

6. Reducing use of disposable nappies. Better participation gained by increased education through literature and talks to interest groups.

7. Tyseley Energy from Waste (EfW) plant residual, combustible waste incinerated with energy recovery. Inform local community about contribution of EfW plant to energy recovery.

Options for waste management at local business level:

- "Green" purchasing and stock policies, minimise packaging waste, reduce disposable and non-returnable goods.
- Re-usable packaging for transportation and storage.
- Discarded office furniture and IT equipment to recycling schemes

Source separation of commercial/industrial waste should complement and support BCC's trade waste collection arrangements.

LEGISLATION

Batteries EU Directive 91/157/EEC Reduce heavy metals, ensure separate collection of single use/rechargeable cells for recovery/disposal. Draft directive sets new collection/recycling targets, requires batteries easily removed from appliances.

The Waste Electrical and Electronic Equipment (WEEE) Directive (2002/96/EC) Requirements will come into force in late 2004/05/06

FURTHER SOURCES OF INFORMATION

www.wrap.org.uk, Waste Resources and Action Programme

www.defra.gov.uk, The Government's Recycle Now Campaign.

Latest statistics on municipal waste in England,

www.defra.gov.uk/environment/statistics/wastats/index.htm

www.urbanmines.org.uk, environmental charity finding innovative solutions for waste materials.

ECT: www.ectgroup.co.uk

Community Recycling Network: www.crn.org.uk

www.Letsrecycle.com latest news and info from the recycling and waste sector.

The Long Now Foundation www.longnow.org

www.wastewatch.org.uk information on reducing, reusing and recycling

Composting Association www.compost.org.uk

National Recycling Forum database of recycled products

www.nrf.org.uk/buy-recycled

Computer Aid International-refurbishes used computers for schools/community organisations in the developing world www.computer-aid.org

Oxfam- mobile phone recycling scheme www.oxfam.org.uk/mobile

www.recycle-more.co.uk how to increase recycling rates in home school or office

www.rethinkrubbish.com

<http://firstsupply.co.uk/nisp/>, AWM's NISP project, Industrial Symbiosis identifies and uses synergies and linkages between cooperating industries to improve resource efficiency and minimise waste.

Community Transport Birmingham collect furniture for recycling.

Birmingham@communitytransport.org

Contact John Brighton Tel: 0121 771 1520

Ladywood furniture recycling project:

48 Eyre Street, Bham B18 7AA, T: 0121 455 7133

Enviroinnovate <http://www.tic-online.com/enviroinnovate/index.asp>, Business Support for new product development, including recycling.

Run A Muk Community Composting (CSV), Birmingham. collecting, processing, composting green garden waste. www.csv.org.uk

Local paper for London

http://www.bioregional.com/programme_projects/pap_fibres_prog/lp4london/londonpaper

Buildings & Demolition Waste www.birmingham.gov.uk, BCC building control

Natural Building Technologies: www.natural-building.co.uk: building materials from renewable sources and waste materials

www.bre.co.uk, research, good practice in recycling construction and demolition waste, see also, BREMap, and Smartwaste.

Contact James Hubery and Katherine Adams T: 01923 664000

C&D Waste Contractors

Coleman & Co (Plant Hire) Ltd

43-49, Station Rd, Stechford, Birmingham, West Midlands B33 9AX

Tel: 0121 783 2583

City Demolition Contractors (Birmingham) Ltd

Blews St, Aston, Birmingham, West Midlands B6 4EP Tel: 0121 333 7999

TRAINING

Groundwork's Practical Environmental Management (PEMs) and the Bridge-IT Programme.

<http://www.groundwork.org.uk/birmingham/ebs/index.html>

For further information contact

Eastside Sustainability Advisor

t: 0121 464 0900 f: 0121 464 0899

www.birmingham-sustainablebuildings.org

Study commissioned by Groundwork Birmingham + Solihull and undertaken by Robert Long Consultancy Ltd.

Sustainable Eastside

Advice Note No.7

Successful Waste Management Strategy for Eastside

All materials have an inherent value (embodied energy from their manufacture) and potential for reuse, recycling or recovery of energy.

Reduce-Reuse-Recycle



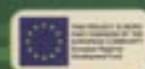
Waste Minimisation During Construction & Demolition

Crushing and screening concrete, brick etc as secondary aggregate, separation of structural steel and timber for recycling



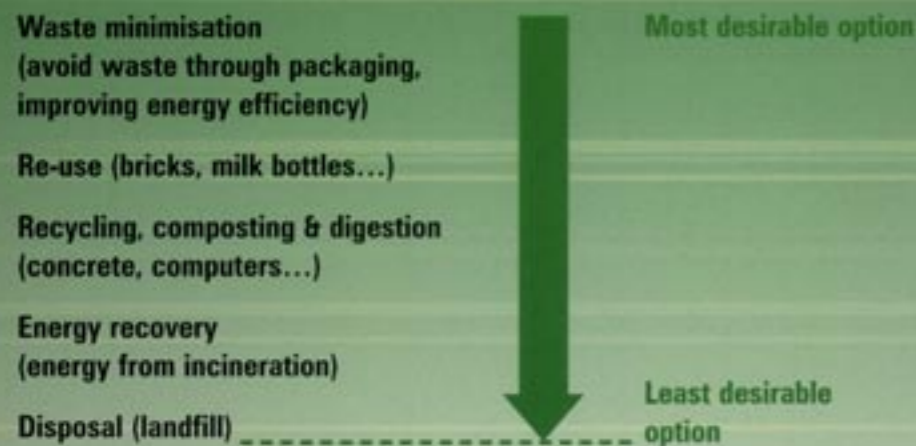
Waste management at household/community level

Waste materials should be separated at source. Separate wood, cardboard, paper, cans, glass, plastic bottles and compostables (food and green waste) into clearly labelled containers.



