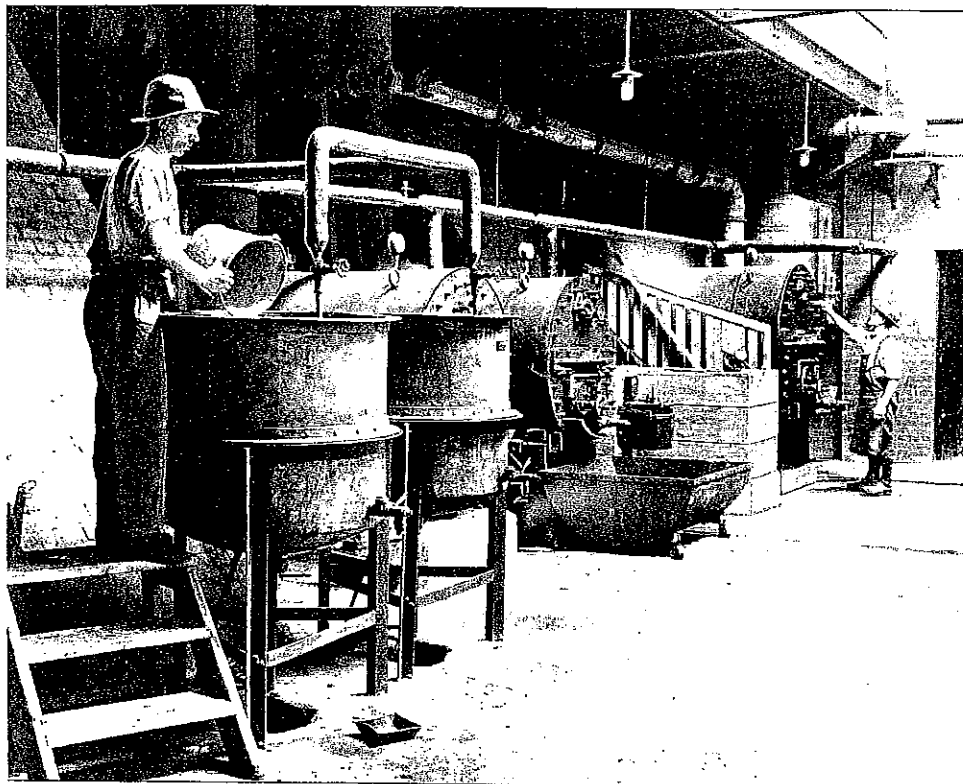
PERSONALITY PROFILE:

John Terry

The Institute's longest-serving Treasurer

- President in 1917.
- Treasurer from 1907 to 1937.
- General Council member for 40 years.
- Early Chairman of the Midlands Centre.
- Institute representative on the Electric Vehicle Committee.
- 1894 to 1901 – Bury's Chief Sanitary Inspector and Cleansing Superintendent.
- 1901 to 1937 – Nottingham Health Department Manager and Wharf Superintendent, then Nottingham Cleansing Superintendent.
- His working life spanned fifty seven years. From the age of nine to thirteen, he worked as a half timer in a cotton mill. Then joined Bury Council where, with evening classes, he passed the Royal Sanitary Institute examinations in 1893.
- Member of the Sanitary Inspectors Association Executive Council. In his 70s, present at the 1948 Golden Jubilee Conference in Margate.
- Lived from 1871 to 1954.





SALVAGE
Recovery of
fats from
wastes at
Preston in
the 1930s

Refuse vehicles were adapted from 1936 onwards for Air Raid Protection (ARP) work. 700 gallon water tanks were provided for fire-fighting, and gas de-contamination though this was never actually needed. Street orderly barrows were also adapted to fight small fires or ferry people injured by enemy bombing.

There was a switch to diesel vehicles after the break in further waste industry mechanisation during World War Two, and the post-war austerity period, with vehicle design innovations including improved loading systems, and new rams and reinforced bodywork.

Compaction was essential from the 1960s because a ton of uncompacted waste then took up 8 cubic metres. Household waste densities from previous decades were up to three times greater.

Salvage and composting

A 1930 survey in the *Journal* showed that less than a dozen large councils earned over £5000 from salvage. Smaller authorities earned very little, with kerbside collection of papers being the only common scheme.

Some cities went further. For instance, Birmingham:

- rendered fat from abattoir wastes for soap manufacture, using steam-jacketed pressurised and heated Industrial Waste Elimination (IWEL) vessels installed in 1933;
- made poultry feed and a fertiliser unfrankly called Veg-U-Mus from vegetable mar-

ket wastes, combined with rendering solids like bones and fats. Bags of compost were sold to gardeners via local retailers.

Composting made something of a post-war comeback in the 1950s, particularly in Scotland. Sewage sludge and straw were co-composted in 1950 at Kirkconnell, Dumfriesshire, population 5000, and Edinburgh installed a DANO composting system in 1952.

There were 70 Separation and Incineration plants in operation at the start of World War Two, including five in Birmingham, with features including:

- rotary screens that separated out the 60 per cent that was dust and cinders, with the fines sold

to farmers for incorporation into land;

- hand picking from slow conveyors - a very dirty job - to separate glass, including refillable containers, bones, paper, cardboard, rags and aluminium; and

- electro-magnetic ferrous recovery, which was replaced by overband magnets in the late 1940s.

Wartime salvage

Councils made a major contribution in World War Two through their salvage efforts. This recovered scarce resources and involved everyone in Britain. Salvage Circular No 1, issued in November 1939, was the first of over 130 such instructions to local councils from the Government.

Monthly council salvage returns were compulsory from the beginning. Discussion of salvage options dominated the *Journal* for six years, showing how waste managers and their councils and contractors could play an important role

They ran schemes like kerbside paper collections, trailer collections of up to four recyclable items, and arranged communal kitchen waste bins sited throughout towns. The collected organic matter was boiled up as pigfeed in special steam cookers. 'Tottenham Pudding' was, for instance, sold to pig farmers across southern England, as well as being used in municipal piggeries.

Salvage was still a strong theme during the

austerity period that continued until the early 1950s. Councils continued their public education work, some using mobile cinemas and special films.

Local authorities salvaged over 10 million tons in the decade from 1939. In one typical month, January 1940, salvage was 35,073 tons, with an average income of £1/ton, comprising:

- paper – 5518 tons;
- ferrous metal – 4795 tons;
- fuel cinders – 7667 tons;
- screened dust – 6478 tons, mainly for agriculture;
- manure – 4120 tons;

plus non ferrous, textiles and glass.

(Source: Ministry of Health Annual Report, April 1941.)

Waste food was used in wartime to make

meal and fertilisers, and bones rendered for glycerine for use in explosives. Several Institute members were again co-opted by the government as Honorary Salvage Advisers, as in World War One.

Incineration

Many towns still operated destructors in the mid-1920s (*see map below*). Clinker was reused by about half, namely those who had a use for it in roading or paving manufacture.

However, these old batch incinerators were inflexible and in decline and many had to be loaded and shovel emptied by hand. Labour for these tasks was relatively cheap before World War One but became uneconomic in later years.

