

MEMORANDUM OF UNDERSTANDING

Between:

**Aylesbury Vale District Council
Buckinghamshire County Council
Chiltern District Council
South Bucks District Council
Wycombe District Council**

This Memorandum of Understanding between the aforesaid Buckinghamshire Local Authorities (hereinafter referred to as 'all parties') is created to promote joint working on the implementation of the Waste Strategy for Buckinghamshire for the sustainable management of municipal waste.

INTRODUCTION

All Local Authorities within Buckinghamshire share a responsibility for and commitment to the effective delivery of Municipal Waste Management Services. All parties intend that this *Memorandum of Understanding* will promote the effective planning and delivery of these services, by establishing a lasting framework and partnership for consultation and co-operation, in order to make the best use of our combined resources to mutual advantage. Delivery of the 'understanding' will be monitored through the Bucks Waste Forum.

OUR AIMS AND OBJECTIVES

All parties agree to embrace the following protocol:

- ⇒ aim to improve waste minimisation, recovery, recycling and composting from Buckinghamshire household waste in line with the Government's national targets and local Best Value targets;
- ⇒ where appropriate jointly research, fund, develop and implement detailed proposals for this purpose and develop, implement, support and continue to enhance, such schemes as are decided upon;
- ⇒ explore other partnership opportunities in the pursuit of these aims and objectives;

- ⇒ work within a common framework and approach to waste related education and awareness issues;
- ⇒ to develop and promote existing joint initiatives such as real nappies, home composters and the glass recycling consortium.

OUR SHARED RESPONSIBILITIES

The District and County Authorities undertake related and complementary functions and have responsibilities for Waste Services. For example:

- ⇒ District Councils are required to make adequate arrangements for the collection of Household and where requested Commercial waste within their respective areas.
- ⇒ Buckinghamshire County Council has a responsibility to make arrangements for the disposal of any Household and Commercial waste collected by collection authorities and to provide household waste sites.
- ⇒ District Councils have a responsibility to prepare a plan to show how they intend to work towards achieving the Government targets for recycling household waste.
- ⇒ Buckinghamshire County Council has a statutory duty to prepare a waste local plan which sets out detailed background, policies and guidance on waste planning matters. Its strategic aim is to develop appropriate Waste Management Practices in support of the Waste Strategy for Buckinghamshire.
- ⇒ All parties are required to plan and deliver their various obligations in accordance with locally agreed policies and procedures and Central and European Government legislation and in particular the Environmental Protection Act 1990, Local Government Act 1974 and the European Economic Community Procurement Directives.
- ⇒ Central Government require local authorities to carry out appropriate consultation with each other in planning and implementing future proposals for the management of waste and in particular the reduction, reuse, recycling and disposal of Buckinghamshire's waste.

OUR SHARED COMMITMENTS

All parties to this agreement are determined to fulfil their respective waste functions and responsibilities in a concerted and co-operative way so that, wherever possible, the activities of one complement and enhance the activities of the others, for the benefit of all residents, businesses and visitors to Buckinghamshire.

THE KEY PRINCIPLES WE WILL FOLLOW:

All parties recognise that four key principles should underpin the way in which their collective responsibilities are fulfilled. The principles are **Transparency, Consultation, Co-operation** and **Information**.

Transparency

All parties are committed to making the strategic planning and development of Buckinghamshire's Waste Strategy and Services as transparent as possible to each other and to the public as a whole.

Consultation

All parties recognise the importance of consultation and liaison on issues concerning Waste Services and commit themselves to the principle of consultation in the widest sense, both with themselves and the community, on any significant issue which will impact upon those receiving waste related services within Buckinghamshire.

Co-operation

Local Authorities have a statutory responsibility to provide services. Recognising that the development and delivery of Waste Services, involves significantly more than simply complying with the legislative requirements, all parties acknowledge the need for a pro-active approach and undertake to co-operate at all levels for the development of these services. Co-operation will be ensured by the maintenance of the Bucks Waste Forum.

The Bucks Waste Forum will meet a minimum of twice per year with Member and officer representation from all parties. The Forum will continue to welcome the involvement of other relevant bodies, such as the Environment Agency and the Waste Management Industry.

Information

All parties agree as a general principle to the free exchange of information.

All parties further agree to give consideration to methods of collection and presentation of waste related information in the public domain so that this will be, as far as possible, in a form that is readily useable by the other.

All parties will exercise due discretion in their dealings with each other. They will respect each others rights and obligations with respect to confidential or privileged information or expressions of opinion. Each party will retain the copyright in any private data provided by it to the other so that such data cannot be exploited commercially without permission.

