

# Conversion to energy

Energy from Waste (EfW) in the UK has usually meant Incineration. This is an unpopular technique for 'treating' wastes prior to landfill. Incineration can vary from nearly complete destruction of hazardous wastes to 70% volume reduction in a municipal waste incinerator. This leaves 30% of concentrated, toxic ash for which a disposal route has to be found. So far, most has been landfilled.

Other satisfactory and generally acceptable alternatives for this ash have yet to be devised, and some attempts have ended in spectacular failure, such as the 2000 tonnes (Environment Agency figures) of ash containing dioxins measuring thousands of times the EU safety limits, spread between 1993 and 1998 over five years on the paths of over 40 allotments in Byker, Newcastle. All ash deposits known to the Environment Agency in and around Newcastle have been removed by Newcastle City Council and disposed of to an appropriately licensed landfill site. This incinerator is no longer allowed to operate.

Most incineration is either covered by European Directives (hazardous waste and municipal waste) or will be covered by a proposed Directive as and when it is passed and implemented into UK law. Most incinerators must be authorised under the Environmental Protection Act 1990. The Directives must specify the conditions under which an incinerator must be operated, emission limits and monitoring. But Directives cannot always protect against human failure (accidental or wilful). Safe emission limits have frequently been exceeded at all UK incinerators, and serious mistakes including a number of unintentional fires have occurred in recent years.

Many scientists believe there are no 'safe' emission levels of dioxin, formed by burning chlorinated plastics and products such as batteries. Incineration with energy recovery is nevertheless placed higher in the government's waste hierarchy (**Reduction, Recovery of materials, Recovery of energy, Disposal**) than disposal via landfill. At the top is waste minimisation through materials avoidance (this includes product design for durability, repair, reuse and recycling), followed by recovery, reuse and recycling.

Modern incineration with energy recovery can displace fossil fuels that may otherwise be used to provide energy. But it is not an efficient or sustainable method of energy generation, and it also displaces energy from renewable sources, such as wind, solar, thermal, tidal and photovoltaics. Not as much energy is produced as would be saved by recycling, and further energy can be conserved by manufacturing with recycled materials, so, ideally, it is desirable that extraction and processing of 'virgin' raw materials is greatly reduced, and that no recyclable waste should be incinerated. Also, incinerator contracts are necessarily long, and they need continuous feedstock. This sits unhappily with the aim to increase reuse and recycling rates - successful recycling deprives a thirsty incinerator, and the tail should not wag the dog.

The use of wastes as substitute fuels in other processes, for example shredded tyres in cement production, can also reduce consumption of fossil fuels but, like incineration, is controversial. It may be a more efficient use of tyres to crumb them for incorporation in the material used for road-building. Ferrous metals can be recovered

by electromagnetic means from municipal waste incinerator ash, but the scrap is of a lower grade than if it were pre-sorted. Research is taking place to establish if incinerator ash is suitable for recovery and use, to reduce the amount of residue to be landfilled - but incorporating it into building blocks is unlikely to win wide acclaim. It may be possible to vitrify ash into a slag suitable for use in road construction, but who is calling for incineration in the first place? Indeed, recycling must take place - the UK has one of the worst records in Europe. Clearly new incineration plants are not essential, and could quickly become redundant, causing a problem for councils with long contracts, as waste reduction and recycling are made easier for us and take a firmer hold in our way of life.

An independent report, confirmed in research by the British Newsprint Manufacturers Association, has shown recycling of used newspapers and magazines at Aylesford Newsprint to be environmentally much preferable to their incineration for energy recovery. Without plants such as Aylesford - and more facilities are needed to service other areas and reduce transportation - the pressure to obtain timber would have greater impact on now scarce old-growth forests, which provide wildlife habitat.

Recycling textiles can save up to 15 times the energy recoverable by incineration (British Textile Technology Group report for Evergreen Recycled Fashions, Dewsbury) and recycling of PET plastic can save up to 40 times the energy recoverable by incineration (Clark & New, Current UK Initiatives in Plastics Recycling).

Friends of the Earth believes a target should be set in the UK to recycle 50% per cent of materials by 2010. The establishment, promotion and demand of large new incineration plants would be likely both to prevent the achievement of this target, and to dissuade the public and businesses from taking responsibility for their waste. A recent US EPA report shows that recycling is a far better option than incineration as a greenhouse gas abatement strategy. Commercial conifer forestry uses pesticides, and acidifies soil and water. Natural forests, with their increased biodiversity and biomass, soak up more CO<sub>2</sub>. There is therefore a need to reduce overall demand on trees, which retain water, prevent erosion and fix carbon.

The recovery and recycling of a discarded resource can produce up to ten times the employment offered by an incinerator. Hidden costs include incinerator pollutants which end in the food chain and contribute to the burden of toxins in humans and wildlife. Waste prevention, minimisation, recycling and energy efficiency are sustainable strategies; new incineration plants, with the subsidies they receive, and the recyclable materials they are currently likely to attract, are harder to justify. The 15 main incineration facilities in the UK range in capacity from 30,000 tonnes in Shetland to 400,000 tonnes. Some say this is enough. Yet currently another 23 are planned. Given a culture increasingly emphasising sustainable practices, businesses can play a major part in reducing the waste currently going to landfill or incineration.

Recent direct actions by Greenpeace have temporarily closed incinerators in Sheffield, Edmonton (North London) and Deptford (South London). On its website, Greenpeace lists the currently operating and proposed incinerators in the UK. An entertaining and educational few minutes can be spent doing their incinerator tour at [www.greenpeace.org.uk/incineratortour.htm](http://www.greenpeace.org.uk/incineratortour.htm)

Energy is fed into the national grid from power stations capturing methane (a powerful greenhouse gas) emitted from landfill sites, where they are big enough to make it commercially viable, such as that at Brogborough, Bedfordshire. Unfortunately all waste reaching Brogborough arrives by the least sustainable option - road, rather than rail. Waste does reach some landfills by rail, however, and this should be encouraged, as landfill will be needed for some years yet, in the time it takes for waste to become seen as a resource, and reducing and recycling increases.

The government has set a target date by which no organic waste should still be landfilled. Other ways of converting waste to energy will have an increasing part to play, such as anaerobic digestion (processing without oxygen) for organic waste, and trials have proved successful. Some players hope to introduce pyrolysis or gasification plants. These would only be likely to meet public acceptability standards if they operated in a total vacuum with no emissions to the air, but as with incineration, they would be likely to swallow resources that could otherwise be reused or recycled. The industry may be right to state that technologies are evolving, and this space should be watched. However, the fact remains that nearly everything used by household or industry can already be reused or converted for reuse, without being burnt or chemically altered, given the political will.