The year 1938 saw one of the few major

TABLE 4: MAJOR TOWNS AND CITIES WITH A SINGLE DISPOSAL STRATEGY IN THE 1920s

SEA DUMPING OF HOUSEHOLD WASTE

Gateshead
Middlesbrough
Southampton
Sunderland
Tynemouth
(Hastings, Liverpool and Plymouth dumped part of their municipal wastes at sea)

SEPARATION AND INCINERATION PLANTS

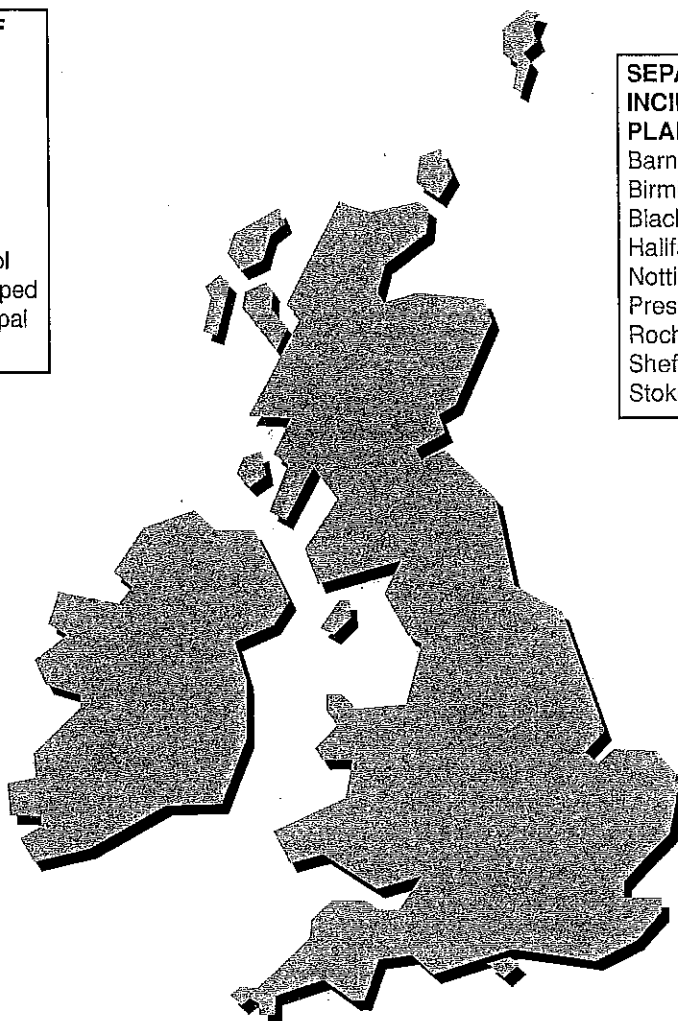
Barnsley
Birmingham
Blackburn
Halifax
Nottingham
Preston
Rochdale
Sheffield
Stoke

TIPPING

Carlisle
Chester
Darlington
Exeter
Gloucester
Merthyr Tydfil
Norwich
Newcastle
Oxford
Reading
St Helens
Walsall
West Ham
Worcester
(The quality of this landfill varied considerably)

DESTRUCTORS (INCINERATORS)

Barrow-in-Furness
Bath
Blackpool
Brighton
Canterbury
Coventry
Eastbourne
Great Yarmouth
Ipswich
Leicester
Portsmouth
Southend-on-Sea
Wallasey
Wolverhampton



(Source: Survey by James Jackson of main town and cities in 1926.)

inter-war events for incineration with the opening of a much improved incinerator at Govan by the Duke of York, the future King George VI. At the time, it was the largest incinerator in Britain and the forerunner of the large continuous-feed incinerators of the 1960s/1970s. Govan had:

- a capacity of 640 tons/day in a three shift operation;
- mechanised loading and unloading, achieving lower labour costs than the earlier destructors;
- the capacity to generate 42 million alternating current (AC) electrical units, exporting 35 million and earning £28,900 from the 167,000 tons of refuse incinerated; and
- magnetic separation before burning and the capacity to manufacture concrete-type goods from the furnace clinker/residue until 1954.

However, Govan had two problems common to other incinerators of the time:

- hot ashes sometimes set refuse alight in the storage bunkers, making life inside the facility occasionally unpleasant; and
- it had limited grit emission interception, creating significant local pollution problems.

Lessons were learnt in the next generation of incinerators, like Glasgow's Polmadie Works, built in 1958 to process 200,000 tons a year.

Dumping at sea

Dumping of municipal waste at sea was a low cost, environmentally questionable option. The barging distance to site was short, with the aim that material be carried seaward. Middlesbrough barged waste 14 miles to 20 fathom dumping areas, away from the normal shipping lanes. The barges, designed to carry 300 tons, had four airtight cells. The level of complaints showed that it was sometimes poorly done. This became obvious when the lighter packaging fraction increased. Dumping was also interrupted by bad weather, and even by problems of unloading the hoppers in very smooth seas.

Controlled tipping (landfill)

Landfill expanded to become the most common, and usually cheapest, environmentally acceptable solution for urban as well as rural waste. With encouragement from the Ministry of Health, it expanded to account for two thirds of disposal by 1939.

There was plenty of official advice, and

the practical experience of a number of leading councils, on which to draw. The Ministry of Health published 'Suggested Precautions For the Controlled Tipping of Wastes' in 1922, written by J.C. Dawes. From 1925, the City of Bradford established a name for itself as a landfill pioneer, filling 46 local quarry and other holes with the waste from its 270,000 residents, including destructor residues. Odsal Rugby League Stadium, capacity 100,000, and several playing fields and cycle tracks, were built on waste foundations.

Controlled tipping, as recommended by the Ministry of Health, was very different to the uncontrolled dumping with fires, wind-blown litter, rodents, flies etc. Sadly, standards at sites were generally and consistently poor.

Direct incorporation of refuse into farm land was used, particularly in Scotland. Pulverisation was often used to reduce waste to a fine heterogeneous mass.

PERSONALITY PROFILE:

Alexander L. Thomson

A leading Institute scribe

- President 1942 to 1945.
- From 1920, he was Inspector of Cleansing and Sanitary Inspector at Motherwell and Wishaw Burgh Council, then Director of Public Cleansing. Earlier, he was Surveyor and Sanitary Inspector with Leslie, Forfarshire, Dundee, Tayport and Wishaw councils.
- Respected as probably the most eloquent platform speaker and the Institute's then greatest scribe. He wrote several quality books and was a prolific article writer in the Journal, the 'Sanitary Record and Municipal Motor', 'Contractors Record and Municipal Engineer', and 'County and Municipal Engineer', signing each article 'ALT'.
- Technical education at Dundee and Glasgow Technical Colleges, achieving a distinction at both.
- President of the Sanitary Inspectors' Association of Scotland.
- Active member of the Municipal and County Engineers Association. At the time of his death, in 1946, he was President-Elect of the Scottish Royal Sanitary Association.
- Mrs Thomson donated his library to the Institute.



REFUSE
COLLECTION
VEHICLE
A Dennis
Gibson
model dating
from the
1960s

THE CHANGE TO THE INSTITUTE OF WASTES MANAGEMENT

The last quarter century has been the period of most rapid change in the Institute's history. It has been an age of complexity, with a significant increase in the technical detail of wastes management issues, and in new legislation and regulation.

In 1980, a wall of bookcases could have contained all of the essential reading and regulations on waste. Today, there is enough material to fill several rooms, with the bookcases now housing legislation, regulations, orders and European Directives.

Wastes management is no longer a local government domain. Unified public sector delivery has been transformed and local government structures fragmented.

The British waste management and related engineering industries have grown, and are now estimated to be worth £6 billion a year. The private wastes management sector has expanded. The National Association of Waste Disposal Contractors (now the Environmental

Services Association) was formed in 1969. The industry now includes a very wide range of technical and consultancy expertise, used frequently by waste managers to supplement their in-house skills. Academics play a leading role in the Institute and industry, reflecting the range of research disciplines that contribute to the work of the industry.

The Institute has played an important part in this period of change, revising its constitution, and developing its approach to influencing the many Government and European decisions affecting the industry.

75th anniversary

In 1973, the Institute celebrated its 75th anniversary and it was a year of major change. Britain joined the European Economic Community on 1st January, introduced Value Added Tax in April, and survived a sudden five fold increase in oil prices.

The Institute became the Institute of Solid

Wastes Management at the June 1973 Annual Conference, a name that was not universally popular. The main change was the recognition that the Institute now needed to embrace not just the new waste disposal authorities but the whole of the waste industry, private as well as public. There was plenty of debate before it occurred, and two votes were needed by corporate members in 1972 and at the 1973 AGM.

James Sumner played a significant role in the late 1960s and early 1970s in promoting the modernisation of the Institute, as he did in contributing to national waste policy (see profile in box).

Wider objectives adopted

Between 1928 and 1970, relatively minor changes were made to the Objects adopted by the Institute in 1928, e.g. the deletion of the Institute's role in acting to defend the interests of individuals.