EXCLUSION FROM THE FOUR PRINCIPLES & PROTOCOL

All parties recognise that nothing in this *Memorandum of Understanding* will prevent them from carrying out their individual statutory duties and responsibilities or unduly restrict the decisions to be made with regard to their respective functions.

REVIEW OF THIS DOCUMENT

All parties agree that this *Memorandum of Understanding* shall be periodically reviewed through the Bucks Waste Forum, in the light of any changes in relevant circumstances.

We the following agree to be bound by the terms of the *Memorandum of Understanding*:

.....	On behalf of Aylesbury Vale District Council	Date
.....	On behalf of Buckinghamshire County Council	Date
.....	On behalf of Chiltern District Council	Date
.....	On behalf of South Bucks District Council	Date
.....	On behalf of Wycombe District Council	Date

ABBREVIATIONS USED IN THIS REPORT

ACTVaR	the Association of Councils of the Thames Valley Region
ARP	Annual Review of Performance
ARRC	Aylesbury Recycling and Reuse Centre
AVDC	Aylesbury Vale District Council
BCC	Buckinghamshire County Council
BMW	Biodegradable Municipal Waste
BPEO	Best Practicable Environmental Option
BWF	Bucks Waste Forum
CDC	Chiltern District Council
CFCs	Chlorofluorocarbons (an ozone depleting gas)
CEAC	the Corporate Environmental Advisory Centre of Buckinghamshire Chilterns University College
CoD	Certificate of Destruction
DETR	Department of the Environment, Transport and the Regions
DIY	Do It Yourself
EEC	European Economic Community
EfW	Energy from Waste
ELV	End of Life Vehicle Directive
EMAS	Environmental Management Assessment System
ESA	Environmental Services Association
EU	European Union
HWRCs	Household Waste and Recycling Centres
MRF	Materials Recycling Facility
MWMS	Municipal Waste Management Facility

OWG	Officer Working Group (of the BWF)
RTAB	Regional Technical Advisory Bodies
SAVE	Save Aylesbury Vale Environment
SBDC	South Bucks District Council
SELCHP	South East London Combined Heat and Power
SEEDA	South East England Development Agency
SEERA	South East England Regional Assembly
SERTAB	South East Regional Technical Advisory Body
SLP	School Litter Programme
SMEs	Small and Medium Enterprises
SPS	Statutory Performance Standard
SWMA	Strategic Waste Management Assessment
UK	United Kingdom
WCA	Waste Collection Authority
WDA	Waste Disposal Authority
WDC	Wycombe District Council
WEEE	Waste Electrical and Electronic Equipment Directive
WMO	Waste Minimisation Officer
WRAP	Waste and Resources Action programme
WSB	Waste Strategy for Buckinghamshire

1.0 - INTRODUCTION AND CONTEXT

Introduction

- 1.1 For many years the most common form of waste management in Buckinghamshire has been the disposal of waste in landfill sites. Changes to national waste policy mean that this will no longer be acceptable in the future and better ways of managing our waste will be needed. Buckinghamshire needs to move towards the sustainable alternatives to landfill through greater use of recycling, composting and recovery of value (energy) from waste. These options make better use of resources and avoid the pollution risks caused by landfill. It is vital, however, that Buckinghamshire establishes the right type and mix of new waste facilities.
- 1.2 As a catalyst for change, the Bucks Waste Forum (**BWF**) has taken stock of the ever increasing amounts of waste that will be generated in the future and has mapped out a strategy - this *Waste Strategy for Buckinghamshire (WSB)* - to meet that challenge over the next twenty years or so. In this way the WSB will function as a Municipal Waste Management Strategy (see Glossary) for Buckinghamshire.
- 1.3 The strategy has been jointly prepared by the BWF, which includes members and officers from Buckinghamshire County Council (**BCC**), Aylesbury Vale District Council (**AVDC**), Chiltern District Council (**CDC**), South Bucks District Council (**SBDC**), and Wycombe District Council (**WDC**). Other stakeholders are represented including the Environment Agency ("**the Agency**") and the waste management industry (in the form of the Environmental Services Association - **ESA**). The neighbouring unitary authority of Milton Keynes Council is also represented, but has not made a direct contribution to the preparation of the WSB.
- 1.4 The public has been consulted at two stages during the preparation of the WSB. Firstly, in April 2001, at an early stage in the generation of the draft strategy, the partner authorities undertook a Householder Survey of waste behaviour and attitudes (see paragraphs 2.72 to 2.76 below). This informed the future waste management options to be evaluated in the draft. Secondly, consultation on the draft WSB took place between Monday, 3rd September and Friday, 12th October 2001 (6 weeks). Consultees (organisations and individual members of the public) were provided with appropriate consultation materials. These materials were supplemented by press releases and other information made available to the public. All consultees were encouraged to make a response upon the proposals and recommendations in the draft WSB using a customised form. The Forum considered responses received at its meeting of 9 January 2002 and agreed consequent amendments to the draft document. These amendments have been incorporated into this *final* Waste Strategy for Buckinghamshire, which was agreed by the BWF at its 20 March 2002 meeting. Implementation will be achieved by the partner local authorities using the WSB as a basis for planning the future delivery of collection and disposal

