Total waste management
Best practice advice on local waste management for the NHS in England

2004

STATUS IN WALES

INFORMATION
Total waste management (TWM) explains how the NHS can develop and implement effective waste management in line with risk management procedures and legislative requirements. By adopting a TWM approach, by preventing and reducing waste, the NHS can save money and reduce the environmental impact of its operations.
Foreword

This document sets out a vision. It also sets a challenge, by tasking the NHS to be pro-active. To lead the way in tackling waste – to refuse to accept that waste is just a by-product that we can do nothing about. We can do something about it.

Waste is a particular issue for the NHS, which has to contain, move, and pay to dispose of all the waste it produces. The money spent by the NHS to dispose of waste is millions of pounds. If we can be as efficient as possible, we can release some of that money and use it to improve the environment for care, to improve facilities and develop new services.

The NHS provides essential healthcare. Waste is often an inevitable outcome of providing our services and facilities. It is also a cost. The NHS in England spends, on average, some £50 million per year on waste disposal.

This document aims to help the NHS reduce that waste mountain. By introducing performance indicators and a benchmarking process, we aim to show that waste prevention and reduction can be achieved, and importantly, that significant savings will result.

It is intended to assist in addressing the issues, and provides recommendations to help us all work together to achieve the end result of a better, more efficient NHS.

Through the White Paper Waste Strategy 2000, and the more recent ‘Waste not, Want not – a strategy for tackling the waste problem in England’ (November 2002), the Government will continue to monitor progress towards waste prevention and reduction targets. NHS Estates, working in partnership with NHS Purchasing and Supply Agency (PASA), aims to help the Government deliver this agenda. Our aim with this document is to provide a framework within which the NHS, in partnership with other waste producers and the private sector, can plan long-term investment decisions with greater certainty, enabling the NHS and others to meet the challenges ahead.

PETER WEARMOUTH
Chief Executive
The NHS can save money and reduce the environmental impact of its operations by focusing on waste management – primarily waste prevention, re-use and recycling – rather than waste disposal. Savings generated can be reinvested in patient care and the potentially polluting effects of waste disposal will be reduced.

Trusts need to have local waste management strategies in place. This is already a recommendation under ‘Sustainable development: Environmental Strategy for the NHS’ (NHS Estates) and the Corporate Governance: Controls Assurance risk management process. Furthermore, the NHS, as a waste producer, has a legal responsibility to properly manage waste, including its disposal.

This document offers best practice advice on the development and implementation of local waste management strategies in line with risk management procedures.

It has been drawn up with input from the NHS Purchasing and Supply Agency (NHS PASA) and waste contractors and with the support of the Department for Environment, Food and Rural Affairs (Defra) and the Environment Agency (EA).

Key recommendations include:

- use of **key performance indicators** (KPIs) as a benchmark for waste management;
- use of **total waste management contracts** at local level, covering the segregation, recycling and disposal of waste, preferably with one contractor;
- creation of **waste consortium groups** comprising a number of trusts;
- a **designated waste manager** at trust or consortium level;
- **effective waste disposal contingency planning**;
- development and implementation of periodic **audit, monitor and review procedures**.

As a nation, we cannot continue sending current levels of domestic waste to landfill. The south-east of England is already running out of potential landfill sites and, under the Landfill Directive, it is becoming more difficult to obtain licences for new sites. Meanwhile, increasingly stringent emission regulations are pushing up the cost of incineration.

Over 50% of waste sent to landfill in the UK could be recycled (source: ‘Waste not, want not – A strategy for tackling the waste problem in England’). Trusts are advised to:

- adopt **green procurement policies** to increase the use of recycled products and products with minimal packaging;
- introduce proper **waste segregation procedures** to increase opportunities for waste re-use and recycling.

It is essential to achieve “ownership” of the waste management agenda at chief executive/Board level as well as commitment from other staff. Waste training and awareness programmes also determine change and the pace of change.

To supply feedback on this document, contact Lorraine Brayford at NHS Estates, 1 Trevelyan Square, Boar Lane, Leeds LS1 6AE, telephone 0113 254 7040, or e-mail: lorraine.brayford@dh.gsi.gov.uk
1 Scope of this document

1.1 This document aims to improve waste management within the NHS, particularly waste reduction. It draws attention to the increasing legislation surrounding waste handling and disposal.

1.2 There is a recognised hierarchy of measures for reducing waste (see diagram below). Trusts should aim to achieve action as high up the hierarchy as possible. In other words, waste prevention should be top priority, followed by re-use and then recycling of waste (50% of waste sent to landfills in the UK could be recycled) etc.

1.3 This document provides best practice advice on the development and implementation of local waste management strategies. It recommends that trusts move towards contracts for “total waste management” covering segregation, recycling and disposal of waste, preferably with a single contractor. It also suggests the use of key performance indicators (KPIs) as a benchmark for waste management.

1.4 It is aimed at:
- Strategic Health Authorities (SHAs);
- Chief Executives and Board members of NHS trusts;
- directors of estates and facilities management;
- waste managers and those who have waste management as part of their responsibilities;
- waste contractors;
- foundation trusts.

Source: Murray, R, ‘Creating Wealth from Waste’ – from work by Merrill Lynch
2 Waste management – Why does it matter to the NHS?

2.1 This chapter explains why it is essential for NHS trusts to adopt effective waste management strategies and describes the policy and legal drivers for ensuring this happens.

GOVERNMENT POLICY ON WASTE MANAGEMENT


2.3 According to ‘Waste not, want not’: “England is behind most other developed countries when it comes to waste management – we produce more waste per head and recycle less . . . Currently, almost 80% of municipal waste in England is sent to landfill sites, compared with 50% in France and 7% in Switzerland. England recycles just 12% of its municipal waste, while Germany recycles 52% and the Netherlands 47%.”