In the 1970s, the Institute agreed to radical change. By 1981, the main Objects of the Institute had substantially changed:

1. to advance the scientific, technical and practical aspects of wastes management for the safeguarding of the environment;
2. to promote education, training, research and the dissemination of knowledge in all matters of wastes management;
3. to achieve and maintain good standards of practice, competence and conduct by all its Members.

The changes reflected an Institute that had broadened its scope to serve the full range of waste and waste engineering professionals.

The IWM is created

In 1981, the Institute changed its name for the fifth and last time in its first century to the Institute of Wastes Management (IWM).

Despite the changes in the early 1970s, it had been recognised by the General Council in 1978 that the Institute needed further reform. Several leading individuals from the private sector had been co-opted to the General Council, but the Institute still focused mainly on local authority issues.

The 1978 President, Ken Harvey, initiated a Working Party which proposed the basis for the changes adopted in 1981, including greater flexibility in the recruitment of private sector managers.

In 1982, Jack Ambrose became the first

Fellow of the Institute who had never worked in the public sector.

Committees and Head Office team

The Institute now has a General Council, an Executive Committee, and five Standing Committees:

- ☐ Policy;
- ☐ Membership;

PERSONALITY PROFILE:

James (Jim) Sumner

A leading moderniser of wastes management in the 1970s

- Institute President in 1967.
- 1932 – Trained at Blackpool where he gained full Institute and Institution of Mechanical Engineers membership.
- 1939 – Appointed Assistant Supervisor at Westminster City Council.
- 1947 – Joined Ministry of Health as an Engineering Inspector.
- 1967 – Became Senior Engineering Inspector for the Ministry of Housing and Local Government.
- 1968 to 1980 – Vice-President, International Solid Waste Association (ISWA).
- 1970 – Appointed Assistant Director (Wastes) in new Department of the Environment, becoming Waste Division Director in 1974.
- 1978 – Consultant for the World Health Organisation, and others.
- Made a major contribution to improving wastes management and disposal standards, and to the modernisation of the Institute.
- Chairman of numerous working parties in the 1960s and early 1970s. The report of the 1971 Working Party on Waste Disposal, which he chaired, became known as the Sumner Report.
- Died in July 1988. Remembered with the annual James Sumner Award which provides a young Institute member with a travel study bursary.



- Education and Training;
- Scientific and Technical; and
- External Affairs.

IWM Business Services, with Directors nominated by the General Council, was created in 1992 as an arms' length company to manage the Institute's commercial ventures.

The Institute's full-time Secretaries, latterly Chief Executive Officers, other Institute position holders, and its headquarters arrangements are described in Appendix 2, including the move from London to Northampton in 1982. In 1998, the Institute now has over 4000 members in nine different membership grades.

The Annual Conference, regularly held in Torbay through the 1990s, annually attracts around 300 exhibitors and several thousand visitors from the waste industry, as well as the hundreds of delegates attending the Conference and a growing variety of workshops. Appendix 3 lists recent conference organisers.

The Journal has continued to be an important means for information exchange, with its name and coverage changing to mirror Institute and waste industry changes. The publication of more technical papers and meeting proceedings has increased its contribution to the professional readership since the 1960s. Its biggest presentational change occurred in 1995, to full-colour A4 format, following the appointment of its first full-time editor. The circulation for each Journal is now approximately 6000, rising to 9000 for international editions. Appendix 3 lists the editors.

Education and training

Effective training has never been more important. From the late 1960s, courses leading to the Testamur were provided at technical colleges in Coatbridge, Durham, Bradford, Sheffield, Ashton-under-Lyne, Liverpool, Stoke on Trent, Birmingham, Nottingham and Hackney.

At that time, there were four two-and-a-half hour written papers for the Testamur, with the choice of answering one of two questions in every category, to take account of different specialisations. Passing the four papers required a breadth of knowledge and plenty of common sense (*see box top right*).

In the 1990s, the course is now a formal Higher National Certificate (HNC) in Wastes Management at several colleges. Universities

now play a major role with over 100 first and 72 higher degrees in wastes management and related subjects, plus a wide range of post-graduate waste courses which began at Loughborough in 1989.

WAMITAB, the Waste Management Industry Training and Advisory Board, was created by several leading members of the Institute as a non-statutory body to raise industry standards. Since 1992, when it was recognised in Regulations linked to the 1990 Environmental Protection Act, it has introduced the now familiar Certificates of Technical Competence (COTCs).

The Institute runs courses, on thirty one different subjects in 1996, as do other wastes management and private training organisations. Institute courses assist graduates and others to become full members and/or contribute to their continuing professional development.

Technical work and publications

A wide range of publications has been produced by the Institute since the 1960s. For example, those available in the early 1970s written by Fellows of the Institute were:

- 'Analysis of Domestic Refuse' by A.E. (Higgy) Higginson;
- 'Mechanical Street Cleansing' by Phil Patrick;
- 'Disposal Works Plant and Maintenance' by John Skitt; and
- 'Depots, Workshops and Vehicle Maintenance' by George Cooper and David Jackson.

The creation of the Scientific and Technical Committee, and its Special Interest Groups and specialist Working Groups, has rapidly expanded the range of major technical reviews and generated a long and impressive list of publications, normally distributed free to Institute members.

THE FOUR PAPERS OF THE TESTAMUR

1. administration, accounting, the law, personnel and public relations, materials and storekeeping;
2. refuse composition storage and collection, street cleansing, weather emergencies;
3. disposal, salvage, waste transfer and processing, composting and pulverisation, incineration and disposal on land; and
4. mechanical and electrical engineering, automobile and earth moving plant, workshops and depots.

Four new Centres

The Institute now has nine centres covering the whole of Britain, with four new Centres created between 1980 and 1990:

Northern Ireland Centre: Northern Ireland waste managers visited a North West Centre meeting in Autumn 1981. President John Bonser attended a meeting in Northern Ireland in November 1981, and the Northern Ireland Group was set up by the following St Patrick's Day, 1982. Northern Ireland waste managers and Councillors continue to be regular attendees at the annual Torbay conference.

South West Centre: established at a meeting on 26 February 1982 at the Mariner's Rest Hotel, Poole. The meeting was attended by over 100, including national President John Bonser.

Anglian Centre: also promoted by John Bonser in his Presidential year. The Centre grew from the East Anglian Group, established by five members on 1 January 1983, covering both public and private sectors, with its first full meeting on 15 May that year.

Welsh Centre: the Institute's newest Centre began as a Group in 1990, becoming the Institute's ninth full Centre in December 1992, and completing national coverage.

Younger waste professionals

Each Centre now has at least one New Generation Group, aimed primarily at younger waste professionals. Because of geography, Centres like Scotland have several.

They are not a wholly new idea. In the 1960s and early 1970s, both the North West and North East Centres had Junior Discussion Groups. The North West Group renamed itself the Cleansing Supervisors Group and had a busy programme of monthly events.

The New Generation Groups held their first weekend national conference in

Loughborough in April 1998.