services in Buckinghamshire, acting both in partnership and individually. Regular reviews will need to be undertaken in the future to keep the strategy up to date and to make provision for the requirements of any emerging legislation. The Forum has agreed that it will review this Strategy within three years, if necessary, and no longer than five years in any event. It has additionally agreed that it will prepare an Annual Review of Performance (ARP) of the WSB.

The Context for the WSB

- 1.5 Nationally, municipal waste collected and disposed of by local authorities accounts for 15% of the controlled waste (i.e. any household, industrial or commercial waste that is controlled under the Waste Framework Directive) that is generated in an area. (source: paragraph 2.1.4 of the *Strategic Waste Management Assessment: South East*, published by the Environment Agency, December 2000). The remainder is produced by industry and commerce such as factories, offices, restaurants and shops. Also, it needs to be borne in mind that most waste management facilities, certainly in Buckinghamshire, are owned by the private sector.
- 1.6 Despite the above, the Government has decided that municipal waste should be used to drive forward the far-reaching changes that are needed. There are three reasons for this approach.
- 1.7 Nationally, in 1998/99, some 83% of the municipal waste collected in the UK was sent to landfill compared to 54% of commercial and industrial waste (source: paragraph 1.4 of *Waste Strategy 2000*, DETR, May 2000). Therefore, by comparison, the commercial sector is already diverting a higher level of waste away from landfill than the public sector.
- 1.8 Secondly, local waste authorities can play a central role in leading the diversion of waste away from landfill in favour of sustainable waste management solutions. The initiatives advanced by the BWF and contained within this Strategy are examples of what could be achieved by the partner authorities consistent with sustainability objectives.
- 1.9 Equally, the Bucks waste authorities have a responsibility, through the operation of the land use planning system, for providing the waste infrastructure that is needed to deliver the waste strategy. The WSB will work out the right type and mix of waste facilities and the overall level of provision that is required. It will be a function of the forthcoming *Buckinghamshire Minerals and Waste Local Plan*, to be prepared by the County Council to establish where any necessary facilities should be located.
- 1.10 For these reasons much of the WSB focuses on planning for municipal waste. Nevertheless, the Strategy considers the strategic implications for planning to meet the pressing problem of the ever-increasing growth in industrial and commercial waste. This section of the strategy has been prepared in partnership with representatives of the waste management industry.

Partners and Statutory Functions

- 1.11 Milton Keynes formed part of Buckinghamshire County Council's administrative area until it became a separate unitary authority in the local government re-organisation in 1997. Apart from that change, however, the two-tier system of local government has been retained in Buckinghamshire.
- 1.12 Responsibility for managing the collection of municipal waste (e.g. collected household waste, litter and street sweepings) rests with the four Buckinghamshire district councils (Aylesbury Vale District Council, South Bucks District Council, Chiltern District Council and Wycombe District Council).
- 1.13 Generally, recycling waste is also the responsibility of the district councils. As a part of this function each district council is obliged to prepare a ***Recycling Plan***. The Government has announced that these district level plans can be incorporated into the jointly prepared municipal waste strategies provided that it contains the specific recycling information that is required by law. **This information appears in Section 5 of this Strategy.**
- 1.14 Commercial and industrial premises are responsible for their own waste. However, individual traders may request that arrangements be made with the relevant district council for their trade waste to be collected in conjunction with the householder collection service. In Buckinghamshire, the majority of collections are carried out by private sector companies.
- 1.15 Buckinghamshire County Council is responsible for the disposal of all the municipal waste collected by the district councils and the provision and operation of all the Household Waste and Recycling Centres (HWRCs) (formerly known as civic amenity sites) sites across the county. Responsibility for the recycling of waste brought to HWRCs rests with the County Council.
- 1.16 The County Council, as the Waste Planning Authority, has a legal duty to prepare a Waste Local Plan which sets out the detailed land use policies for the treatment and disposal of waste including household, industrial and commercial waste. This process has commenced now that the WSB has been finalised. Similarly, the County has responsibility for deciding planning applications for development associated with the deposit, treatment, storage, processing and disposal of waste from either the public or private sectors.
- 1.17 Operational waste management activities are subject to two separate but complementary forms of regulatory control. Land use and amenity issues (such as noise, visual appearance, traffic and, in some cases, odours) are controlled, where necessary, by conditions of the planning permission. Measures to prevent or minimise the effects of pollution are contained in the waste management licence that is issued by the Environment Agency. The Agency also has an important wider role in gathering up to date information on waste arisings and existing waste management facilities for each region known as *Strategic Waste Management Assessments* (SWMAs).