2.4 NHS trusts can contribute to the national targets for waste that the Government has set for local authorities.

2.5 Under ‘Sustainable development: Environmental Strategy for the NHS’ (NHS Estates) the NHS is advised to produce local strategies for waste management (as well as energy, transport, water and procurement).

2.6 Trusts are also obliged to comply with the ‘Standards for Better Health’, which cover waste management as a core standard.

THE WASTE PROBLEM IN THE NHS IN ENGLAND

2.7 The NHS in England generates around 356,700 tonnes of waste per annum (104,700 clinical waste, 247,700 domestic waste and 4300 special waste) at a disposal cost of approximately £48.4 million (Source: Estates Returns Information Collection (ERIC) for 2001/2002*).

TABLE 2.1: NHS IN ENGLAND – WASTE GENERATED

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical waste</td>
<td>100,200</td>
<td>101,200</td>
<td>104,700</td>
</tr>
<tr>
<td>Domestic waste</td>
<td>146,200</td>
<td>148,500</td>
<td>247,700</td>
</tr>
</tbody>
</table>

Source: ERIC

2.8 Table 2.1 shows that waste production by the NHS has increased since 1999. Some of this increase may be due to the increased size of the NHS estate, increased patient care activity and throughput, and increased use of single-use equipment. However, the level of increase is still excessive and has serious implications for the NHS and public health.

KEY DRivers FOR REDUCING WASTE IN THE NHS

2.9 These include:

- to reduce the environmental impact of NHS operations;
- to improve healthcare opportunities;
- to save money;
- to release valuable resources that could be redirected to patient care;
- the declining availability of landfill sites;
- public opposition to waste disposal;
- increased difficulty in obtaining new licences for waste disposal sites.

LEGAL REQUIREMENTS

2.10 The NHS, as a waste producer, has a legal responsibility to properly manage waste and reduce environmental impacts as a result of waste production and disposal.

* This data excludes construction/demolition waste as a result of the NHS build/rationalisation programme
2.11 The Environmental Protection Act 1990 and Environmental Protection (Duty of Care) Regulations 1991 impose legal “duty of care” requirements on waste producers, such as the NHS, to ensure the appropriate safe handling and disposal/treatment of waste. An explanation of “duty of care” is provided at http://www.nhsestates.gov.uk/sustainable-development/index.asp.

Changes to legislation

2.12 It is now possible for GPs to prescribe sharps bins. Legislation surrounding the disposal of sharps bins is available at http://www.nhsestates.gov.uk/sustainable-development/index.asp.

Forthcoming legislation

2.13 Trusts should also bear in mind forthcoming legislative changes. For example, the EU Landfill Directive requires the UK to reduce the volume of biodegradable municipal waste sent to landfill by 2010, with further reductions in 2013 and 2020. Failure to meet these targets could result in fines for the Government of up to £180 million per year (source: ‘Waste not, want not’).


2.15 It is essential that NHS trusts are aware of all their legal responsibilities as waste producers. A list of the principal legislation that affects waste management and disposal is provided in Appendix 1.
3.1 This chapter considers the operational issues in the management of waste at trust level. It outlines the need for stakeholder involvement/participation and examines practical ways in which waste can be reduced.

3.2 All NHS trusts produce waste to a greater or lesser extent. Most trusts produce the following:

- clinical (yellow bag) waste;
- domestic (black bag) waste;
- special waste;
- radioactive waste;
- other waste.

3.3 All trusts have the ability to prevent and reduce waste in line with requirements to assess risk and undertake control of infection regimes.

Example of a trust that has successfully introduced waste management and reduction: Guys & St Thomas’ Hospital NHS Trust saved £71,000 in one year alone (see Appendix 2 for details).

CONDITIONS FOR ENSURING EFFECTIVE WASTE MANAGEMENT

3.4 To effectively manage and reduce waste it is recommended that NHS trusts have the following:

- a documented waste management policy and strategy (see http://www.nhsestates.gov.uk/sustainable-development/index.asp for example document);
- a waste “champion” at senior/board level;
- a designated waste manager with responsibility for making progress and effecting change (as Appendix 2 shows, such a postholder can help trusts generate significant savings);
- short-term waste disposal contracts that specify options for recycling and reducing waste;
- effective staff training and awareness programmes;
- accurate data on waste as a basis for monitoring and reviewing progress;
- adequate risk assessment processes;
- good relationships with their suppliers and the waste industry;
- an understanding of the environment impacts of waste disposal.

3.5 Consideration should be given to moving towards contracts for “total waste management”, that is, covering the segregation, recycling and disposal of waste. Ideally the contract should cover all waste streams and should be with a single contractor (who would sub-contract as necessary). This will be more efficient and less time-consuming than tendering for, and monitoring, three or more separate waste disposal contractors.

3.6 Trusts should also consider the option of forming a consortium when contracting out waste procurement/disposal services. This will bring down the cost for individual trusts and may provide a sufficient financial return to the contractor to encourage investment in recovery facilities.

STAKEHOLDER INVOLVEMENT/PARTICIPATION

3.7 Preventing, reducing and recycling waste may prove difficult to do in isolation. NHS trusts need to work in partnership with other stakeholders to effect change and the pace of change.

3.8 Currently, NHS-owned facilities are only able to dispose of around 8% of their total waste load. The waste industry is essential to provide this function. The way forward has to be achieved in a spirit of co-operation and support towards a common goal.

3.9 Trusts should work with NHS PASA and local suppliers to explore opportunities for reducing packaging waste, for example using more recycled materials or reducing the amount of packaging employed in the first place. This will benefit suppliers affected by the Packaging Waste Regulations.

3.10 They should work in partnership with waste contractors to develop innovative methods of waste prevention and reduction. This should not affect the waste industry’s ability to continue to provide and maintain services.
3.11 Building contractors working on site should be responsible for their own waste, and made aware of the expectation that they should abide by the trust’s waste reduction policy.

3.12 Trusts should also consider the advantages of forming consortium groups for disposal of waste. This includes increasing the opportunity for recycling waste and keeping costs down.