External links

The current long list of official external links, where the waste industry is represented by Institute members and/or Northampton HQ staff, include those with:

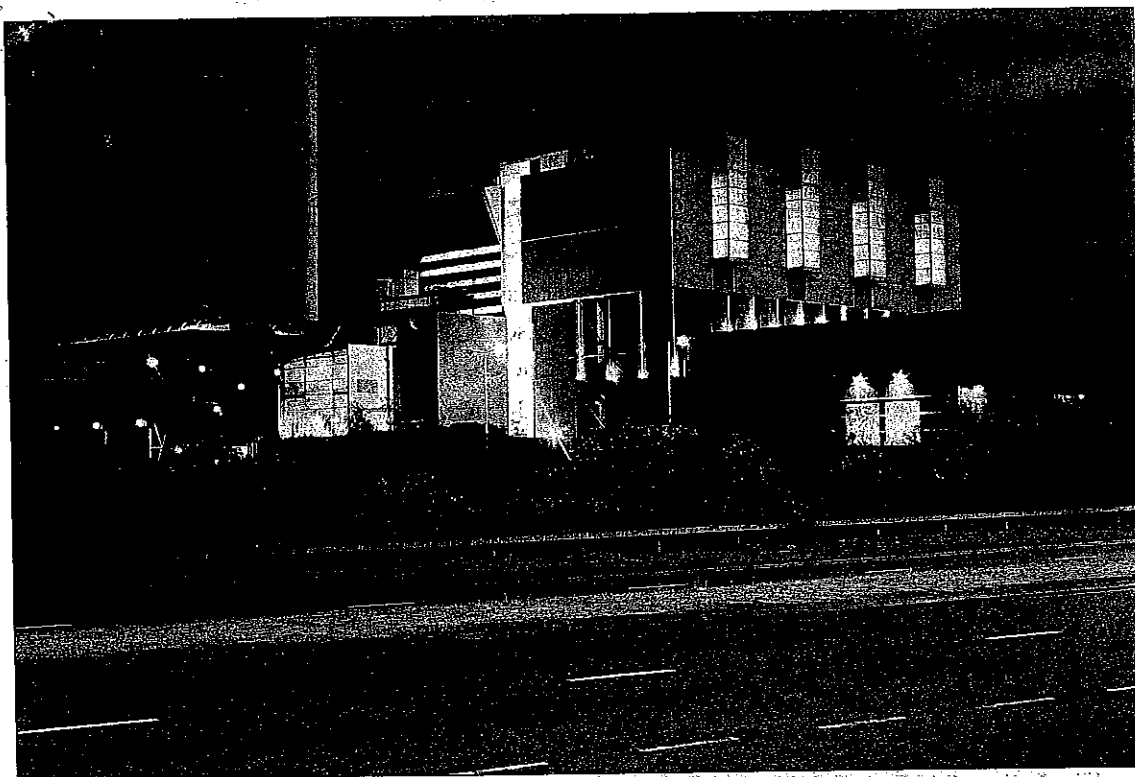
- ☐ Government Ministers, civil servants, the Environment Agency and the European Commission, on policy issues, legislation, reviews and inquiries;
- ☐ other industry organisations like ESA and the Container Handling Equipment Manufacturers (CHEM);
- ☐ the Tidy Britain Group, the County Surveyors Society, the Waste Management Forum and the National Hazardous Household Waste Forum;
- ☐ the British Standards Institution;
- ☐ the European Community Waste Management Organisation (ECWMO) and International Solid Wastes Association (ISWA – see Chapter 8).

The Institute now employs a full-time Press and Public Affairs Officer, in addition to technical and training staff with extensive external contacts.

Special Institute awards

The Institute makes several awards each year for distinguished contributions. These are normally presented at Annual Conference, and include:

- ☐ The James Jackson Award for the best paper presented at any meeting;
- ☐ The James Sumner Award, a travel bursary for a young Institute member;
- ☐ The PEEL (Packington Estates) People's Cup; for the best landfill operating team; and
- ☐ The President's Award, to an individual who has made a conspicuous contribution to the Institute during his/her year of office.



**MODERN
PLANT**
The new
Energy from
Waste facility
at Tyseley

WASTE INDUSTRY DEVELOPMENTS AND LEGISLATION 1970 TO 1998

The last 30 years have been a period when the need for our increasingly affluent society to deal effectively with the effluent it produces has been recognised and steadily addressed. In consequence, tough new environmental protection standards and dramatic changes in waste management practice have been introduced.

Change has come from three directions. Legislation, the Institute and its members, and the wider waste industry, have each responded to the need for improved waste services. The Institute has played a particular role in bringing the different waste sectors together to develop responses to a long list of policy issues that have been or are being implemented.

Waste is now managed in ways that can minimise the potential for environmental harm, an issue not always addressed by previous practices. Waste management has also moved increasingly towards implementing the waste hierarchy of reduce, reuse and recycle,

followed by effective energy recovery and final disposal of the residue. The strategy for delivering waste management has also changed. Local government is no longer the dominant force. Provision is increasingly by the private sector, and regulation is now a national Environment Agency responsibility.

The 1970s

The 1970s were not just a period of 'beer and sandwiches' in London during the informal resolution of national industrial disputes. They were also a period when a close Government and Institute relationship developed. Jim Sumner (*see profile on page 40*) and numerous other civil servants have encouraged this. Co-operation between leading industry experts and the technical and policy waste teams developed by the Department of Environment (DoE) has generated improved legislation, and assisted the promotion of best practice.

The first major waste review of the 1970s, the Sumner Report, was produced by the 1970 Working Party on Refuse Disposal, appointed in May 1967. One of its conclusions was that the most common problem with waste disposal was under-funding by smaller councils. Co-ordination by larger disposal authorities was considered the answer.

The dumping of cyanide drums made front page national news in 1972. The almost immediate response was the 1972 Deposit of Poisonous Waste Act which was drafted and enacted within three months, requiring toxic waste movements to be notified. Magistrates were also given powers to issue penalties for the deposit of poisonous, noxious or polluting waste on land where it constituted an environmental hazard.

This extended the framework that had also been proposed by the 1970 Technical Committee on the Disposal of Toxic Solid Wastes, the Key Committee, which reported that poor waste management was causing river pollution, and recommended that better processing/disposal facilities and improved regulation were required.

The 1974 Control of Pollution Act (COPA) followed, proposing a comprehensive licensing approach for the first time in Britain. It was brought into effect in several stages. However, COPA had a significant impact, establishing:

- the licensing of waste sites by Waste Disposal Authorities (WDAs), in addition to their powers of waste disposal and waste planning; and
- the preparation of waste surveys and waste plans by those WDAs, developing a basis for local and regional waste planning.

The DoE also established a variety of specialist advisory groups in the 1970s such as the Landfill Practices Review Group, contributing to a thorough series of over thirty Waste Management Papers, with IWM members contributing to both the original papers and subsequent redrafts.

The 1980s

Legislation in the 1980s required local authority waste collection and cleansing services to compete for contracts with the private sector. 1983 saw two further changes. The Hazardous Waste Inspectorate was set up to improve site licensing standards for hazardous waste and increase consistency across Britain, consistency

that its early reports showed was lacking. At the local level, the 1983 Litter Act tightened street cleansing standards and was strongly supported by the Prime Minister Margaret Thatcher.

Local government reform

The creation of the Greater London Council, responsible for London's waste disposal from 1965, set the pattern for the 1970s. Bigger was considered best for waste disposal, 36 years after J.C. Dawes had first proposed this change.

The 1972 Local Government Act then transferred disposal powers in England to counties and metropolitan counties from 1 April 1974, splitting collection and disposal. The new county WDAs were required to prepare five to ten year Waste Disposal Plans. In contrast, Welsh, Scottish and Northern Ireland districts retained both collection and disposal responsibilities and, until the national agencies were created, regulatory powers as well.

In 1986, a little over a decade later, the large metropolitan authorities were abolished, unravelling the creations of two previous Conservative governments and reducing the ability of the major English cities to manage waste strategically. This change dispersed waste responsibilities in English metropolitan areas in a wide variety of directions, including the creation of

- the London Waste Regulation Authority, which was to provide a model for the separation of regulation in the 1990s; and
- recombined collection and disposal authorities, with their own advantages of integrated service provision and the economies that this can afford.

The 1990s

In the 1990s, the trend towards unitary authorities has continued. Far reaching changes in both British and European waste legislation in the last decade have set a dramatic and continuous pace of change. Here is a small sample:

1990: The Environmental Protection Act and its subsequent regulations implemented many changes, including a tougher waste regulatory regime, and the creation of Local Authority Waste Disposal Companies (LAWDCs) to manage their disposal operations.

1991: The Controlled Waste (Registration of Carriers) Regulations introduced carrier regis-

tration in response to major flytipping problems in inner urban constituencies.

1992: New Duty of Care responsibilities were placed on waste producers and handlers, and the concept of Certificates of Technical Competence was introduced for waste site managers.

1994: The European Union (EU) Packaging Directive led to the adoption of British packaging recovery targets and the creation of packaging compliance schemes.

1995: The Environment Act established the Environment Agency, integrating the regulation of air, water and land pollution.