*Also see*

*Rubber and tyres (47)*

*Wood Burning (15)*

**Associated Energy Products plc**

Tel 0207 823 2288 London / 01784 465880 Staines Fax 0207 823 2844 / 01784 496332

55-60 London Road, STAINES, Middx TW18 4BQ

*Development of integrated solid waste treatment processes and recycling schemes, technologies to generate energy from waste and other power generation projects. Provision of finance planning and public relations support. ESA member. Offices at 14 Headfort Place, Victoria, London SW1X 7DH.*

**Biffa Environmental Technology**

Tel 01254 831389

Withnell Service Centre, Bolton Road, Withnell, CHORLEY, Lancs PR6 8BT

E-Mail [marketing@biffa.co.uk](mailto:marketing@biffa.co.uk) Website [www.biffa.co.uk](http://www.biffa.co.uk)

*Offers landfill gas control service: gas production modelling, design of systems, purchase of equipment, installation, maintenance, monitoring, and emergency response unit.*

**Biogas Technology Ltd**

Tel 01487 831 701 Fax 01487 830 962

6 Brookside Industrial Estate, Glatton Road, Sawtry, HUNTINGDON, Cambs PE17 5SB

*Landfill gas management and power generation including pumping trials and site assessment; provision of gas extraction and flare systems; power generation plant including complete power stations; leachate control and treatment; site monitoring and aftercare. An associate company, Natural Power Ltd, is also able to provide funding of power station construction and take on operational responsibility. Recent projects are a 2.6MW station (sufficient for 2600 homes at Harnhill, near Bristol (complete) and similar schemes under construction near Telford and York. ESA member.*

**Communities Against Toxics**

Tel 0151 339 5473 Fax 0151 201 6780  
E-mail [ralph@tcpublications,freereserve.co.uk](mailto:ralph@tcpublications,freereserve.co.uk)  
PO Box 29, ELLESMERE PORT, Cheshire L66 3TX

*Nationwide organisation of local groups promoting clean methods in industry. Supplies waste disposal information concerning toxic, clinical and municipal waste, and facts about health and environmental concerns. Bi-monthly newsletter. (Updated May 2001)*

**Energy Technology Support Unit (ETSU)**

Web Site <http://www.etsu.com>  
Tel 01235 433517 Fax 01235 432923  
Building 156, Harwell Laboratory, DIDCOT, Oxon OX11 0RA

*Government sponsored body managing and promoting research, development and demonstration programmes in energy efficiency, renewable energy and clean coal technology. Expertise on energy technology including biofuels, landfill gas, CHP, geothermal and hydro power, passive solar design, tidal, wave and windpower. The associated Renewable Energy Enquiries Bureau provides a range of free educational publications (including a set of infosheets by the International Energy Agency aimed at a non-specialist audience, on waste management options for municipal wastes, lifecycle assessment and related topics) and summaries of completed research. Publishes a free general interest quarterly journal 'RE View'.*

**Fibropower**

Tel 01379 871100 Fax 01379 871376  
Eye Power Station, EYE, Suffolk IP23 7DH

*Power station uniquely licensed to burn poultry litter, as well as clean, dry forest residues, and vegetable-based biomass, eg food waste, grains.*

**Greenfinch Biowaste Digester**

Tel 01584 810777 Fax 01584 810673 Email [greenfinch@burford.co.uk](mailto:greenfinch@burford.co.uk)  
Burford House, TENBURY WELLS, Worcestershire WR15 8HQ  
Contact: Michael Chesshire

*Anaerobic (no air) digestion plant engaged in 18 month pilot project begun in Oct 1999 on a plot only 0.015 hectare. 4.6 tonnes per week of putrescible kitchen waste that would otherwise go to landfill, including meat and bone, is collected (on the same day as refuse is collected in black sacks) from 1100 local households, who are provided with white sacks. This is manually loaded into the plant once a day. The anaerobic digester (temperature 35 degrees) is fed hourly. It conditions this biowaste into a soup, producing biogas which keeps the process hot and heats a greenhouse. Organic compost/fertiliser is also produced. As the process is a closed system, it is odour-free, no vermin are attracted, and no planning problems were experienced, despite it being near a nursery and a river. It is a sustainable, benign process. If extended to 10,000 households (only needing 0.1ha) it is claimed that it could become a commercial venture, with price and capacity vastly more favourable than incineration.* (Updated Mar 2001)

**London Waste Ltd**

Tel 0208 803 1322 Fax 0208 884 0537

Energy from Waste Plant, Advent Way, LONDON N18 3AG

*Municipal waste to energy incineration plant, recently upgraded to comply with new emission standards. Serves seven London boroughs and numerous commercial customers. Several recycling schemes also undertaken, including green waste composting, building blocks and paving manufactured from bottom ash, and sale of wood waste for charcoal production.*

**Motherwell Bridge Envirotec Ltd**

Tel 01698 242 600 Fax 01698 242 609

PO Box 4, Logans Road, MOTHERWELL, Scotland ML1 3NP

*Consulting, design, engineering and construction of composing, recycling, incineration and co-design facilities worldwide. Specialists in bio-gas utilisation schemes, contaminated land remediation.*

**Onyx Environmental Group plc**

Tel 0208 983 1000 Fax 0208 983 0100 24 hour hotline 0800 626274

E-Mail [info@onyxgroup.co.uk](mailto:info@onyxgroup.co.uk) Website [www.onyxgroup.co.uk](http://www.onyxgroup.co.uk)

Onyx House, 401 Mile End Road, LONDON E3 4PB

*Integrated waste management company owned by French company Vivendi. 40 sites throughout Britain including St Albans (2), Colchester and Gerrards Cross, Bucks. Collection, disposal and treatment of all types of solid and liquid waste including asbestos, PCBs, sewage sludge, special wastes and tyres. Operates landfills; oil and solvent recovery and aqueous organic waste treatment plants; high pressure jetting; drain, sewage and tank cleaning; chemical decontamination; hazardous and clinical waste incineration or treatment (one of two major companies promoting incineration in the UK); tyre crumbing; 24 hour emergency service for chemical explosion or spillage; land decontamination and reclamation. ESA member.* (Updated Mar 2002)

**Shanks & McEwan (SWS) Ltd**

Tel 01908 650650 Fax 01908 650699

Head Office, Dunedin House, Mount Farm, Auckland Park, MILTON KEYNES MK1 1BH

Email: info@shanks-recycling.co.uk

*Major national waste management group, operating large landfill gas waste to energy schemes, including Brogborough, Beds. Other activities include collection, road and rail haulage, disposal of special and difficult waste, high temperature incineration of hazardous organic chemicals, disposal of domestic, commercial and industrial wastes, recycling, composting and operation of MRFs and transfer stations. ESA member.*