- 1.18 Local waste strategies for Buckinghamshire will also need to be developed within the sub and regional waste planning framework. The Bucks waste authorities are actively engaged at the sub regional level through the Association of Councils of the Thames Valley Region (ACTVaR), a grouping of local authorities and partners in the Thames Valley area. ACTVaR's remit is to build strategic links between authorities in the Thames Valley and neighbouring sub regions as a means of developing approaches to issues of common interest including waste.
- 1.19 At the regional level, the Government has set up Regional Technical Advisory Bodies (RTABs) to develop regional waste strategies and provide technical input in the preparation of regional planning guidance carried out by the Government Office in the region. The County Council is represented at the South East RTAB (SERTAB). This body will assist in the development of regional waste frameworks that will inevitably affect the WSB.
- 1.20 Finally, it is important to the economic well being of the region that strategic waste matters are a part of the regional economic strategy prepared by the South East England Development Agency (SEEDA). Equally important is the regional sustainable development framework set by the South East England Regional Assembly (SEERA).

Definitions of Waste

- 1.21 Waste is produced by every sector of the community including private households, local government, schools, hospitals and private businesses. Everyone has a role to play in reducing the amount of waste that is produced. The **WSB** is mapping out a way forward for all Buckinghamshire's waste. However, the source and type of the waste does influence the level of control that can be exercised by the Bucks Waste Authorities. Therefore, it is important to define the main types of waste that are involved.

These are:

- **Municipal Waste** includes waste collected from households, that taken by the public to Household Waste and Recycling Centres, and waste resulting from services such as street sweepings, litter collection and commercial waste collected by the district councils;
- **Household Waste** includes all waste collected by the Waste Collection Authorities on collection rounds (including separate rounds made for the collection of recyclables); the collection of street cleansing and litter, bulky waste, hazardous waste, household clinical waste, garden waste; and waste brought to bring systems and Household Waste and Recycling Centres;

- **Commercial and Industrial Waste** is waste that is generated from individual traders, businesses, places of recreation and entertainment and factories.

National Waste Strategy

- 1.22 In May 2000 the Government published the *Waste Strategy 2000*, which establishes the national framework for moving away from landfill towards sustainable waste management alternatives in the UK.
- 1.23 It is an over-arching policy document that is the Government's response to obligations on waste issues contained in European Law. Accordingly, it is both a national waste management plan (as required by Council Directives 75/442EEC, as amended by 91/156/EEC and 96/350/EC Framework Directive on Waste) and a strategy to divert waste away from landfill (Council Directive 1999/31/EC).
- 1.24 The overall aim of the national strategy is to cut the amount of waste that is produced and, where waste is produced, ensure that it is put to good use by encouraging far higher levels of re-use, recycling, composting and energy recovery before final disposal than has previously been the case.
- 1.25 By managing resources and waste more efficiently in the future, the strategy states that the UK can make an important contribution to *sustainable development*. This is commonly defined as being "development which meets the needs of the present, without preventing future generations from meeting their own needs." The Government's sustainable development strategy *A Better Quality of Life* is based on four key elements:
- effective protection of the environment,
 - prudent use of natural resources,
 - social progress which meets the needs of everyone, and
 - high and stable levels of economic growth and employment.
- 1.26 In protecting the environment, the Government has also stated that regard must be given to the *Precautionary Principle*. This was defined at the Rio Earth Summit in 1992 as meaning "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation."

Guiding Principles of the National Waste Strategy

- 1.27 Running in parallel with the strategy, the Government has developed guiding principles to ensure that future waste decisions take account of the factors that are fundamental to sustainable waste management. These are:

The Best Practicable Environmental Option

- 1.28 The process that should be used for considering the relative merits of various waste management options is the *Best Practicable Environmental Option* (the "BPEO").
- 1.29 It is defined by The Royal Commission on Environmental Pollution as "The outcome of a systematic consultative and decision making procedure which emphasises the protection and conservation of the environment across land, air and water". The BPEO is a procedure which establishes, for a given set of objectives, the option that provides the most benefits or the least damage to the environment as a whole, at acceptable cost, in the long term as well as the short term. This concept means that local environmental, social and economic preferences will be important in any decision. Put simply, there may well be different BPEOs for the same waste stream in different areas. Alternatively, there may well be a different BPEO for the same waste at different times.