1996: The Landfill Tax was introduced by the Finance Act, justified by the Government as a 'polluter' pays tax. New EU municipal incineration emission standards were also implemented.

1997: Environmental Trusts began operation, funded by companies diverting up to 20% of their landfill tax liability.

1998: A new draft EU Landfill Directive was announced, establishing a framework for the separate management of inert, organic and hazardous landfills for the next two decades, when adopted.

Social changes/waste composition

The last 30 years have seen rapid social change and change in waste (*see graph on page 22*), notably its increasing bulkiness in the average dustbin.

Supermarkets were small in size and market share in the 1960s. They, and a rapidly expanding range of packaged foods, now dominate shopping patterns and have changed the household waste stream. Packaging and disposable items are not the biggest or only change in Britain's overall waste generation. It has also changed following further developments in housing and heating, and household size. Commercial and industrial wastes are now different too, due to rapid changes in Britain's economic base.

Refuse collection

Diesel fuelled rear-end loaders dominate in refuse collection, although different vehicle types and fuel options continue to be developed. Further automation, and the growth of efficient, flexible systems like bag collections and wheeled bins have significantly reduced manual handling, walking distances, and over-

all waste industry staffing levels.

Compulsory competitive tendering by local councils, and increased efficiency, have changed working practices throughout the collection industry, in particular ending 'task and finish' in most areas.

Salvage becomes recycling

Many council salvage schemes which survived the post war slump in material prices in 1949 had, nevertheless, declined by the 1970s. However, over 100 councils had kerbside paper collections in 1974, despite the fact that landfill was then a low cost disposal option.

Successive Governments tried various initiatives to stimulate recycling. For instance, in September 1974, the then Junior Industry Minister Michael Meacher launched a War on Waste.

In 1977, bottle banks arrived in Oxford, the first development of many recycling bring systems in carparks and elsewhere. In 1985, the Local Authority Recycling Advisory Committee was created and many councils appointed Recycling Officers in the late 1980s. Domestic demand for recycled paper continued to be a big obstacle limiting household recycling, before and after the new Aylesford mill and other domestic mill expansions.

In 1990, Chris Patten, Secretary of State at the DoE, declared that half of a half of household waste was recyclable. Recycling has been a major theme in national waste strategy ever since. Kerbside collections and new composting and waste reduction schemes have expanded steadily, if not spectacularly, in most areas, but the national problem of limited markets has still to be solved effectively.

Waste processing and transfer

Engineers have played a significant role in the last 25 years in the search for one of waste's holy grails, a technical solution capable of economically sorting mixed waste at a time of falling landfill availability in many areas and rising landfill costs. Sadly, modern British municipal waste does not conform readily to engineering principles, unless streamed by selective separation at the collection stage.

Warren Spring, the Government Laboratory, was closed in the 1990s after being a highly influential base for waste technology. The refuse-derived fuel (RDF) plant it assisted

at Byker, Newcastle, is still operating, while the Doncaster automated RDF sorting facility closed in the mid-1980s. Manchester built a network of pulverisation plants, although this and high density baling did not expand to become widely practised options. Their benefits have been limited given the investment of resources they required.

Waste often now travels much longer distances than in earlier years. Private sector operated transfer stations have expanded rapidly since 1970, particularly for trade and construction waste. Modern rail transfer was introduced in London and Bristol in the 1970s, and new river transfer stations were built later on the Thames. Despite such options, most urban waste continues to be directly delivered to the disposal facility by collection vehicles.

Incineration

Some 43 municipal waste incinerators were operating in the 1970s, but only five with major thermal recovery. No new municipal incinerators were built from the mid-1970s until the South East London Combined Heat and Power (SELCHP) Project was completed in 1994.

From December 1996, the EU Municipal Incineration Directive enforced tougher emission standards and a higher cost regime on the generation of incinerators built in the 1970s, and several were closed. Less than ten have so far been updated but further replacements continue to be planned. All the new plants include energy and/or heat recovery.

Despite the closures, factors including the shortage of landfill in some areas, and the limits on the potential for recycling, mean that incineration and other energy from waste and waste digestion/processing options are again on the agenda for many areas of Britain. Recent local waste strategies promote an integrated approach, often including incineration, but also involving the maximising of the other reliable options for reducing the volume of waste requiring landfill.

Landfill

In 1998, landfill disposal accounts for approximately 90 per cent of municipal waste, a

dominance it has enjoyed throughout most of the last 100 years. Working practice, however, is very different from previous years.

In the 1970s, the dilute and disperse approach was favoured, and sites were not required to be lined. A survey in the 1980s by Her Majesty's Inspectorate of Pollution (HMIP), now part of the Environment Agency, identified 1300 landfills with a potential gas problem, and improvements were put in place, assisted by Non-Fossil Fuel Obligation (NFFO) incentives for gas recovery. Inadequate old landfills have closed and many have been restored.

In the 1990s, the prevailing philosophy is for containment sites, which prevent the escape of liquid leachate from the sites and minimise emissions to air.

Over the last 30 years, there have been several switches in the guiding philosophy, heralded in revised advice in DoE Waste Management Papers. The recent debate has extended to a wide range of landfill issues, from the need for daily cover through to proposals for flushing bioreactor landfills which accelerate decomposition in landfills.

The debate goes on. Landfill will be needed in the future for residues, whatever shape the final EU Landfill Directive takes, and whatever national strategy we adopt. In the realm of landfill science, Britain can argue that its practice and analysis have been among the best in the world. The Institute has played a significant role in that achievement.

The European dimension

The European Union has had an increasing say in domestic waste policy, through a long series of Directives. This has required the UK waste industry to respond, directly and via both the International Solid Waste Association (ISWA) and European Federation of Waste Management (FEAD). The EU Landfill Directive is a good example of the need for the UK to be involved in developing strategy, as the Institute has recognised. We gain little by making an isolated contribution near the end of the process. Europe will be a major theme in the first quarter of the waste industry's, and the Institute's, next century.



**LOOKING
OVERSEAS**
A refuse
collection
vehicle in
Bamako,
West Africa

THE INTERNATIONAL ROLE OF THE INSTITUTE

The USA and other countries had all begun to take cleansing seriously about the same time as Britain, towards the end of the nineteenth century. For instance, in Germany, Max von Pettenkofer made major breakthroughs in identifying the links between effective wastes management and the reduction of diseases like cholera and typhoid, publishing papers such as 'Drainage, Sewerage and Refuse Removal' in 1880.

However, the British Institute was the first national organisation for waste professionals to be established anywhere in the world. As the oldest organisation, it has fulfilled four essential international roles over the course of the last century.

□ It has assisted in the development of other national organisations, enjoying a particularly close relationship with the Netherlands Institute from its formation in September 1907. Contact was also established with the newly

created German Institute, before World War One.

□ It has promoted effective communication between different Institutes. The exchange of speakers and delegates between the national conferences began in the 1920s with US and Dutch speakers at the British Annual Conferences.

□ It has helped to create, and sustain, a world-wide association for wastes professionals that has grown into today's International Solid Wastes Association (ISWA).

□ Finally, it has provided technical advice and assisted with consultancy work in developing countries, including the valuable work of international bodies like the World Health Organisation.

It is worth looking more closely at the Institute's role in the origins of ISWA. In 1922, the German Institute invited a large overseas representation to its conference in Dusseldorf. There, Dutch delegates proposed an interna-

tional organisation. The British Institute was formally involved from 1924 and in 1926, James Jackson and J.C. Dawes attended the first full European meeting in Budapest.

The forerunner of ISWA, the International Committee for Public Cleansing (INTAPUC), was formed in 1928, followed in July 1931 by the first International Conference in London. The Conference attracted delegates from 19 countries and 190 British local authorities. The new International Committee included representatives from 15 countries – Austria, Britain, Czechoslovakia, Denmark, France, Germany, Hungary, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Sweden and the USA.

J.C. Dawes was elected as the first President of INTAPUC from 1931 to 1935 and Chairman of its Technical Committee. The Second International Conference was held in Frankfurt in August 1935 and was attended by a large group from Britain. Frankfurt's Director of Public Cleansing Dr Shroder became the second President.