**SITA Tyre Recycling (UK) Ltd**

Tel 01902 408608 Fax 01902 664995

Elm Energy House, Ettingshall Rd, WOLVERHAMPTON, Bilston, West Mids WV2 2 LA

*French owned tyre burning plant, taking up to 10,000 scrap tyres a year, and supplying electricity to Powergen.. Steel wire and zinc recovered.*

**Todaysure Projects Ltd**

Tel 0161 929 7172 Fax 0161 929 6210

154 Oldfield Road, ALTRINCHAM, Cheshire WA14 4BJ

*Markets woodburning combustion units, for woodwaste, pallets, chipboard, MDF, skip debris, woodchips, dust, cardboard and paper, producing hot air and hot water. Capacity from 1 to 120 tonnes per week.*

**White Rose Environmental**

Tel 0113 248 9062 Fax 0113 248 4445

Knostrop Treatment Works, Knowsthorpe Lane, LEEDS LS9 0PJ

*The UK's leading clinical waste incineration plant operator, White Rose is the clinical waste arm of Yorkshire Environmental, a subsidiary of Yorkshire Water. Plants in the south are at King's College Hospital, London; Goodmayes Hospital, Romford (these two, operated by Clinical Waste Ltd, having been acquired in 1997); Sidcup, Kent; Ashford; Ipswich; and Bournemouth. Others are at Leeds (2); Pontefract; Oldham; Bolton. One is under construction at Nottingham.*

**Yorkshire Water Services Ltd**

Tel 0113 234 3234 Fax 0113 234 2322

2 The Embankment, Sovereign Street, LEEDS LS1 4BG

*Major partner in a £28m project to construct a wood-fuelled power plant at Eggborough near Selby, North Yorks. Gasification of woodchips from forest residues and short rotation coppice will fuel turbines generating 10Mw of electricity, of which 8Mw will be exported to the local grid. Forest Enterprise, the Forestry Commission's commercial arm, will supply wood chips, but an increasing proportion of fuel will come from fields of short rotation willow coppice planted by local farmers on low grade land as both a habitat for game and songbirds, and an outlet for disposal of sewage sludge produced by the company.*

## **Rubber and tyres**

There are over 121 million tyres on vehicles in Britain - a number which is increasing - and about 38 million worn tyres are replaced each year. About 26% are reused as retreads, and 46% recycled as reclaimed materials, or incinerated for energy recovery. The rest are landfilled or stockpiled, and represent a major waste problem. This will be accentuated by a draft EC Directive banning the landfill of whole tyres from 2003 and shredded tyres by 2006.

With a higher calorific value than top grade coal, a typical car tyre equates to ten litres of fuel oil, and may present a fire hazard. Even tyres accumulated in landfill may be ignited. Once started, such fires may be virtually impossible to extinguish; meanwhile they emit atmospheric and water-borne pollutants. Unless the tyres are shredded prior to being landfilled, such accumulations are also structurally unstable - tyres tend to rise to the surface, limiting options for future land use.

The UK has a well-established re-tread industry (there can be shortages of those used tyres which are suitable for retreading) and many old tyres are exported. Alternative re-use options for scrap tyres are increasing, but the number of outlets remains less than that which would meet potential demand. Small numbers are used as boat fenders, playground equipment and by farmers.

Material recovery from tyres and other rubber products is also increasing. The main technique is to reduce the rubber to crumb, and use this as a moulding material or filler. Applications include brake linings, carpet backing, asphalt surfacing for roads, paths and playgrounds, and low grade use as landscape mulch or waste oil absorbent.

Energy recovery, a seemingly obvious option for so abundant a high calorific waste is not without its problems. Sulphur is an essential component for vulcanisation - the process which transforms soft, natural or synthetic latex into a more durable wear-resistant material. Incineration oxidises this to sulphur dioxide - atmospheric emissions can only be prevented by 'bolt on' flue gas desulphurisation. This is costly, not only in terms of additional plant but as reduced net energy output, since the process itself uses considerable electrical power. It also consumes large quantities of limestone, but produces gypsum (calcium sulphate) as a useful by-product.

Pyrolysis is an alternative to incineration of tyres which minimises atmospheric emissions. It involves destruction by heating in the absence of air within an enclosed chamber - like the related fractional distillation process of petroleum 'cracking' it produces fuel gases and oil together with a residue of carbon and steel beading.

A new publication "Introduction to Tyre Recycling: 2000" gives facts and figures, lists where tyres come from, different types, quantities, and estimates EU tyre disposal routes. It gives suggestions as to how the tyre mountain could be disposed of, and many treatments for post-consumer tyres, both whole and granulate. (Also available in French.) EUR18 (p+p extra) from European Tyre Recycling Association, 7 rue Leroux, 75116, Paris, France, email etra@euronet.be

**A & B Tyres Ltd**

Tel 0207 511 5771

Unit 2, East Ham Industrial Estate, 1000 Newham Way, LONDON E6 4JN

*Commercial tyre retreading company.*

**Apex Rubber Co Ltd**

Tel 0207 987 4911

443-451 Westferry Road, Millwall, LONDON E14 3AN

*Purchases scrap motor inner tubes.*

**Biffa Waste Services**

Tel 0121 502 5500

Wednesbury Waste Management Centre, Potters Lane, WEDNESBURY, West Mids  
WS10 7NR

E-Mail marketing@biffa.co.uk Website www.biffa.co.uk

*Waste management subsidiary of Severn Trent plc, offering nationwide collection and disposal of automotive tyres, which are shredded for use as fuel.*

**Colway Tyres**

Tel 0191 378 0558 Fax 0191 378 1758

Email colway.tyres@virgin.net Website www.colwaytyres.co.uk

*New company collecting worn tyres to produce lifetime guaranteed retreads. These are cheaper than new, and production is estimated to save 27 million tonnes of crude oil each year. Casings that cannot be used become carpet underlay.*

**CTS (Brackley) Ltd**

Tel 01280 704626

Top Station Road, BRACKLEY, Northants NN13 5UG

*Tyre retreading company.*

**Fraser Evans & Sons**

Tel 01993 700887 Fax 01993 700887

The Tyre Yard, Downs Road, WITNEY, Oxon OX8 5SY

*Collection of scrap tyres from tyre shops at a small charge across Southern England (about 300,000 p/a). Some 25% are sold on for remoulding. Operates a pilot pyrolysis plant designed by Bevan Recycling (see section 250) for tyres unsuitable for retreading. Plant recovers gas, oil, carbon and steel. A small fraction require disposal in landfill.*