3.13 Local authorities have a stakeholder interest in ensuring the NHS is actively involved in waste prevention and reduction to contribute to the national waste reduction targets (described in ‘Waste Strategy 2000’ and ‘Waste not, want not’).

3.14 Table 3.1 gives a quick checklist identifying some aspects of stakeholder involvement that can be pursued. Appendix 3 provides more information.

### TABLE 3.1: STAKEHOLDER INVOLVEMENT

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff – all levels</td>
<td>Gain commitment and understanding of the reasons for preventing and reducing waste – no ownership, no progress</td>
</tr>
<tr>
<td>Waste contractors</td>
<td>What can they do to support your strategies and action plans? Can they suggest how waste can be minimised? Can they diversify to offer recycling services? Can they provide training?</td>
</tr>
<tr>
<td>Local community</td>
<td>Share information on what you are trying to achieve, and get support. Can you make use of volunteers? What about tapping into local community initiatives for waste recycling? Local supermarkets offer recycling collection points – is there an opportunity for sharing?</td>
</tr>
<tr>
<td>Local schools</td>
<td>Are children educated in the need for, and benefits of, waste prevention and reduction? It is surprising how children can influence! Also, what they learn they take into the home and ultimately into the workplace</td>
</tr>
<tr>
<td>Patients</td>
<td>Raise awareness among patients about the benefits of waste prevention and reduction. Also educate them on appropriate places for depositing waste, for example clean newspapers do not go in clinical waste sacks</td>
</tr>
<tr>
<td>Visitors</td>
<td>Raise awareness among visitors about the benefits of waste prevention and reduction. Also educate them on appropriate places for depositing waste, for example flowers do not go in clinical waste sacks</td>
</tr>
</tbody>
</table>

### CHECKLIST FOR WORKING WITH STAKEHOLDERS

- Work with NHS PASA to identify and implement waste prevention/reduction opportunities
- Work with waste contractors to identify and implement waste recycling/reduction opportunities
- Work with building contractors and service providers to reduce construction-site waste
- Consider potential benefits from joining together into waste consortia

### STEPS FOR REDUCING WASTE

3.15 There are four steps to waste reduction:
- waste prevention;
- waste segregation;
- waste re-use;
- waste recycling.

3.16 The overall strategy should be one of waste prevention and reduction. Waste disposal should be the final option once other avenues have been explored.

3.17 Trusts should aim for quick hits in the first instance, such as:
- partnering with local authorities and “piggybacking” on their initiatives to reduce waste;
- purchasing “green” (recycled) products;
- introducing a “suggestions box” to get staff on board;
- introducing staff awareness campaigns with reward/incentive schemes;
- devolving responsibility and accountability to ward/department level;
- encouraging correct segregation of waste by appropriate siting of clinical waste bins and domestic waste bins.

3.18 Before attempting to reduce waste, trusts should know the current levels of waste generated and associated disposal costs.

3.19 They need to identify initial resources/cash injection (including the potential for reorganising existing resources) to put procedures and equipment in place to achieve long-term benefits and savings.
Waste prevention

3.20 Stop waste arising in the first instance. Avoided waste reduces handling, reduces risks, reduces storage, and reduces the cost of disposal. NHS Estates has produced some helpful guidance on waste prevention (see Appendix 4 for details).

3.21 One of the most effective ways to prevent and reduce waste is to consume less. This should be reflected in purchasing decisions.

3.22 NHS PASA has produced guidance on environmental purchasing (see also Appendix 4). Purchasing decisions can have a double benefit. The recycling market can only develop if decisions are made to purchase items made from recycled materials instead of specifying virgin materials.

THE FOUR Rs

Recovery = Re-use + Recycling = Reduction

3.23 It is not possible to consider the four Rs without first introducing effective, thorough waste segregation.

Waste segregation

3.24 Segregation of waste into appropriate streams is key to identifying re-use and recycling opportunities, for example for cardboard, paper, glass, furniture, toner cartridges, plastics, computers and some metals etc.

3.25 It is also essential for the safe and secure handling of waste in line with health and safety at work and risk assessment requirements.

3.26 NHS trusts that have effective segregation procedures have found a remarkable reduction in accidents and incidents, for example needle-stick injuries, leading to reduced compensation payments and less staff time off work. Further information on risk management is given in Appendix 5.

3.27 Research shows that around 40–50% of waste found in clinical waste bags is domestic waste. As it costs, on average, £375 per tonne to dispose of clinical waste compared with £80 per tonne for domestic waste disposal, it makes financial sense to segregate properly.

3.28 Before effective segregation procedures can be implemented, trusts must ensure that clinical waste management complies with their policy on the safe handling and disposal of waste in accordance with legislation and best practice requirements.

3.29 An example of a local clinical waste disposal procedure within a total waste management regime is available at http://www.nhsestates.gov.uk/sustainable-development/index.asp.

Waste re-use

3.30 Stop and think! Must this waste be thrown away? Can it be used again?

3.31 Magazines and journals, even newspapers discarded by visitors or staff, can be placed in a waiting area for others to derive benefit from.

3.32 Single-use items: Do they really need to be single-use?

3.33 Life-cycle analysis is proving that there can be advantages with re-usable items in terms of:
- reduced life-cycle cost;
- improved durability;
- reduced disposal cost;
- reduced demand on raw materials;
- energy savings and reduced pollution;
- reduced demand on landfill;
- building understanding of environmental issues.

Waste recycling

3.34 There are a number of advantages to recycling:
- some recycling is low cost/no cost, and some generates income;
- collection at nil cost saves the cost of domestic waste disposal;
- reduced demand on raw materials;
- energy savings and reduced pollution;
- reduced demand on landfill;
- builds understanding of environmental issues;
- creates individual responsibility for waste.