As an aside, the opening address was given by Dr Frick, the Nazi Reich Minister of the Interior and one of the original conspirators in the failed 1923 Munich putsch. He said that the German Government had *"only one wish, that is, to carry on its constructive work, at peace with all the world"*. He concluded with his wish that *"this conference will be a pillar to the great constructive and peace making work of our leader Adolf Hitler"*.

A 1938 Conference followed in Vienna

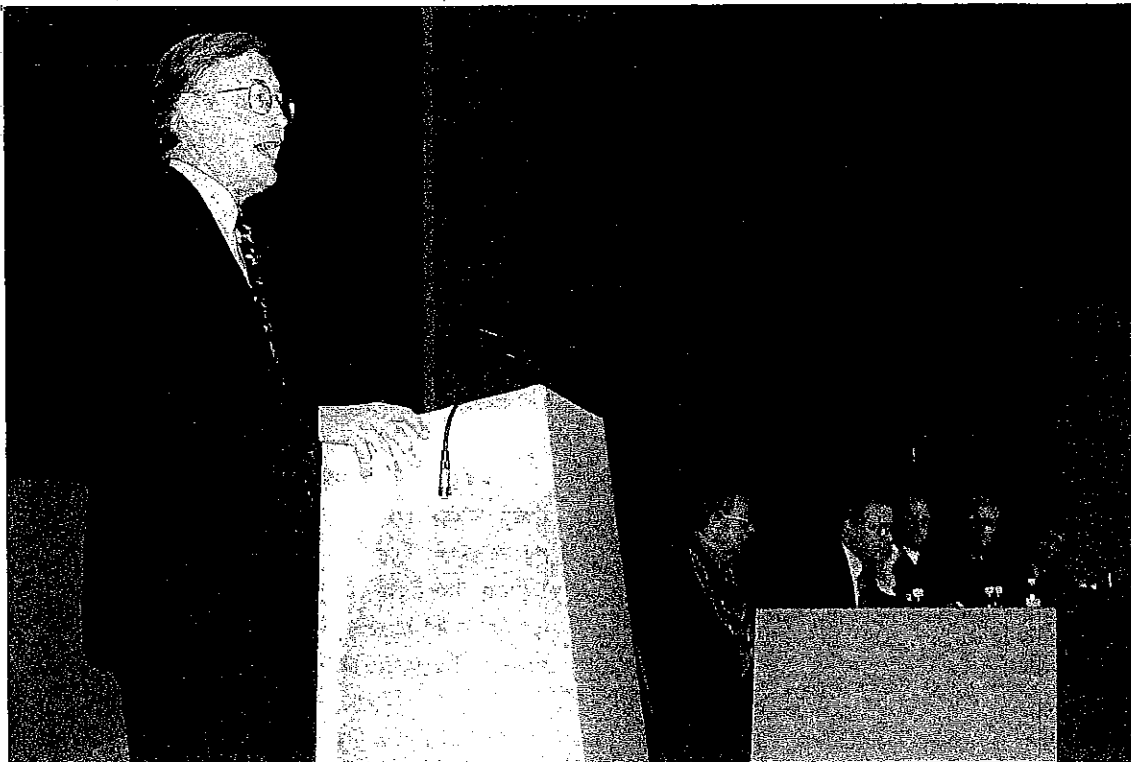
when Mr Kocmanek, the city's Director of Public Cleansing, was elected the third President. In his speech, Mr Kocmanek proposed a permanent office for the growing world-wide Association, a professional international journal, an information centre, and international standards for each aspect of cleansing, in addition to regular congresses. At the same time, waste services across Europe were already making preparations for their wartime contributions.

After the war, Amsterdam hosted the fourth conference in 1947, attracting 500 delegates from 14 countries. Amsterdam's long-serving Director Mr Noppen became President. Post-war international conferences have been held in Edinburgh (1953) and, after the organisation changed to become ISWA in 1972, in London (1980). Jim Sumner played a leading role in the development of ISWA in the 1970s.

Today, ISWA's secretariat is based in Denmark. Institute members from the UK play an active role in each of its working groups, and on its other committees. John Ferguson, IWM President in 1990, will become the ISWA President from October 1998.

The Institute continues its leading world-wide role. It has a major contribution to make in promoting and sharing best waste management practice.

One of the most important aims is to assist developing countries to protect their environment and benefit from the latest technologies appropriate to their needs.



EFFECTIVE STRATEGIES
Michael Meacher MP, Minister for the Environment, launching the Consultation Paper on waste strategy for England and Wales at the 1998 IWM Conference

LEARNING THE LESSONS OF HISTORY – ONE OF THE KEYS TO FUTURE PROGRESS

The combination of the Institute's centenary and the forthcoming dawn of a new millennium make this an excellent time to reflect on the lessons of the past hundred years, and reconsider our individual and collective priorities for the future. We all have a part to play in continuing the pace of improvements within the industry into our second century.

From its very beginning on 25 June 1898, the Institute has a record of continuous progress. Its biggest contribution has been in bringing the country's leading waste management experts together. We need to continue this tradition of co-ordination, more important than ever given the increasing diversity of the industry and the range of specialisations and sectoral organisations

The Institute will continue to provide an essential meeting place, nationally and regionally, where best practice can be debated and decided. It is uniquely placed to integrate and

oversee future waste industry developments, providing training and education, and monitoring performance and reviewing standards. As in the past, it will develop effective training courses, and its distribution of technical publications will ensure that the latest knowledge is shared throughout the industry.

The Institute has long been committed to strong links with those responsible for national waste policy. That policy now puts waste reduction and environmental solutions for waste at the heart of Government's wider strategy for sustainable development. It is an agenda that the Institute can help to develop.

The Institute continues its pioneering international role. By involving its leading experts, it has made a substantial contribution to the International Solid Wastes Association, has contributed to the developing European waste organisations, and has assisted the adoption of effective wastes management methods by developing countries.

Conclusion

World gatherings like the 1992 Earth Summit and the Agenda 21 initiative reinforce the recognition that waste is a global, not just a national, issue. The Rio Summit highlighted the fact that global impacts include the sum of countless local actions in the creation and management of waste.

Our approach has changed to recognise this. Our focus is now much wider than the public health imperative of our predecessors. The public expects much more and we must work closely with them and with other waste producers. The community is increasingly aware of what we do and what we are capable of delivering. It supports both the increased priority for, and financial investment in, environmental protection, and expects a big say in the future choices being made.

The Institute plays an increasing role in

assisting its members to educate people about waste and the best solutions for dealing with waste, including a renewed focus on waste reduction, reuse and recycling.

The founding fathers and modernisers of the last century have provided excellent foundations for our progress today. They tackled the problems that society faced then, and their successors transformed the quality of the services we provide. We are now well prepared as an industry to meet new challenges and problems of a future that we cannot possibly predict now.

We can learn much from our predecessors, their experiences, their problems and their successes. For, as the philosopher George Santayana said earlier this century, those who ignore the lessons of history are doomed to repeat the same mistakes.