**G & S Tyres**

Tel 0207 511 2017

Unit 1, Petto Street North, Canning Town, LONDON E16 1DD

*Tyres collected in Southern England for retreading.*

**Jet Tread Ltd**

Tel 01708 861828

801 London Road, West Thurrock, GRAYS, Essex RM16 1LR

*Tyres collected in Southern England for retreading.*

**Plastics and Rubber Advisory Service**

Tel 0991 908070

6 Bath Place, Rivington Street, LONDON EC2A 3JE

*Advice and information on the plastics and rubber industry. The British Plastics Federation is at the same address.*

**PR Matters**

Tel 01494 764932 Fax 01494 764408

Brambling House, 7 Finch Lane, LITTLE CHALFONT, Bucks HP7 9NE

*Public relations consultancy promoting recycling of PVC wellington boots for Dunlop. Promotions include providing 'welly banks' for local authority recycling sites; support for special events and competitions such as welly 'wanging' contests and recycling presentations to schools. Dunlop can also provide bulk collection arrangements for large users of industrial and safety boots.*

**REG (UK) Ltd**

Tel 01895 444714

191 High Street, Yiewsley, WEST DRAYTON, Middlesex

*Member of the Tyres Continental Group. Tyres and automotive workshop waste collection on toll basis with recycling where possible. Suitable tyres are passed on for retreading. Those unsuitable are used at Elm Energy's West Midland waste to energy plant.*

**Riverside Rubber Co Ltd**

Tel 01604 38631 Fax 01604 232449  
167-171 Bridge Street, NORTHAMPTON NN1 1QF

*Member of the Tyres Continental Group. Tyres and automotive workshop waste collection on toll basis with recycling where possible. Suitable tyres are passed on for retreading. Those unsuitable are used at Elm Energy's West Midland waste to energy plant.*

**Rushden Granulating Company Ltd**

Tel 01933 623249 Fax 01933 460095  
Upper Higham Lane, RUSHDEN, Northants NN10 0SU

*Collects scrap truck tyres (pays approx £3 per casing) as well as other types of rubbish, which must be checked beforehand for quality.*

**SITA Tyre Recycling**

Tel 01902 408608 Fax 01902 408517  
Ettingshall Road, Bilston, Wolverhampton WV2 2LA

*French owned tyre burning facility, taking up to 100,000 scrap tyres a year, and supplying electricity to Powergen.*

**South East Recycling**

Tel 01708 522622 Fax 01708 522229  
Units 5-6 Marshview Estate, Ferry Lane, RAINHAM, Essex RM13 9BU

*Granulation of scrap tyres to crumb and chip.*

**Tyre Industry Council**

Tel 0207 583 9365 Fax 0207 353 0394  
c/o British Rubber Manufacturers Association, 90 Tottenham Court Road, LONDON W1P 0BR

*Trade body concerned with promotional and educational activities related to tyres. Affiliated bodies are BRMA, Imported Tyre Manufacturers Association, and Retread Manufacturers Association.*

**University of Maine**

Tel (001) 207 581 3777

Dept of Public Affairs, Orono ME 04469 - 5761, ORONO, USA

*Expertise based on successful experimental work on using tyre chips as a construction material with unusual properties. (Used as a road foundation over soft compressible ground; or backfill to reduce pressure behind retaining walls.)*

**Wellington Rubber Co Ltd**

Tel 0113 270 4525 / 0113 271 1818

Brown Lane Trading Estate, Brown Lane West, LEEDS, West Yorks LS11 0EG

*Rubber processing and import and export merchant.*

## **Transport issues**

A Department of Transport survey carried out in 1995 provides some personal travel mileage data: our average mileage per year per person was 6,511, carried out by 200 miles walking, 37 miles cycling, 800 miles on public transport and 5,474 miles in cars and other private motor vehicles.

Transport for work and leisure purposes is an essential part of modern life which can be conveniently and flexibly provided by private vehicles. The advertising industry argues, quite convincingly, that car ownership enhances quality of life, can be a legitimate cause for pride, and that in a free society those who wish should be encouraged in updating regularly to the latest, more powerful, improved model. Also, since the motor manufacturing and service industries account for nearly 10 per cent of the British Gross National Product, many consider that this may be beneficial for the national economy.

Nevertheless, the figures above seem to indicate a misuse of resources and an excessive dependency on the private motor vehicle. There is also a significant downside represented by over 43,000 deaths and serious injuries (1996) from traffic accidents; continuing effects, particularly on health, of serious air pollution; occasional marine catastrophes associated with the massive global shipments of oil; unacceptable pressures on native peoples where fossil fuels are extracted; and reduced quality of life for those in the UK unable to afford a car, who remain dependent upon declining public transport services.

Following a century of technical development it seems likely that individual vehicles will continue to form a major part of transport strategy. But it is desirable that future efforts be directed where possible towards reducing the need for motor transport, as well as volumes and effects of traffic. The organisations listed attempt to do so in various ways.

# Wood burning

Wood and other cellulose materials represent stored solar energy, and were the first fuels ever used. Wood burns about 4 to 5 times more efficiently in an enclosed stove, designed for the purpose, than on an open fire.

Enormous quantities of waste wood from demolition sites, timber yards, packaging and scrap furniture are landfilled each year. Whilst painted timber and particle boards should only be burned in incinerators with suitable abatement plant, much of the remainder that is unsuitable for logs may be processed to a convenient woodchip fuel for semi-automatic boilers. These are appropriate not only for domestic use but for small commercial and institutional buildings. (They also offer prospects for beneficial use of problem wastes such as shredded paper and cardboard, but note that this may be subject to regulatory controls.)

It is claimed 'wood is a renewable energy source because the carbon dioxide emitted when the wood is burned has been taken out of the atmosphere by the growing plant. Even allowing for emissions of fossil carbon dioxide in planting, harvesting, processing and transporting the fuel, replacing fossil fuel with wood fuel will typically reduce net CO2 emissions by over 90%' (from [www.greenenergy.org.uk/logpile/pellets/index.htm](http://www.greenenergy.org.uk/logpile/pellets/index.htm) : wood pellet heating - introduction, see the Logpile Project, below). There is also a UK wood pellet and wood pellet stove manufacturing industry developing - pellets are usually made of highly compressed waste sawdust, and have been used for heating in North America, Sweden, Austria and Denmark (see the British Pellet Club below).