3.35 However, there are also some potential disadvantages:
- transport costs for moving waste;
- storage space may be required;
- staff training and co-operation are essential;
- not all waste can be recycled;
- control of infection/decontamination issues have to be assessed;
- fear of prosecution if waste is mismanaged.
CHECKLIST FOR REDUCING WASTE

Move away from a culture of waste disposal to one of waste prevention and reduction.

Purchase recycled materials wherever possible.

Implement waste segregation measures to identify and open up re-use and recycling opportunities.

Implement staff induction training and awareness sessions.

Incorporate waste storage facilities into designs for new healthcare facilities.
4 Overall checklist for waste reduction and management

### 4.1 This section sets out an overall checklist for helping to manage and reduce waste.

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>AIM</th>
<th>SOURCE OF INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment/ownership</td>
<td>Gain commitment to waste management agenda at chief executive/Board level and ownership at all levels</td>
<td>• ‘New Environmental Strategy for the NHS’, NHS Estates</td>
</tr>
</tbody>
</table>
| Waste manager              | To have a designated waste manager with the appropriate qualifications and power to be effective. Responsible for producing and implementing the waste strategy and action plan. Someone to raise issues at CE/Board level and act as a “champion” to ensure waste reduction and cost savings | • NHS Estates website (http://www.nhsestates.gov.uk/sustainable-development/index.asp; for job description of waste manager)  
• Waste Industry Training and Advisory Board (WAMITAB) |
| Legal requirements         | Understand your legal “duty of care” responsibilities. Avoid prosecution by the Environment Agency | • NHS Estates website (http://www.nhsestates.gov.uk/sustainable-development/index.asp; for explanation of “duty of care” responsibilities)  
• Appendix 1 (for legislation) |
| Waste handling and transportation | To ensure the safe and secure handling and transportation of waste | • Appendix 1 (for legislation) |
| Segregation                | To effectively segregate selected items for recycling. To reduce costs by removing domestic waste from the clinical waste stream | • HTM 2065 ‘Healthcare waste management – segregation of waste streams in clinical areas’  
• ‘Safe Disposal of Clinical Waste’, Health & Safety Commission |
| Training                   | To effectively train all staff in waste management/reduction. To carry out induction training and periodic review. To devolve responsibility for waste management at ward/department level | • Waste Industry Training and Advisory Board (WAMITAB)                                |
| Communications             | To communicate with patients, visitors, contractors and suppliers so they can contribute to effective waste management | • Appendix 3 (for information on stakeholder involvement)                               |
| Waste contracts            | To have effective and efficient waste contracts. To minimise the distance that waste is transported. To have contingency plans for waste disposal in place | • Appendix 4 (for useful guidance from NHS Estates and NHS PASA)  
• Appendix 6 (for guidance on contingency planning) |
| Equipment                  | To have the right equipment in the right place. To ensure it meets legal requirements. To ensure it is well-maintained, clean, safe and secure | • NHS PASA                                                                 |
| Waste minimisation         | To ensure only waste items are disposed of | • ‘Healthcare waste minimisation – a compendium of good practice’, NHS Estates |
| Waste prevention           | To save money by preventing waste arising in the first place. To reduce the amount of packaging you consume | • Waste Prevention Guide, NHS Estates  
• Waste Prevention Screening Tool, NHS Estates  
• ‘Sustainable development in the NHS’, NHS Estates |
| Monitor, audit and review  | To regularly monitor your waste management processes and periodically review your policies/procedures | • Estates Returns Information Collection System (ERIC), NHS Estates  
• NHS Environmental Assessment Tool (NEAT), NHS Estates |
| Obstacles                  | To identify obstacles to success. This could be staff lethargy, wrong equipment, lack of appropriate job-related training, lack of information | |
5.1 This chapter summarises the key recommendations for waste reduction and effective waste management in the NHS in England. The recommendations are of equal importance.

KEY PERFORMANCE INDICATORS

5.2 Recommendation: NHS trusts should use key performance indicators (KPIs) as a benchmark for waste management.

Let us assume that the NHS reduces its waste production by 20% – by a number of trusts moving from lower quartile to median figures, and others moving into the upper quartile.

If we assume the NHS in England currently generates 250,000 tonnes of waste per annum, this would mean a reduction of 50,000 tonnes. This could be a mixture of prevented, re-used and recycled waste.

If the 50,000 tonnes were made up of domestic waste and clinical waste, this would result in savings of £4–10 million.

LOCAL WASTE STRATEGY

5.3 Recommendation: NHS trusts should produce local waste management strategies. They should be agreed at chief executive/Board level and be in line with the ‘Sustainable development: Environmental Strategy for the NHS’ and ‘Standards for Better Health’ core standard on waste.

5.4 Strategies should identify opportunities for waste prevention, re-use, and recycling. They need to be realistic yet challenging if real progress is to be achieved. (An example of waste management policy and strategy document is available at http://www.nhsestates.gov.uk/sustainable-development/index.asp.)

WASTE – KEY PERFORMANCE INDICATORS

**DOMESTIC WASTE**

<table>
<thead>
<tr>
<th>NHS FACILITY</th>
<th>kg/m² Median</th>
<th>kg/m² Upper quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>6.53</td>
<td>4.83</td>
</tr>
<tr>
<td>Teaching</td>
<td>6.63</td>
<td>5.53</td>
</tr>
<tr>
<td>Specialist</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Mental health</td>
<td>7.5</td>
<td>5</td>
</tr>
<tr>
<td>Multi-service</td>
<td>6.47</td>
<td>5.23</td>
</tr>
<tr>
<td>Community</td>
<td>8.1</td>
<td>4.6</td>
</tr>
<tr>
<td>PCT</td>
<td>8.25</td>
<td>5.05</td>
</tr>
<tr>
<td>Ambulance</td>
<td>7.2</td>
<td>3.7</td>
</tr>
</tbody>
</table>