INSTITUTE PRESIDENTS AND CONFERENCES

Year	President	Organisation	Conference venue
1898	D. McColl*	Glasgow	Birmingham
1899	D. McColl	Glasgow	Glasgow
1900	George Darley	Leeds	Salford
1901	J. McTaggart	Bradford	Liverpool
1902	G.A.D. MacKay	Edinburgh	Edinburgh
1903	Roderick McLeod	Bristol	Bristol
1904	A. Findlay*	Aberdeen	Aberdeen
1905	James Jackson*	Sheffield	Sheffield
1906	W.H. Hamblett	Salford	Salford
1907	John McKechnie	Liverpool	Liverpool
1908	William J. Heavey	City of London	City of London
1909	D. McColl	Glasgow	Glasgow
1910	F.W. Brookman*	Rochdale	Southport
1911	F.W. Sykes	Newcastle	Newcastle
1912	Robert Williamson	Manchester	Manchester
1913	A. Findlay	Aberdeen	Aberdeen
1914	A. Findlay	Aberdeen	No meeting
1915	David Kennedy	Kensington	London
1916	W. Harpur	Cardiff	Cardiff
1917	John Terry*	Nottingham	Nottingham
1918	William H. Eccles	Stockport	Stockport
1919	James Bee	Blackpool	Blackpool
1920	John A. Priestley	Sheffield	Sheffield
1921	John A. Priestley	Sheffield	Brighton
1922	R. Diggle	Accrington	Harrogate
1923	A. Findlay	Aberdeen	Aberdeen
1924	J.C. (Jesse) Dawes*	Ministry of Health	Margate
1925	R. Heath	Swansea	Swansea
1926	James Jackson	Birmingham	Birmingham
1927	James Jackson	Birmingham	Dublin
1928	Carlos W. Laskey	Eccles	Liverpool
1929	Thomas B. Crookes	Min of Health (Scotland)	Blackpool

Institute Presidents and Conferences

1930	J.C. (Jesse) Dawes	Ministry of Health	Bournemouth
1931	J.C. (Jesse) Dawes	Ministry of Health	London
1932	J.C. (Jesse) Dawes	Ministry of Health	Manchester
1933	R. Beveridge	Edinburgh	Edinburgh
1934	Samuel Thornley	Leeds	Southend
1935	Thomas Robinson	Newcastle	Newcastle
1936	James S. Rae	Falkirk	Portsmouth
1937	H. Cook	Rochdale	Margate
1938	Colin H. Macfarlane	Glasgow	Glasgow
1939	Bertram B. Jones	Manchester	Scarborough
1940	Bertram B. Jones	Manchester	AGM only
1941	Robert H. Storer	Gateshead	AGM only
1942	Alexander L. Thomson*	Motherwell & Wishaw	AGM only
1943	Alexander L. Thomson	Motherwell & Wishaw	London
1944	Alexander L. Thomson	Motherwell & Wishaw	AGM only
1945	J.C. (Jesse) Dawes	Ministry of Health	London
1946	J.C. (Jesse) Dawes	Ministry of Health	Folkestone
1947	Harold Ardern*	Westminster	Blackpool
1948	Harold Ardern	Westminster	Margate (chair taken by J.C. Dawes)
1949	Harold Edridge	Chesterfield	Edinburgh
1950	Harold Edridge	Chesterfield	Torbay
1951	Cyril Fox	Sheffield	Southport
1952	Harold Turner	Bury	Harrogate
1953	Norman G. (Norrie) Wilson	Edinburgh	Edinburgh
1954	Cyril R. Moss	Brighouse	Southend
1955	William H. Andrews	Birmingham	Scarborough
1956	Reginald G. Totty	Stoke	Eastbourne
1957	Eric Bell	Walthamstow	Torbay
1958	William Smith	Wigan	Morecambe
1959	Colin Clegg	Leicester	Brighton
1960	H.M. (Bert) Ellis	Bristol	Portsmouth
1961	P.D. (Duncan) Fairlie	Glasgow	Aberdeen
1962	John Stephen	Luton	Hastings
1963	Alan E. Barton	Birmingham	Southport
1964	F St L (Mac) McCarthy	St Marylebone	Margate
1965	Frank Roberts	Birkenhead	Scarborough
1966	Alexander C. French	Falkirk	Bournemouth
1967	James (Jim) Sumner*	Ministry of Housing & Local Govt	Blackpool
1968	David W. Jackson	Sunderland	Brighton
1969	W.A. (Alan) Turner	Middlesbrough	Harrogate
1970	Thomas B. Finnie	Glasgow	Torbay
1971	John (Jack) Skitt	Stoke	Scarborough

1972	R.E. (Ted) Bevan	Manchester	Bournemouth
1973	John Scott	Edinburgh	Torbay
1974	Philip K. Patrick	Greater London Council	Scarborough
1975	Eric A. Mossey	City of London	Brighton
1976	Ian L. Cooper	City of Westminster	Torbay
1977	Kenneth Harvey	West Midlands County Council	Torbay
1978	Frank Flintoff	Consultant	Brighton
1979	Robert R. Adams	Renfrew	Scarborough
1980	A.E. (Higgy) Higginson	Consultant	London
1981	John R. Bonser	Waltham Forest	Torbay
1982	Bernard (Ben) Heath	Leeds	Scarborough
1983	W.A. (Bill) Lewis	Dundee	Ayr
1984	George H. Cooper	Balfours	Torbay
1985	Ronald J. Stanyard	Consultant	Scarborough
1986	Ronald Millard	Consultant	Bournemouth
1987	J.B. (Brian) Carter	Bury	Torbay
1988	Dennis Taylor	Manchester	Torbay
1989	David MacKrill	David MacKrill Engineering	Torbay
1990	John M. Ferguson	London Waste Regulation Authority	Torbay
1991	Keith J. Bratley	West Yorkshire Waste Disposal Authority	Torbay
1992	Keith Bury	Waste Management Ltd	Torbay
1993	Colin Burford	Lancashire Waste Services	Torbay
1994	John Leaver	Bristol/SITA Ltd	Torbay
1995	John Birch	Lincwaste Ltd	Torbay
1996	Helen Toft	Environment Agency	Torbay
1997	W.H. (Bill) Bentley	Shanks & McEwan	Torbay
1998	Colin Carr	Consultant	Torbay
1999	W.K. (Bill) Townend**	Consultant	Torbay
2000	Roger Hewitt**	Kenal Services Ltd	Torbay

** see profile in the text*

*** already chosen by General Council*

INSTITUTE SECRETARIES AND OFFICES

The volunteers below and in Appendix 3 each 'donated' part of their life to the development of the Institute. The local authority they worked for is shown in brackets.

Honorary Secretaries

- 1898 F.W. Brookman* (Rochdale) and
James Jackson* (Sheffield)
Jointly convened the first meeting
and drafted the original
Constitution.
- 1898-1902 F.W. Brookman
- 1903-05 J.B. Massey (Burnley)
- 1905-15 F.W. Brookman
- 1915-16 James Jackson
- 1916-20 Thomas B. Crookes (Finsbury)
- 1920-27 William J. Heavey* (City of
London)
- 1927 John A. Priestley (Sheffield) - died
in office
- 1927-31 William J. Heavey*
- 1931-48 Harold Ardern* (Blackpool, then
Westminster).
Mr Ardern's home at 160
Buckingham Palace Road was also
the Institute's office address until it
was bombed out in April 1941.
- 1947-48 Assistant Secretary - K. Wyndham
Brown, the Institute's first full-time
employee.

Full-time Secretaries/Chief Executives

- 1948-58 K. Wyndham Brown ACIS
First Institute office - 9 Orange
Street, London WC2.

- He appointed an assistant who
took over routine workload that
had previously been done by
Institute volunteers. (He emigrated
to British Columbia, Canada.)
- 1958 Coral E. Reoch (Acting Secretary)
- 1958-61 Henry Key
Previously Secretary of the Central
Council for Health Education.
Expanded the Institute's offices in
1959 in move to the top floor of 28
Portland Place, London W1. (He
left to become Secretary for the
Institute of Housing.)
- 1961-71 Maurice English
Previously a civil servant in East
Africa. Productive, if slightly
reserved. (He died in post.)
Number of Institute staff in the
1960s - 3.
- 1971-76 G.P. (Gerry) Wall
Previously a diplomat and editor of
the Persian Gulf Gazette. (He left
to join an international law firm.)
- 1976-77 Tim Wrey
Previously employed by the British
Oxygen Company (BOC) as a
Marketing Manager. Wrote an arti-
cle in 1977 Journal on the global
environmental crisis, the impact of
waste and the role of the Institute.
(He left to travel around India.)

1978 to 87 F.J.A. (Freddie) Shults

Previously worked in a very wide variety of local government and private sector wastes management positions, active Institute member, and Exhibition Organiser. Expanded staff to eight in the four rooms at Portland Place including:

- Secretary and Deputy Secretary;
- Conference and Advertising staff;
- Membership Assistant;
- Book-keeper;
- Shorthand Typist; and
- Telephonist/Receptionist.