Waste Hierarchy

Minimising waste through a basic decision making process which leads to the adoption of preferred management options significant to local circumstances, it should be applied flexibly.



Successful Waste Management Strategy for Eastside

- Well planned to identify key management issues at various stages of regeneration.
- Regard to EU Directives, UK Legislation, Eastside Planning Guidance, Eastside Sustainability Action Plan and Best Value Performance Indicators.

Roles Involved in Successful Waste Management Strategy

Sustainable Eastside seeks to develop a successful waste strategy involving all stakeholders.

- Birmingham City Council, Eastside.
- The Development "Sector"
- Groundwork Birmingham & Solihull
- Community (businesses and residents)

POSITIVE BENEFITS

- Reduced or nil waste disposal costs £s saved through recycling.
- Efficient, prudent use of natural resources in line with Government Policy on Sustainable Development.
- Positive environmental enhancement -reduced litter, cleaner environment.
- Properly planned facilities to reduce pollution and nuisance.
- More recycling activities and facilities, which are locally based - creating jobs.
- Exemption from landfill taxes as waste is recycled.
- Reduced transport of waste and materials reducing pollution and improving air quality.
- Meeting Government targets on recycling household/commercial waste.
- Excellent environmental ratings for businesses, improving performance for shareholders, creating a green image, good PR and CSR.

Overall Businesses and the Community get benefits back from recycling.

Options & Opportunities in Eastside

Physical redevelopment in Eastside will create substantial demand for services in:

- Recycling construction & demolition waste
- Facilities for waste handling and processing in post-regeneration phase
- Designing recycling facilities into developments

Waste Management During Regeneration Demolition of Existing Structures

Standard business practice in construction and demolition industry to reclaim and recycle materials rather than pay increasing landfill tax charges for waste disposal. C&D waste produced from clearance of Masshouse flyover reclaimed and reused at source to construct new site levels, ensuring no transport of waste, less pollution, CO2 savings from reduced emissions and massive savings on unquarried raw materials.

Hierarchy for demolition materials



Demolition contracts effective separation during demolition with penalties for not complying. Re-use of materials needs to be a clear objective. Demand will encourage supply, supply without demand is not sustainable.

Method Statements auditable for recovery/recycling, proposals to survey materials prior to demolition and proposals for dealing with hazardous materials e.g. asbestos.

Construction Phase

Eastside and partners inc Groundwork hold ideal roles to encourage reuse of materials locally. Specification and reuse of materials needs to be recognised in architectural specifications, design and construction contracts and appropriate standards met. Waste minimisation will be improved with co-ordination and leadership based on coherent strategy.

Eastside and Groundwork can access networks with businesses to establish new routes for reusing materials. RMC in nearby Aston use crushed glass bottles in road surfacing materials

Option to transport C&D waste by the extensive network of canals from Eastside; loading facility near Bordesley Circus with HGV access.

Post –development

Eastside's developments will include mixed-use elements of residential, retail, offices, leisure, food establishments and educational elements.

Options for waste management at household/community level:

Need adequate facilities in homes and offices.

1. **Building Integrated Recycling:** designing recycling facilities and waste sorting into buildings. In apartments or offices separate storage areas and waste chutes, segregate recyclables and different wastes at source. See www.bedzed.org.uk

2. **Kerbside Collections:** frequent, convenient collections of separated materials encourage participation. Recycling facilities and networks combined with kerbside collection enable all residents to recycle paper, glass, metals, plastic bottles, textiles and cardboard.

Household Waste Recycling Act, BCC to separately collect at least two materials from kerbside for recycling. Eastside must be compatible with city-wide collection strategy.

Brumcan, Birmingham. www.brumcan.co.uk Set up 1991, not-for-profit, advance recycling, improve physical environment of Birmingham. Doorstep collections recycling cans, paper, cardboard, clothes. Serves 16,000 households around Nechells.

3. **Bring sites:** small-scale facilities e.g. supermarkets for deposition of recyclable materials. Needed on university campus so students can deposit separated waste.



Underground glass recycling container (Dordrecht)

Netherlands; Netwerk's Dordrecht Underground-recycling containers - serves 120,000 people, collects 66,700 tonnes pa household waste, 40% recycled/composted. Unobtrusive design, containers ensure quiet glass collection. Accept commercial waste, can be situated in mixed-use developments; automated collection system works in less than two minutes and can be operated by one person.

4. **Green Waste Composting:** Manage waste from city centre park, arboricultural waste from redeveloped streets and source-separated biodegradable waste, (vegetable and plant). Compost from households/businesses could be used in mixed-use sites, communal and open spaces for parks and street landscaping.

Wormeries: digest biodegradable waste, produce no odour and pure compost; used on commercial/industrial scales in the USA and Japan.

5. **Household Waste Recycling Centres (Civic Amenity Sites)** recycle waste materials not collected from kerbside. Sites with re-use systems achieve higher recycling rates. 1-2 may be appropriate for Eastside. Could be open to Eastside traders/businesses, all other commercial users charged. Social enterprises operate recycling schemes in/around Eastside, recycle furniture, clothing, textiles, unused PC's.