**CLINICAL WASTE**

<table>
<thead>
<tr>
<th>NHS Facility</th>
<th>kg/avail bed (M)</th>
<th>kg/avail bed (UQ)</th>
<th>kg/occ bed (M)</th>
<th>kg/occ bed (UQ)</th>
<th>kg/bed day (M)</th>
<th>kg/bed day (UQ)</th>
<th>kg/FCE* (M)</th>
<th>kg/FCE* (UQ)</th>
<th>kg/m² (M)</th>
<th>kg/m² (UQ)</th>
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<tbody>
<tr>
<td>Acute</td>
<td>593</td>
<td>502</td>
<td>710</td>
<td>606</td>
<td>2</td>
<td>1.7</td>
<td>6.4</td>
<td>5.3</td>
<td>5.23</td>
<td>4.33</td>
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<td>11.1</td>
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<td>Specialist</td>
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<td>1119</td>
<td>950</td>
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<td>Mental health</td>
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</tr>
<tr>
<td>Ambulance</td>
<td>–</td>
<td>–</td>
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<td>–</td>
<td>–</td>
<td>–</td>
<td>0.37</td>
<td>0.13</td>
</tr>
</tbody>
</table>

* FCE – Finished Consultant Episode
TOTAL WASTE MANAGEMENT CONTRACTS

5.5 Recommendation: NHS trusts should consider the potential benefits of moving to a contract for total waste management at local level.

5.6 A total waste management solution will encompass the segregation, recycling and disposal opportunities for clinical, domestic and special waste. It will monitor all waste streams and encompass a series of well-managed and continually improving partnership contract(s) between the trust(s) and contractor(s).

5.7 Contracts should ensure value for money and quality control through performance monitoring.

TOTAL WASTE MANAGEMENT CONTRACT REVIEWS/PERFORMANCE

5.8 Recommendation: Once a total waste management contract is in place, regular reviews (at least quarterly) should be undertaken with the contractor(s). This will enable the trust/consortium to ensure that the contractor(s) are maintaining agreed service and quality levels.

5.9 NHS PASA has produced an “invitation to offer” evaluation sheet. All parties should actively pursue a continuous improvement programme. Review meetings should involve the waste manager and other personnel at the trust/consortium connected with waste.

5.10 To enable the trust/consortium to challenge the contractor(s) on any non-compliance and give them feedback on their performance, the trust/consortium should complete a contractor evaluation form. This requires the trust/consortium to maintain formal evaluation records and have good channels of communication between various departments/functions.

NHS WASTE CONSORTIUM GROUPS

5.11 Recommendation: NHS trusts should join together into consortia, probably on a geographical basis.

5.12 Economies of scale will bring down the processing cost for individual trusts. As one trust will usually take the lead role in the consortium, this often results in more effective management of the process. There is also the opportunity for trusts to invest capital in dedicated facilities for a consortium.

5.13 Further details can be found in the NHS PASA procurement guide (see Appendix 4).

5.14 There are a number of successful consortium groups operating within England.

DESIGNATED WASTE MANAGER

5.15 Recommendation: Designate a waste manager to “champion” and manage waste at either trust or consortium level. (A sample job description is available at http://www.nhsestates.gov.uk/sustainable-development/index.asp.)

5.16 The designated manager should be responsible for producing waste management strategies and action planning.

5.17 The waste manager should:

- implement effective and periodic staff training and awareness sessions appropriate to the needs of staff;
- look after the interests of the trust/consortium and monitor waste contracts;
- ensure that the trust/consortium acts in a legal, responsible manner in compliance with “duty of care” requirements encompassed in legislation and regulations.

5.18 An effective waste manager will be instrumental in achieving waste reductions and containing costs for the trust/consortium.

WASTE DISPOSAL CONTINGENCY PLANNING

5.19 Recommendation: Undertake waste disposal contingency planning at trust/consortium and waste contractor level.

5.20 How are waste contractors to dispose of waste if they experience plant failure? How will the trust/consortium dispose of its waste if the waste contractor fails to collect the waste for whatever reason?

5.21 A checklist for contingency planning is provided in Appendix 6.

“GREEN” PURCHASING POLICY

5.22 Recommendation: Adopt a “green” purchasing policy designed to reduce waste. Talk to suppliers to reduce packaging waste, where feasible; buy on a new-for-old basis; buy products that can be recycled; buy products that are made from recycled rather than virgin materials etc.

5.23 See NHS PASA environmental purchasing guidance for further information (Appendix 4).

AUDIT, MONITOR AND REVIEW

5.24 Recommendation: Periodically, undertake a performance audit in order to monitor and review the waste contract and in-house waste management procedures.
ACTIONS FOR DELIVERY OF RECOMMENDATIONS

Ensure chief executive/board level responsibility for waste.

Designate a waste manager.

Produce a local waste management strategy.

Introduce contracts for total waste management solutions at local level.

Participate in consortium arrangements for waste management.

Undertake waste disposal contingency planning.

Comply with ‘Standards for Better Health’ core standard on waste.

Comply with ‘Sustainable development: Environmental Strategy for the NHS’ for waste.

Implement training and awareness procedures.

Audit, monitor and review on a six-monthly basis.
## Appendix 1 – Legislation

### Acts and Regulations

<table>
<thead>
<tr>
<th>Act/Regulation</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health and Safety at Work etc Act 1974</td>
<td></td>
</tr>
<tr>
<td>Ionising Radiation Regulations 1985 (SI 1985/1333)</td>
<td></td>
</tr>
<tr>
<td>Medicines Act 1968 sections 58 &amp; 130</td>
<td></td>
</tr>
<tr>
<td>Misuse of Drugs Regulations 1973 (SI 1973/797)</td>
<td></td>
</tr>
<tr>
<td>NHS trusts have producer obligations where they supply services to others that amount to a business turnover of more than £2 m or 50 tonnes of packaging waste per annum (for example CSSD (Centralised Sterile Services Department) or pharmacy services).</td>
<td><a href="http://www.defra.gov.uk/news/2003/031120a.htm">http://www.defra.gov.uk/news/2003/031120a.htm</a> (for information on packaging waste recovery and recycling targets for 2004–2008) <a href="http://www.letsrecycle.com/legislation/packaging_waste.jsp">http://www.letsrecycle.com/legislation/packaging_waste.jsp</a> (for information on packaging waste legislation)</td>
</tr>
</tbody>
</table>
Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (SI 1995/3163)  
http://www.hmso.gov.uk/si/si1995/Uksi_19953163_en_1.htm