## Alphabetical list of organisations

### **1st Call Fireplaces**

Tel 01865 777710

61 Boswell Road, Cowley, OXFORD OX4 3HW

*Sale and installation of wood burning stoves.*

### **Airplant Ltd**

Tel 0116 283 3581 Fax 0116 283 7311

295 Aylestone Road, LEICESTER LE2 7PB

*Manufacturer of straw, woodchip and suitable waste fired boilers including automatic types suitable for industrial and commercial premises.*

**Bentley Fire Shop**

Tel 01206 251118 Fax 01206 252145

Unit C5-6, Plough Road Centre, Great Bentley, COLCHESTER, Essex C07 8LQ

Email [bentleyfireshop@lineone.net](mailto:bentleyfireshop@lineone.net) Website [www.bentleyfireshop.co.uk](http://www.bentleyfireshop.co.uk)

*Sale and installation of wood burning and multi-fuel stoves.* (Updated Apr 2001)

**Big K Charcoal Merchants Ltd**

Tel 0208 808 6336 Fax 0208 365 1452

Unit 20, Mill Mead Industrial Estate, Mill Mead Road, Tottenham Hale, LONDON N17 9QU

*The first UK company to achieve FSC (Forestry Stewardship Council - see separate entry) certification for four of its suppliers. Management of all four woodlands is oriented towards multiple benefits, and the development of uneven-age woodland. Three of the sites are managed by Norfolk Wildlife Trust, and will include restoration of open ground habitats within the woods. The sites supply pulpwood to Big K's manufacturing plant near Stoke Ferry for processing, bagging and distribution to retail chains throughout the UK. Big K intends to expand its supply base in future.*

**Bioregional Treestations**

Tel 0208 404 4891 Email: [atolfts@onetel.net.uk](mailto:atolfts@onetel.net.uk)

Contact Andrew Tolfts

*The loss of natural forests around the world is a major environmental concern, yet our traditional woodlands lie neglected. The London Tree Officers Association estimate that London generates 54,000 m<sup>3</sup> of tree surgery waste per annum of which 51% is dumped and 11% burnt. Yet this wood is a renewable resource which can be put to good use. There is potential to produce a range of wood products from sawn timber to energy. If simple forestry practices are introduced in managing urban trees, both useful lifespan and value as timber can be increased, so contributing to local sustainability.*

*TreeStations are sites (either urban or rural) to which local woodland and tree managers and owners can bring woody waste, rather than sending it to landfill. The station develops new uses for wood, and converts it into useful products. Managing local trees and woodlands sustainably provides environmental, social and economic benefits: it reduces the environmental impact of transporting timber, and benefits people working and living locally.*

*In partnership with the London Borough of Croydon, BioRegional has set up a pilot TreeStation, with a small sawmill, setting an example by good management of trees through Forest Stewardship Council (FSC) certification and improving the environment for local people. Woodlands are highly valued by local residents, and local people are involved in managing four woodlands, removing invasive species and bringing back young growth and a variety of light and shade, so primroses, bluebells*

*and other plants and animals have returned. Management of trees in parks and gardens has improved too. Ecological monitoring, helped by BTCV (British trust for Conservation Volunteers) has reduced the amount of waste wood going into landfill. This links with other examples of sustainable living such as the BedZED development (see sections on Green Building, Energy Use and Transport). Some timber has been sold for pulp, firewood or charcoal(Bioregional Charcoal Co Ltd); some wood products have been marketed locally. Croydon is the only urban area in the world certified by FSC (see section on Environmental labelling) as a sustainably managed forest.*

*Charcoal was made for 4 years from several hundred tonnes of timber, but production has stopped to avoid smoke nuisance. Most of the wood from Croydon is to be used in a combined heat and power (CHP) plant at the recently built BedZED development. Commissioned in February 2002, it requires 1000 tonnes of wood chip annually, closely matching the amount of wood produced in Croydon. BioRegional is planning the first rural TreeStation in co-operation with Surrey Wildlife Trust and Surrey County Council, where there is a great range of woodland types, including a relatively large area of ancient and semi-natural broadleaved woodland. Lessons learned will be shared through a website, site tours and seminars. Also see entries in sections 31(paper and card), 430 (green building), 450 (energy use) 460 (transport)*  
(Updated Nov 2002)

### **Brent Wood Burners**

Tel 01277 374247 Fax 01277 374949

3-5 Coxtie Green Road, Pilgrims Hatch, BRENTWOOD, Essex CM14 5PN

*Sale and installation of wood and multi-fuel burning stoves.*

### **The British Pellet Club (BPC)**

Tel 01908 665555 Fax 01908 665577 Freephone / 'Renewable Energy for the Home' Helpline 0800 138 0889

Email [saffron@greenenergy.org.uk](mailto:saffron@greenenergy.org.uk)

Website [www.greenenergy.org.uk/logpile/britishpelletclub.htm](http://www.greenenergy.org.uk/logpile/britishpelletclub.htm)

National Energy Foundation (NEF) Renewables, National Energy Centre, Davy Avenue, Knowlhill, MILTON KEYNES, Bucks MK5 8NG

Contact Saffron Myhill-Hunt

*Trade association for UK wood pellet industry. Formed 2003 to promote wood pellet heating, and excellence in the industry. Not for profit company limited by guarantee, to benefit members. Its main objectives are to: promote wood pellet heating; be a central body presenting views to Government, agencies, Parliament, European Commission / Parliament, and other organisations; provide information to industry and customers to ensure high standards of fuel, appliances and installation; provide a forum for exchange of non-competitive information. **National Energy Foundation** (see listing below) in Milton Keynes provides secretariat services, and is working on a Pellet Regulatory Study. Pellets are usually made of highly compressed waste sawdust. It is claimed pellets are easier to handle and store than wood chip (**CRI-East**, listed below - [www.greenenergy.org.uk/cri/CRIEastPresentation.htm](http://www.greenenergy.org.uk/cri/CRIEastPresentation.htm), see slide*

*on pellet fuelled heater); and 'have higher energy density and are more economic and convenient to transport. Pellet fuels open domestic heating markets to biomass with automatic pellet stoves and domestic boilers being reliable, convenient, clean, efficient and affordable' (**British Biogen**, listed above - [www.britishbiogen.co.uk/bioenergy/pellets/biofuelpellets.htm](http://www.britishbiogen.co.uk/bioenergy/pellets/biofuelpellets.htm)). See also **The Logpile Project**, below. (Updated May 2004)*

**Clarke International**

Tel 01992 565300 Fax 01992 561562

E-mail [sales@clarkint.com](mailto:sales@clarkint.com) Web Site <http://www.clarkint.demon.co.uk>

Hemnal Street, EPPING, Essex CM16 4LG

*Sale of popular workshop equipment including cast iron coal / wood burning stoves up to 15kw capacity. Stockists throughout UK.*