The Secretary's post was redesignated Secretary-General during this period. The Institute's offices relocated to Albion Place, Northampton, adding space for extra staff including an Accounts Manager, plus a small library, a Committee meeting room, and space for car parking. (Freddie then retired, and died seven years later in 1994.)

1987-94 R.A. (Tony) Bispham

Previously Northamptonshire's County Waste Management Officer. Implemented significant modernisation including:

- widening the breadth of the Institute in membership and services etc. during a time of major restructuring in the waste industry;
- building training partnerships, including through the establishment of WAMITAB;
- creation of IWM Business Services in December 1992, an arms-length company to manage the conference etc;
- moved the Institute's offices to 9 Saxon Court, Northampton.

The post was redesignated Chief Executive

Officer. (Tony left to become Chief Executive of the Chartered Institute of Water and Environmental Management (CIWEM), and has since retired.)

Chief Executives

1994-95 Michael Mealing

Previously General Manager with Magis (UK) Ltd and Sonoco, he resigned mid-1995.

1995 Roger Hewitt, acting Chief Executive.

Roger restructured the Institute's finances and administrative systems.

1996-date Michael Philpott, Chief Executive
Previously Oxfordshire's Assistant County Surveyor (Waste Disposal) from 1974, and Shanks and McEwan Technical Director from 1988.

Number of Institute staff in 1997 - 27.

Deputy Secretaries/Assistant Chief Executives

Mrs Jean Best-Devereaux made an important contribution as full-time Deputy Secretary in the 1970s and early 1980s. She took responsibility, with her team, for building up commercial business including administering the detailed conference and exhibition arrangements, Journal advertising, etc. Jean died in 1990 after a period of ill-health.

George Tinsdeall also made a major contribution to the Conference and Exhibition, after taking over as Assistant Secretary at Northampton in 1982, retiring mid-1994. In 1997, the Institute appointed two Assistant Chief Executives, Chris Murphy and Victoria Martin.

** see profile in the text*

OTHER INSTITUTE OFFICE HOLDERS

Honorary Treasurers

1898-1900	James Jackson (Sheffield)*
1900-02	W.J. Downey (Huddersfield)
1903-05	F.W. Brookman (Rochdale)*
1905-06	J.B. Massey (Burnley)
1906-37	John Terry (Nottingham)*
1937-42	J.H. Codling (Birmingham)
1942-49	Thomas Robinson (Newcastle)
1949-56	William H. Andrews (Birmingham)
1956-68	Alan E. Barton (Birmingham)
1968-75	John Scott (Edinburgh)
1975-78	George Cooper (Bradford)
1978-91	Eric Mossey (City of London)
1991-date	Roger Hewitt (Kenal Services)

Honorary Journal Editors

1910-15	F.W. Brookman*
	Assisted by Arthur May (Finsbury) on London Centre issues, then Thomas Crookes.
1915-51	Thomas Crookes* (Finsbury, then Scottish Department of Health)
1951-63	Norrie Wilson (Edinburgh)
1963-65	Frank Stirrup (Salford). Frank died in 1965.
1965-67	Philip Patrick (Greater London Council)
1968-79	Jack Skitt (Stoke/Staffordshire)
1979-90	Dennis Taylor (Middlesbrough/Manchester)
1990-91	Colin Porter

Full-time Editors

1992-97	David Lloyd
1997-date	Patricia Jennings

Honorary Examination Board

Correspondents/Secretaries

1916-17	J.C. Dawes* (Keighley). Original syllabus devised.
1921-27	David Kennedy (Kensington)
1927-31	Harold Ardern* (Blackpool)
1931-32	H. Cook (Rochdale)
1932-37	Thomas Robinson (Newcastle)
1937-49	A. Connor (Derby)
1949-59	Bert Ellis (Bristol)
1959-65	Frank Roberts (Birkenhead)
1965-75	Eric Mossey (City of London)
1975-79	Ron Stanyard (Salford)
1979-89	Ron Wood (Calderdale)

Position then designated Membership, Education and Training Secretary. Ron transferred to being an employed Institute officer. When he moved to work for WAMITAB, he was succeeded at the IWM by Mark Gibson, Education and Training Manager.

Honorary exhibition organisers

1958-82	John Stephen
1962-66	Freddie Shults (later Secretary)
1966-69	R.J. Lawrence (Southend)
1970-81	Ben Heath (Barnsley, then Leeds)
1981-93	Harry Barton (Pendle)

Exhibition responsibilities were then taken over by full-time Institute staff.

** see short biography provided in text*

REFERENCES AND FURTHER READING

1. Annual Conference Programmes and Papers
(Some years missing, e.g. 1900 and 1946.)

2. The Institute Journal, monthly from the first
edition in Aug. 1910. (Some editions missing,
e.g. 1925 to 1928.)

3. Minutes of the Institute General Council and
Committees.

4. Technical papers given to Institute and
Centre meetings.

5. General texts on wastes management:

- 'English Sanitary Institutions', Sir John Simon,
(1897 - 2nd edition), John Murray.
- 'Endangered Lives: Public Health in Victorian
Britain', A.S. Wohl (1983), J.M. Dent and
Sons. (*)
- 'Removal and Disposal of Town Refuse'
(1898) and
- 'Destructors and the Disposal of Town
Refuse' (1905/1919), by W.H. Maxwell,
Sanitary Publishing Company.
- 'The Utilisation of Waste Products', Dr
Theodor Koller (1902), revised 1915, Scott
Greenwood.
- 'Disposal of Town's Refuse' (1904) and
- 'Refuse Disposal and Power Production'
(1911), both by W.F. Goodrich, Archibald
Constable.
- 'Cleansing'. Arthur May (1911), W.A.
Hammond.
- 'Town Cleansing and Refuse Disposal', Hugh
S. Watson (1911), Charles Griffin.

- 'Modern Destructor Practice' (1912), Charles
Griffin.

- 'Refuse Disposal - A Practical Manual for
Municipal Engineers', Ernest R. Matthews
(1915), Charles Griffin.

- 'Public Cleansing', James Jackson Study
Circle, Birmingham (1929), Ernest Benn.

- 'Report on an Investigation into the Public
Cleansing Service in the Administrative County
of London', J.C. Dawes (1929), HMSO.

- 'Some Notes on The Scientific Aspects of
Controlled Tipping' by Bertram Jones and
Frederick Owen (1934), Manchester City
Council.

- 'Modern Cleansing Practice: Its Principles
and Problems', A.L. Thomson (1928), Sanitary
Publishing Co.

Second edition - 'Modern Cleansing Practice'
(1945).

Third edition - revised and expanded by John
Stephen (1951), Technical Publishing Co.

- London Labour and the London Poor, Henry
Mayhew (1955 edition), Spring Books.

- 'The Wastes of Civilisation' J.C. Wylie (1958),
Faber and Faber.

- 'Notes on the Science and Practice of
Controlled Tipping of Refuse', R.E. Bevan
(1967), IPC.

- 'Public Cleansing', Frank Flintoff and Ron
Millard (1968), Applied Science.

- 'Disposal of Refuse and Other Waste (1972):
and

- 'Waste Disposal, Management and Practice'
(1979), both by John Skitt and published by
Charles Knight.

References and further reading

- 'Waste Management: Planning, Evaluation and Technologies', David C. Wilson (1980), Clarendon.
- 'Practical Waste Management', John R. Holmes (Editor) (1983), Wiley.
- 'Recycling and Waste: Exploration of Contemporary Environmental Policy', Matthew Gandy (1994), Avebury Studies in Green Research. (*)
- Royal Commission on Environmental Pollution reports
- 'Managing Waste: The Duty of Care' (1985) 11th report - HMSO.
- 'Incineration of Waste' (1993) 17th Report - HMSO.

6. A range of vehicle history publications are available including:

- 'Pagefield Motor Vehicles', Tom Meadows (1966). (*)
- 'Kaleidoscope of Shelvoke and Drewry', Nick Baldwin and William Negus (1980), Marshall Harris and Baldwin. (*)

All sources are available to read in the Institute's Northampton library, except where marked ().*

If you are aware of further historically valuable sources and/or have access to copies, please advise the author on (01223) 721027 or the Institute library.



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