Special Waste Regulations 1996 (SI 1996/972)  

Trade Effluents (Prescribed Processes and Substances) Regulations 1989 (SI 1989/1156)  

Transport of Dangerous Goods (Safety Advisers) Regulations 1999 (SI 1999/257)  


Water Industry Act 1991  

Water Resources Act 1991  

EC DIRECTIVES

Appointment and vocational qualification of safety advisers for the transport of dangerous goods by road, rail and inland waterway 1996 (96/35/EC)


Landfill Directive 1999 (99/31/EC)


Healthcare Waste: special waste explanatory notes SWEN001 1999

There are proposed changes to:

Hazardous Waste Directives/Special Waste Regulations – to remove inconsistencies and improve understanding

Landfill Directive – proposals for implementation and to increase waste producers’ requirements and responsibilities

Waste Electrical and Electronic Equipment – proposals related to design and manufacture, and setting targets for end of life, that is, collection and disposal

Restriction of the Use of Hazardous Substances Directive – focuses on removing certain materials and treatments from EE Equipment, for example cadmium, mercury, lead etc.
In 1996 Guys and St Thomas’ Hospitals NHS Trust in London was generating 1460 tonnes of clinical waste and 1850 tonnes of domestic waste per year (that is, nine tonnes of waste per day on average). The cost of the waste contract was just under £1 million against a budget of £750,000, causing an overspend of £250,000 per year.

The District Audit undertook a review which:

- criticised the effectiveness of the contracted service;
- criticised the amount of waste generated per bed.

Problems encountered were:

- waste was not being segregated at source;
- there was multi-handling of the waste;
- fire exits were blocked with bags of clinical waste;
- obsolete goods were being abandoned.

Plan of action:

- the production of a trust-wide waste policy was instigated;
- a dedicated waste manager was appointed, with a brief to reduce the amount of clinical waste produced and ensure that the trust remained free from prosecution;
- the trust announced a move to a system of single handling;
- regular and frequent training of all staff involved in handling waste was implemented;
- the control of infection officer was involved in the training regime;
- tagging of bags for audit trail purposes was introduced;
- disciplinary action against anyone disposing of waste incorrectly was instigated;
- fines were imposed on any department involved with the wrongful consigning of waste;
- a flyer was circulated to every member of staff within the trust clearly stating that the duty of every member of staff was to dispose of waste correctly and that disciplinary action would be taken against anyone found to be disposing of waste incorrectly;
- a one-off investment of £70,000 was made in the provision of new sack holders.

Results:

- in all clinical areas, small yellow sackholders were installed;
- within one year the volume of clinical waste had reduced from 1460 to 900 tonnes;
- this saved the trust 560 tonnes x £300 per tonne = £168,000;
- what is not clinical waste is disposed of as domestic waste (cost of disposal as domestic waste: 560 tonnes x £48.18 per tonne = £27,000);
- £168,000 – £27,000 = £141,000 – investment of £70,000 = £71,000 saving in the first year.

This trust is now set to make further reductions in the volume of domestic waste by recycling.
Appendix 3 – Stakeholder involvement

It is important for trusts to keep up to date with changes in legislation, technology, processes and procedures associated with waste management. One way to do this effectively is to adopt a partnership approach where all stakeholders are included in the waste management process. The main stakeholders are listed below.

**UK SUSTAINABLE DEVELOPMENT IN GOVERNMENT (SDIG)**

All Government departments have a significant contribution to make to sustainable development, not just through their policies and services, but through all the support activities that go on every day. Decisions about energy, water and waste management, and the goods and services Government departments buy, all say a great deal about the Government’s commitment to sustainable development.


NHS Estates is involved in the work of SDIG and will interpret any requirements of this Framework on behalf of the NHS in England.

**DEPARTMENT FOR ENVIRONMENT FOOD AND RURAL AFFAIRS (DEFRA)/DEPARTMENT FOR TRADE AND INDUSTRY (DTI)**

Both Departments have major interests in addressing waste management policy within the UK. Defra leads on most waste negotiations and has responsibility for responding to some EU Waste Directives, and the UK response is split between DTI and Defra.

**ENVIRONMENT AGENCY (EA)/LOCAL AUTHORITIES**

The EA has a crucial role as expert and regulator. However, regulatory responsibility is split between the EA and local authorities.

**HEALTH AND SAFETY EXECUTIVE (HSE)**

The HSE has a crucial role as expert and regulator for health and safety and carriage/transport issues.

**DEPARTMENT OF HEALTH**

The overall aim of the Department of Health is to improve the health and wellbeing of the people of England. Its ‘Strategy on sustainable development and the environment’ will enable the Department to contribute to a better environment, and through this, improve people’s health.

The Department of Health has given a commitment to recover a minimum of 40% of its total office waste, with at least 25% coming from recycling and composting.

**NHS ESTATES**

NHS Estates is a centre of expertise and knowledge that provides support and advice on the design, construction, operation and maintenance of healthcare buildings and facilities. Two of the Agency’s key roles are to take lead responsibility both for “greening” the NHS, and for waste management.

This document was produced by NHS Estates to assist the NHS, and is in accordance with the spirit and requirements of the Government’s White Paper ‘Waste Strategy 2000’ and ‘Waste not, want not’ and the Department of Health’s ‘Strategy on sustainable development and the environment’.