**Coals and Flames**

Tel 01277 227043

147 Kings Road, BRENTWOOD, Essex CM14 4EG

*Sale and installation of wood and multi-fuel burning stoves.*

**Colne Stoves and Fireplaces Ltd**

Tel 01787 222608

42 Halstead Road, Earls Colne, COLCHESTER, Essex CO6 2NL

*Sale and installation of wood burning and multi-fuel stoves.*

**Culworth Forge**

Tel 01295 760439

The Green, Culworth, BANBURY, Oxon OX17 2BA

*Sale and installation of multi-fuel burning stoves.*

**Essex Fireplaces**

Tel 01702 510000

375 Rayleigh Road, Eastwood, LEIGH ON SEA, Essex SS9 5PS

*Sale and installation of wood and multi-fuel burning stoves.*

**Etaglade Ltd**

Tel 01491 837710

By The Fire, Thames Street, WALLINGFORD, Oxon OX10

*Sale and installation of wood burning stoves.*

**Fire Place, The**

Tel 01869 322389

45 Wedgwood Road, BICESTER, Oxon OX6 7UL

*Sale of wood and multi-fuel burning stoves.*

**Firewood Co**

Tel 0207 267 0444

31C Ospringe Road, LONDON NW5 2JB

*Sale of wood and multi-fuel burning stoves.*

**Hausmanns**

Tel 01295 273324 Fax 01295 279122

28 Parsons Street, BANBURY, Oxon OX16 8LY

*Sale and installation of wood burning stoves.*

**The Log Pile Project**

Tel 01908 665555 Freephone / 'Renewable Energy for Homes' Helpline 0800 138

0889 Fax 01908 665577

NEF Renewables, National Energy Foundation (NEF), The National Energy Centre,  
Davy Avenue, Knowlhill, MILTON KEYNES, Bucks MK5 8NG

Email [saffron@greenenergy.org.uk](mailto:saffron@greenenergy.org.uk), [renewables@greenenergy.org.uk](mailto:renewables@greenenergy.org.uk)

Website [www.logpile.co.uk](http://www.logpile.co.uk), [www.greenenergy.org.uk/renewable\\_energy/index.htm](http://www.greenenergy.org.uk/renewable_energy/index.htm)

Contact Saffron Myhill-Hunt

*Promotes use of wood as a renewable energy source. Benefits of the project include: online database of wood fuel suppliers with search facility; guide on how to use wood as a sustainable energy source; opportunity for wood fuel suppliers to increase sales; detailed information on wood pellets*

*[www.greenenergy.org.uk/logpile/pellets/index.htm](http://www.greenenergy.org.uk/logpile/pellets/index.htm) ; supplier lists of wood pellet stoves and boilers. Supported by DEFRA through Environmental Action Fund; managed by Sandra Hayes at the **National Energy Foundation (NEF - listed below)**. See also **British Pellet Club**, above. (Updated May 2004)*

**Majestic Fires**

Tel 01234 215339

Unit 1, Albion House, Lime Street, BEDFORD MK40 1LD

*Sale of wood burning stoves.*

**Newbury Fireplace and Stove Centre**

Tel 01635 40480

Shaw Hill, NEWBURY, Berks RG14 2EQ

*Sale and installation of wood burning and multi-fuel stoves, including refurbished Aga and Rayburn cookers.*

**Prentice, Ken G**

Tel 01234 824797

Meeting Farm, West End, Stevington, BEDFORD MK43 7QU

*Sale of domestic / industrial wood and multi-fuel burning stoves.*

**Rigby Fireplaces**

Tel 0208 868 7899

7 Pinner Green, PINNER, Middx HA5 2AF

*Sale and installation of wood burning stoves. Also at 298 Kingshill Avenue, Hayes, Middx, Tel 0208 842 2499.*

**Teisen Products Ltd**

Tel 01527 821621 Fax 01527 821665

Droitwich Road, Bradley Green, REDDITCH, Worcs B96 6RP

*Manufacture of Farm 2000 range of straw, wood, woodchip, cardboard and combustible waste fired boilers, including automatic types, suitable for domestic, commercial and industrial premises. Also supply chimneys and boiler accessories and offer assistance with design of heating systems. Equipment is sold throughout the U.K.*

**Theale Fireplaces (Reading) Ltd**

Milehouse Farm, A4 Bath Road, Theale, READING, Berks RG

*Sale and installation of wood burning stoves.*

**Todaysure Projects Ltd**

Tel 0161 929 7172 Fax 0161 929 6210

154 Oldfield Road, ALTRINCHAM, Cheshire WA14 4BJ

*Markets woodburning combustion units, for woodwaste, pallets, chipboard, MDF, skip debris, woodchips, dust, cardboard and paper, producing hot air and hot water. Capacity from 1 to 120 tonnes per week.*

# Waste management contractors

It is perhaps significant that one of the main trade associations, the National Association of Waste Disposal Contractors, should have felt the need to rename itself the Environmental Services Association. It reflects the radical development occurring throughout the industry from what were primarily skip hire and landfill site operators to contractors providing a wider, more sophisticated range of services. These include collection and sorting of recyclables, material reclamation, composting of organics and conversion to energy - as well as more mundane matters such as street sweeping and refuse collection.

This has not occurred casually or accidentally but results from the effects of the Environmental Protection Act and the changed role of local government from direct provision of services to one of buying-in through a system of competitive tendering.

Before hiring a contractor, check that they are registered to carry waste. If in doubt, ring your local office of the Environment Agency. Also, as skips are expensive, double check if any of the wastes can be avoided, or recycled, and if you can save money by hiring a smaller skip, by timing the hire of the skip more carefully, or by separating wastes (for which no landfill tax is payable) from the rest. See the section on Duty of Care (500), and remember that the responsibility for correct disposal and treatment rests with the person disposing of the waste.

If you have a long-term contract with a waste disposal contractor, check from time to time that you are not paying for half-empty skips to be taken away. The most cost effective system for most companies is to arrange for skips to be emptied only when they are full, to arrange for particular staff to be responsible for the area used for storage of wastes and for sensible packing of wastes to reduce voids.