**NHS PURCHASING AND SUPPLY AGENCY**

NHS PASA aims to be a centre of expertise, knowledge and excellence on matters of purchasing and supply, in order to modernise and improve the performance of purchasing and supply in the NHS. One of its key activities is the arrangement of national framework agreements for the NHS. These contracts have the potential to generate significant environmental impacts in both the NHS and the NHS supply chain, and it is therefore essential that these impacts are managed.
Appendix 4 – Useful guidance documents

GOVERNMENT WHITE PAPER

http://www.number-10.gov.uk/su/waste/report/01.html
http://www.sustainable-development.gov.uk/

NHS ESTATES PUBLICATIONS

‘A strategic guide to clinical waste management’, HMSO 1999
Health Guidance Notes
HGN ‘Clinical waste incineration joint venture arrangements’, HMSO 1994

Health Technical Memoranda

HTM 2065 ‘Healthcare waste management – segregation of waste streams in clinical areas’, HMSO 1997
HTM 2075 ‘Clinical waste disposal/treatment technologies (alternatives to incineration)’, HMSO 1998

The following documents are available to download at:
http://www.nhsestates.gov.uk/sustainable_development/index.asp

‘Healthcare waste minimisation – A compendium of good practice’, 2000
Waste Prevention Screening Tool, 2000
Sustainable development: Environmental strategy for the NHS, 2004
Sustainable development in the NHS, 2004
ERIC (Estates Returns Information Collection)
NEAT (NHS Environmental Assessment Tool) software, 2002

NHS PURCHASING AND SUPPLY AGENCY

Environmental Report 2001/02
Environmental Purchasing in Practice – guidance for organisations, 2002
Guidance on the development of an environmental procurement strategy, 2003
Procurement Guidance for Total Waste Management (TWM)

Terms and Conditions of Contract
NHS PASA weblink:
http://www.pasa.nhs.uk/sustainabledevelopment

This website also contains a section where NHS trusts can share best practice case studies.

AUDIT COMMISSION


ENVIRONMENT AGENCY

‘Managing Waste from Healthcare Activities: Working Towards Best Practice – a report to assist NHS trusts in managing clinical waste’

‘Perceptions and Communication: Issues on Waste Management’ (Research Paper)

WRC (Water Research Centre) bookshop. Frankland Road, Blagrove, Swindon, Wiltshire SN5 8YF. Tel: 01793 865138. Catalogue number: CWM 151-196

Environment Agency, Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol BS32 4UD

DEPARTMENT OF THE ENVIRONMENT (NOW DEFRA – DEPARTMENT FOR ENVIRONMENT FOOD AND RURAL AFFAIRS)

‘Waste Management: the Duty of Care – a Code of Practice’ (Blue Book), TSO 1996
HEALTH & SAFETY COMMISSION (HEALTH SERVICES ADVISORY COMMITTEE)

‘Safe Disposal of Clinical Waste’ (Purple Book) 1999, available from TSO or HSE Books, PO Box 1999, Sudbury, Suffolk, CO10 6FS. Tel: 01787 881165

INSTITUTE OF WASTE MANAGEMENT (IWM)


IWM Business Services Ltd, 9 Saxon Court, St Peter’s Gardens, Northampton, NN1 1SX. Tel: 01604 620 426 Fax: 01604 621 339

OTHER PUBLICATIONS

‘Creating Wealth from Waste’. Murray, R. Demos 1999
To reduce the risks of handling waste:

- ensure all staff who handle waste are trained to an appropriate level;
- ensure induction training takes place;
- ensure all staff are provided with the necessary and appropriate safety clothing and equipment;
- involve the control of infection team and risk managers to undertake risk assessments.

Under health and safety law, employers who generate clinical waste must ensure that the risks from it are properly controlled. In practice, this involves:

- assessing the risk;
- developing policies;
- putting arrangements into place to manage the risks;
- monitoring the way these arrangements work and with a view to continuous improvement.

The precautions required when handling clinical waste depend on the results of risk assessment and the relevant legal requirements. Measures that need to be considered include:

- training and information;
- personal hygiene;
- personal protection equipment;
- immunisation;
- segregation;
- handling;
- packaging;
- labelling;
- storage;
- transport on-site and off-site;
- accidents, incidents and spillages;
- treatment and disposal.

**NOTE:** This must be taken in the context of the Department of Health’s ‘Standards for Better Health’ core standard on waste management in order to minimise health and safety risks.

**Source:** ‘Safe Disposal of Clinical Waste’, Health Services Advisory Committee (HSAC)
Appendix 6 – Contingency planning

Despite the provision of robust waste management procedures, things can sometimes go wrong. The checklist and proforma provided below may help in the development of contingency plans.

- NHS trusts should have a dedicated waste manager to take responsibility for waste management within their healthcare facilities.
- The waste manager should have a recognised deputy to act on their behalf to cover for periods of absence etc.
- Waste manager/deputy should involve risk manager and infection control team to properly manage and minimise potential for risks to the health and safety of staff, patients, the public and the environment.
- Waste manager/deputy should establish clear lines of accountability detailed in a waste management policy and strategy document approved by the chief executive/Board.
- Waste manager/deputy should be in contact at all times by phone/mobile/bleep etc with up-to-date contact numbers held at the main reception/trust’s procedural notice board.
- Waste manager/deputy should have list of emergency out-of-hours telephone/mobile contact numbers of appointed waste contractor(s).
- Waste manager/deputy should have a copy of waste contractor’s emergency procedure, that is, what the contractor will do in the event of plant downtime/failure/untoward incident.
- Waste manager/deputy should have list of other alternative waste contractor(s) operating in the area/region, with telephone numbers, to contact in the event that the appointed waste contractor is not able to collect waste, or provide a service, for whatever reason.
- Waste manager/deputy should have access to data on waste produced by the trust by volume and waste stream on a daily/weekly basis.
- Waste manager/deputy should identify potential waste storage locations within the trust sites where waste could be securely stored if required (form below).
- Waste manager/deputy should have lists of cold storage firms, with telephone numbers, in case cold storage is required to hold clinical or other waste that would require temperature control if stored longer than 24–48 hours.
- Waste manager/deputy should have lists of licensed clinical waste hauliers/carriers, with telephone numbers, should waste need to be transported from site to a waste transfer station in the event of the appointed waste contractor not being able to collect waste for any reason.
- Waste manager/deputy should confirm licence/registration details with local Environment Agency office of any waste contractor/carrier/haulier the trust is proposing to use.
- Waste manager/deputy should have names and contact telephone numbers for local Environment Agency officer to keep them notified and obtain necessary approvals in the event that a situation develops where waste cannot be removed from site.
- Waste manager/deputy should have names and contact telephone numbers of NHS Estates/NHS PASA officers to keep them/Department of Health properly informed in the event of a waste contractor not being able to comply with the terms of their contract.
- Waste manager/deputy should ensure that all these are available in a local waste strategy/policy and procedure document (as recommended under Controls Assurance and the ‘Sustainable development: Environmental strategy for the NHS’).
- Waste manager/deputy should plan staff training and awareness programmes, acknowledging that this is crucial to the success of any procedure. Staff should know and follow the principles and requirements of the trust’s waste policy and procedure. Staff should know where to look for the waste policy and procedure. Staff should have ready and easy access to the waste policy and procedure, which should be up-to-date. Staff should understand the importance of waste segregation.
KEYS TO SUCCESS

- Waste manager/deputy to implement effective waste prevention and reduction policies as the main key to success. The more waste is prevented from occurring, the less waste there is to manage and control, and the more money is saved on waste disposal costs ('Healthcare waste minimisation – a compendium of good practice', Waste Prevention Guide and Waste Prevention Screening Tool, all available on the NHS Estates website).

- Waste manager/deputy to ensure effective waste segregation to reduce problems of holding and storing clinical waste (research shows that 40–50% of waste placed in clinical waste bags is domestic waste).

- Waste manager/deputy to undertake periodic (at least annual) waste audit trails to identify the type and quality of service provided. This could help to avoid surprises in the future.

- Waste manager/deputy to monitor waste procedures, including checking that systems and procedures are in place and working properly without waiting until something goes wrong – a key part of a successful monitoring regime.

- Waste manager/deputy to ensure that health and safety and risk management is complied with as a critical element of any successful waste management procedure. Effective controls are known to reduce the number of incidents and accidents. This reduces staff time off work, compensation payments, and poor reputation of the trust.

REMEMBER

Section 34 of the Environmental Protection Act 1990 imposes a statutory “duty of care” on any person who imports, carries, keeps, treats or disposes of controlled waste. Until such time as waste is ultimately properly and safely disposed of, it is the legal responsibility of the waste producer – the NHS. This responsibility cannot be delegated or passed to any other body.

Be aware of your legal responsibilities – keep the enforcement body (the Environment Agency) informed at every stage – act responsibly and safely at all times – seek advice from the Environment Agency, NHS Estates, NHS PASA.
The Agency has a dynamic fund of knowledge which it has acquired over 40 years of working in the field. Our unique access to estates and facilities data, policy and information is shared in guidance delivered in four principal areas:

**Design & Building**

These documents look at the issues involved in planning, briefing and designing facilities that reflect the latest developments and policy around service delivery. They provide current thinking on the best use of space, design and functionality for specific clinical services or non-clinical activity areas. They may contain schedules of accommodation. Guidance published under the headings Health Building Notes (HBNs) and Design Guides are found in this category.

Examples include:
- HBN 22, Accident and emergency facilities for adults and children
- HBN 57, Facilities for critical care
- HFN 30, Infection control in the built environment: design and planning

**Engineering & Operational (including Facilities Management, Fire, Health & Safety and Environment)**

These documents provide guidance on the design, installation and running of specialised building service systems and also policy guidance and instruction on Fire, Health & Safety and Environment issues. Health Technical Memoranda (HTMs) and Health Guidance Notes (HGNs) are included in this category.

Examples include:
- HTM 2007, Electrical services supply and distribution
- HTM 2021, Electrical safety code for high voltage systems
- HTM 2022 Supplement 1
- Sustainable development in the NHS

**Procurement & Property**

These are documents which deal with areas of broad strategic concern and planning issues, including capital and procurement.

Examples of titles published under this heading are:
- Estatecode
- How to cost a hospital
- Developing an estate strategy

**NHS Estates Policy Initiatives**

In response to some of the key tasks of the Modernisation Agenda, NHS Estates has implemented, project-managed and monitored several programmes for reform to improve the overall patient experience. These publications document the project outcomes and share best practice and data with the field.

Examples include:
- Modernising A & E Environments
- Improving the Patient Experience – Friendly healthcare environments for children and young people
- Improving the Patient Experience – Welcoming entrances and reception areas
- National standards of cleanliness for the NHS
- NHS Menu and Recipe Books

The majority of publications are available in hard copy from:

The Stationery Office Ltd
PO Box 29, Norwich NR3 1GN
Telephone orders/General enquiries 0870 600 5522
Fax orders 0870 600 5533
E-mail book.orders@tso.co.uk
http://www.tso.co.uk/bookshop

Publication lists and selected downloadable publications can be found on our website:
http://www.nhsestates.gov.uk

For further information please contact our Information Centre:
e-mail: nhs.estates@dh.gsi.gov.uk
tel: 0113 254 7070
Core guidance feedback

Please complete this feedback form and return it to NHS Estates. The information provided will help in the assessment of the value of this document and in the planning of future Agency guidance.

Title: 

Series and series number if applicable (eg Health Building Note 57):

1. How useful is this document to you/your organisation?
   1 □  2 □  3 □  4 □  5 □  6 □
   Not at all useful  Very useful

2. Are you aware of other sources of the information contained in this document?
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   □ Too prescriptive?
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   □ Too short
   □ About right

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Standards and Knowledge Management
NHS Estates
Windsor House
Cornwall Road
Harrogate
HG1 2PW

Thank you