## **WASTE MANAGEMENT TIP:**

*If hiring a contractor to cover your recycling, see 'What should you look for in a company? Checklist for a reliable service' (listed before Contents List)*

## **WASTE PREVENTION TIP:**

*Examine waste skips routinely to see how much product actually finds its way into the waste stream, and what kinds of materials are going off to the scrap merchants.*

## **WASTE PREVENTION TIP:**

*Contact the ETBPP or the Environment Agency for advice on waste minimisation. Consider making a flowchart of material and waste flows, so that you can see where materials come into your plant, where water and energy are used and where losses occur. Whilst such diagrams are often very complicated (and hard to put together) you may find that they reveal unnecessary losses which can save you money.*

## **WASTE PREVENTION TIP:**

*After carrying out a waste audit, you may wish to consider charging relevant departments for the costs of the wastes that they produce.*

**Ahern PF London Ltd**

Tel 01708 723611 Fax 01708 749204  
228 Crow Lane, ROMFORD, Essex RM13 9TW

*Collection and disposal of dry wastes, asbestos, special and clinical wastes throughout Essex and East London, via network of six depots and landfill site at Rainham. ESA member.*

**Alan Hadley Ltd**

Tel 0118 988 3266 Freephone 0800 521099 Fax 0118 988 4538  
Fenton House, 102 Grazeley Road, Three Mile Cross, READING, Berks RG7 1BJ

*Multi-disciplinary waste management company.*

**ASM Waste Services Ltd**

Tel 01908 232325 / 01296 485642 Fax 01296 397304  
5 Gatehouse Way, AYLESBURY, Bucks HP19 3DB

*Aylesbury Secondary Metals. Waste management company operating waste transfer station, and with planning permission for MRF. Operates primarily in Bucks. Supplies static, portable compaction systems for high volume wastes. Skip and container hire: 4 to 40 cu yards, including enclosed containers for secure disposal of asbestos and notifiable wastes. Provides separate containers for cardboard recycling on request. Scrap metal dealer.*

**BFI Waste Systems Ltd**

Tel 01753 662700 Fax 01753 662464  
The Pickeridge, Stoke Common Road, FULMER, Bucks SL3 6HA

*Integrated company operating throughout England and Wales via network of 44 sites. Policy of actively encouraging waste minimisation and recycling via various reporting systems providing analysis and monitoring of waste streams. Collection and disposal of commercial, domestic and industrial wastes; special liquid and solid waste disposal; domestic refuse and household waste collection; gully cleaning and street sweeping; community recycling (MRFs); landfills in Yorkshire, Midlands and south of England. ESA member. Collect fluorescent tubes for recycling in Manchester by Mercury Recycling Ltd.*

**Biffa Waste Services Ltd**

Tel 01494 521221 Freephone 0800 307 307 Fax 01494 463368  
Coronation Road, Cressex, HIGH WYCOMBE, Bucks HP12 3TZ  
E-Mail [marketing@biffa.co.uk](mailto:marketing@biffa.co.uk) Website [www.biffa.co.uk](http://www.biffa.co.uk)

*Waste management subsidiary of Severn Trent plc, recycling nationwide through collection centres, landfill sites and treatment facilities, and delivering paper, card,*

*cans, glass, plastics and textiles to major reprocessing companies. Joint operator of national Bottleback glass recycling scheme, collecting around a third of a million tons of glass each year. Kerbside scheme at Newbury, Berks, reclaims 6500 tonnes a year of recyclables, sorted on vehicle. Collection, treatment and disposal of solid and liquid wastes, landfill gas, and clinical waste, street sweeping, drain clearance, emergency spillage clean up, landfills in most regions and risk management services.. Site investigation and consultancy services. Operates national cardboard recycling scheme with SCA Recycling.*

**BKP Environmental Services Ltd**

Freephone 0800 376 5004 / Tel 01794 368889 Fax 01794 367799 Website  
www.bkpgroup.com  
Casbrook Park, Bunny Lane, Timsbury, ROMSEY, Hants SO51 0PG  
Contact John Kelly

*Complete waste management service, including oils, chemical and hazardous waste, green waste, batteries, tyres, textiles, paper, plastics. Analysis of wastes, packaging, laboratory clearance, waste treatment. Road tankers available for all types of liquid. Emergency clear ups. Environmental consultancy, including waste minimisation. Member of British Oil Spill Control Association. (Updated June 2004)*

**Cawley Waste Disposal Services**

Tel 01582 492694  
57 Wingate Road, LUTON, Beds LU4 8PP

*General waste contractor. Specialist disposal service for toxics, chemicals, solvents, oils and medicines. 24 hour emergency callout. Depots also at Stevenage, Milton Keynes and Bedford.*

**Chiltern Wastaway**

Tel 01582 866640  
Transfer Station, French's Avenue, DUNSTABLE, Beds LU6 1BH

*Container hire and bulk collection transfer station. Separation and sale of hardcore and topsoil.*

**Cleanaway Ltd**

Tel 01277 234567 Fax 01277 230067  
Web www.cleanaway.co.uk  
UK Head Office, The Drive, Warley, BRENTWOOD, Essex CM13 3BE  
Contact Gale Urso / Ann Houghton

*Integrated company with over 60 UK sites. Operates three landfills in Essex and transfer stations for domestic and chemical waste. Bulk composting at Pitsea landfill near Basildon includes green waste collected from Essex CC civic amenity sites. Activities include collection, treatment, recycling and disposal of difficult liquid and*

*solid waste, and paper and confidential waste. 'Ecoservice' provides specialist waste handling, recycling and treatment services. ESA member.*

**Cory Environmental Ltd**

Tel 0207 379 9090 Fax 0207 379 8053  
25 Wellington Street, LONDON WC2E 7DA

*Collection and landfill disposal of household and solid commercial and trade wastes; municipal refuse collection; development of waste minimisation and waste to energy incineration technology. Sites mainly in south of England including Essex. ESA member.*

**Earthline Ltd**

Tel 01672 841389 Fax 01672 841353  
The Old Lime Works, Ogbourne St George, MARLBOROUGH, Wilts SN8 1SU

*Manages eight landfill sites in Bucks, Oxon, Hants and Wilts. Land restoration. Waste collection, mainly from building sites. Reuses and recycles material wherever possible, screening for rubbish. Supplier of aggregate, topsoil and crushed concrete. Bucks site: Warren Farm, Chalfont Lane, Maple Cross; Oxon: Shipton on Cherwell Quarry, Kidlington (Tel 01869 331595).*

**Firbank, C (Haulage and Plant Hire) Ltd**

Tel 01582 475500 Fax 01582 605964  
Blackburn Road, Townsend Industrial Estate, Houghton Regis, DUNSTABLE, Beds LU5 5BQ

*General waste disposal contractor operating transfer station, container hire and bulk collections. Licensed for waste categories A,B,C1 and C2, and special wastes including toxics, chemicals, solvents, oils and medicines. Advice and consultancy on all aspects of solid and liquid waste disposal. Collects segregated office paper and cardboard, and operate Alcan drink can sorting and baling centre.*

**Grundon S (Ewelme) Ltd**

Tel 01491 839212 Fax 01491 832272  
Goulds Grove, Ewelme, WALLINGFORD, Oxon OX10 6PJ

*Integrated company also trading as S Grundon (Waste) Ltd at Colnbrook, Berks. Six sites, mainly in Oxfordshire and Berks. Collection and disposal of all all classes of dry wastes and liquids by tanker or drum; clinical waste collection and incineration; landfill site and MRF operation. ESA member. Collect fluorescent tubes to be recycled in Manchester by Mercury Recycling Ltd.*

**Hales Waste Control**

Tel 01992 627441 Fax 01992 635127

Delamare Road, Cheshunt, WALTHAM CROSS, Herts EN8 9SJ

*General waste management services. 41 sites, mainly in Midlands and south east regions including London and northern home counties (11). Collection and disposal of most classes of solid and liquid waste; tanker services; landfill operation. Containers for all requirements. ESA member.*

**Onyx Environmental Group plc**

Tel 0208 983 1000 Fax 0208 983 0100 24 hour hotline 0800 626274

E-Mail [info@onyxgroup.co.uk](mailto:info@onyxgroup.co.uk) Website [www.onyxgroup.co.uk](http://www.onyxgroup.co.uk)

Onyx House, 401 Mile End Road, LONDON E3 4PB

*Integrated waste management company owned by French company Vivendi. 40 sites throughout Britain including St Albans (2), Colchester and Gerrards Cross, Bucks. Collection, disposal and treatment of all types of solid and liquid waste including asbestos, PCBs, sewage sludge, special wastes and tyres. Operates landfills; oil and solvent recovery and aqueous organic waste treatment plants; high pressure jetting; drain, sewage and tank cleaning; chemical decontamination; hazardous and clinical waste incineration or treatment (one of two major companies promoting incineration in the UK); tyre crumbing; 24 hour emergency service for chemical explosion or spillage; land decontamination and reclamation. ESA member. (Updated Mar 2002)*

**Redland Aggregates Ltd**

Tel 01530 242151 Fax 01530 244279

Bradgate House, Groby, LEICESTER LE6 0FA

*Sand and gravel quarrying company operating subsequent landfilling. 14 sites including Essex (3), Herts (2), Bucks (1). ESA member.*

**SARP UK Ltd**

Tel 01543 452121 Fax 01543 452343

Group Headquarters, Lindon Road, Brownhills, WALSALL, West Mids WS8 7BB

*Integrated chemical waste identification, collection, recycling and disposal, operating from 13 service centres, feeding 11 treatment facilities. Oil reclamation for use as fuel oil. ESA and ORA member. Consultancy on minimising or eliminating waste at source. Specialist activities include high pressure water jetting, tank and drain cleaning and chemical decontamination. Operates 24 hour national chemical emergency incident response.*

**Shanks & McEwan (SWS) Ltd**

Tel 01908 650650 Fax 01908 650699

Head Office, Dunedin House, Mount Farm, Auckland Park, MILTON KEYNES MK1

**1BH**

Email: info@shanks-recycling.co.uk

*Major waste management group which developed from landfills at London Brick Company workings in Beds and North Bucks, and now operates nationwide. Main activities are collection, road and rail haulage, disposal of domestic, commercial and industrial wastes, and operation of major landfill gas waste to energy schemes. Also disposal of special and difficult waste, high temperature incineration of hazardous organic chemicals (via associated company Rechem International), recycling and composting. Expertise and facilities for all categories including liquids and contaminated wastes, via landfill and transfer stations. MRFs include Milton Keynes (Colts Holm Road, Old Wolverton, Milton Keynes, Bucks MK12 5QD (Tel 01908 225000, Fax 01908 225432) and Wilstead Road, Elstow, Bedford MK42 9YU (Tel 01234 327029, Fax 01234 354997). ESA member.*

**SITA**

Tel 01753 662700 Fax 01753 662464

The Pickeridge, Stoke Common Road, Fulmer, BUCKS SL3 6HA

*Waste collection and disposal, including domestic and commercial recycling.*

**TPM Services**

Tel / Fax 01293 413084 Mobile (24 hours) 07836 795835

Email enquiries@thepalletmanservices.com Website www.thepalletmanservices.com

39 Downland Drive, Southgate West, CRAWLEY, West Sussex RH11 8QZ

Contact Simon Hibberd, Managing Director

*Registered waste carrier and recycler, commercial and domestic, in Crawley and surrounding areas. Fleet of drop sided vehicles for any type of waste removal and recycling, 'no job too small or big.' Claims to have 'in 4 months saved over 45 tonnes of wood packaging from landfill, equal to 3000 office desks'. Aims to be cheaper than other services, and offer friendly, helpful advice. Industrial services include 'special' or 'hazardous' waste, and arrangements with the Environment Agency. Commercial customers are asked to separate waste by type (metal, wood, plastic etc). Commercial and domestic fridges and freezers incur an extra charge due to the expense of safe disposal of CFCs. Runs Crawley Waste Exchange (domestic and industrial), including hoovers, dump trucks, cars, horse boxes, wood mulch, ladders and even bicycle sheds, <http://groups.msn.com/CRAWLEYWASTEEXCHANGE/homepage>, <mailto:wastexchange@aol.com>, Tel / Fax as above (see also WasteBook section 120 Materials exchanges (waste exchanges)). Aims to 'show the real worth of things some call scrap!' A non-profit making scheme allowing barter/exchange/sale/donation of anyone's unwanted items. TPM is on Crawley Environmental Forum set up by Crawley Borough Council to encourage residential and industrial communities to live and work in more environmentally sustainable ways. Links on TPM's website to the above and many other initiatives. Hopes to offer a woodwaste shredding facility local to Crawley/Gatwick. Won Crawley Green Business Award 2002 for waste disposal service with emphasis on recycling. Crawley Wastexchange awarded Crawley Green Business Award certificate of merit 2003. (See also sections 40 Metallics, plastic and*

*rubber, 50 Packaging materials, 120 Materials (waste) exchanges, 52 Pallets and cases, and 23 Timber reclamation.* (Updated Jan 2004)

**UK Waste Management Ltd**

Tel 01494 449 944 Fax 01494 537 779

Gate House, Castle Estate, Head Office, Turnpike Road, HIGH WYCOMBE, Bucks  
HP12 3NR

*Fully integrated group. 62 sites throughout UK including four in London and northern home counties. Collection / disposal / treatment of all classes of solid and liquid wastes; operation of landfills, treatment plants, civic amenity sites; MRFs; contaminated land remediation; chemicals collection; special events servicing; industrial cleansing including high pressure jetting and tank cleaning; composting; waste auditing and minimisation consultancy. ESA member.*