Regional Self-sufficiency

- 1.30 Most waste should be treated or disposed of within the region within which it is produced. Each region should provide for facilities with sufficient capacity to manage the quantity of waste expected to be produced in its area for at least 10 years. In some cases, however, it may be necessary to recognise units smaller than the region but larger than areas covered by Waste Planning Authorities.

The Proximity Principle

- 1.31 Waste should generally be managed as near as possible to its place of production because transporting waste itself has an environmental impact.

The Waste Hierarchy

- 1.32 This is a theoretical framework which should be considered when assessing the BPEO and it suggests that:
- **REDUCE:** The most effective environmental solution may often be to reduce the generation of waste (i.e. reduction or minimisation) in the first place such as ensuring that products are not over packaged;
 - **RE-USE:** Where further reduction is not practicable, products and materials can sometimes be used again, either for the same or for a different purpose;
 - **RECOVER:** Failing that, value should be recovered from waste, through recycling, composting or energy recovery from waste; and
 - If none of the above offers an appropriate solution, waste should be disposed of.

National Waste Strategy - Targets

- 1.33 The Government has set challenging targets to ensure the necessary step change in UK waste management practice is made.
- 1.34 The main driver of change is the European Union's Landfill Directive (99/31/EC) which came into force on 16 July 2001. As a consequence, the Government has introduced mandatory targets for the reduction of biodegradable waste that is sent to landfill. This is *organic* municipal waste which decays and produces methane (an inflammable gas that is released into the atmosphere and contributes to "global warming") and a liquid that can pollute water in the ground and on the surface. The UK national targets are:
- by 2010 to reduce biodegradable municipal waste landfilled to 75% of that produced in 1995;
 - by 2013 to reduce biodegradable municipal waste landfilled to 50% of that produced in 1995; and
 - by 2020 to reduce biodegradable municipal waste landfilled to 35% of that produced in 1995.
- 1.35 To encourage the more efficient use of resources, the Government expects value to be recovered (either by recycling, composting and energy recovery) from 40% of municipal waste by 2005. The targets are then to be increased to 45% by 2010 and to 67% by 2015.
- 1.36 Within this overall target, the Government has set discrete targets for recycling and composting to ensure that this particular form of waste management has a significant role to play in meeting the recovery targets.

Table 1a: GOVERNMENT RECYCLING AND COMPOSTING TARGETS

Year	Recycling/Composting
2005	25%
2010	30%
2015	33%

Source: *Waste Strategy 2000, DETR, May 2000*

- 1.37 Therefore, by 2015, the WSB will need to plan to recover value from 67% of the municipal waste that is collected. However at least half of this must be recovered by recycling and composting at that date. Therefore, it will not be possible to rely solely upon energy from waste incineration. The targets would, however, permit total recycling or composting if this were feasible.
- 1.38 Cutting across these targets, the Government has developed ("Best Value") statutory performance standards for all collection and disposal authorities.

These are designed to ensure that all authorities contribute towards the national task of driving up the rate of recycling. These performance standards form part of the existing Best Value framework, which requires local authorities to set challenging targets to improve waste management services.

- 1.39 The Best Value targets have been devised in such a way that the sum of the individual performance standards will meet the overall national target. Another feature of the standards is that a sliding scale of targets that have been set against benchmark rates achieved in 1998/99 such that all authorities are required to contribute regardless of their previous performance. Therefore, Buckinghamshire, as one of the best performing counties, has been set some of the most challenging targets in the country. These are set out in the table below:

Table 1b: BUCKINGHAMSHIRE BEST VALUE RECYCLING TARGETS

	Recorded recycling rate 2000/01 (%)	Recycling target 2003/04 (%)	Recycling target 2005/06 (%)
Aylesbury Vale District Council (AVDC)	14%	26%	36%
Chiltern District Council (CDC)	27%	33%	40%
South Bucks District Council (SBDC)	19%	33%	40%
Wycombe District Council (WDC)	11%	20%	30%
Buckinghamshire	23%	33%	36%

Source: County and District Council data, and *Guidance on Municipal Waste Management Strategies*, DETR, March 2001

- 1.40 The UK's record for managing commercial and industrial waste compares favourably with that for municipal waste. Nevertheless, to encourage businesses to reduce waste further, the Government has set the target that by 2005 to reduce the amount of commercial and industrial waste, which is sent to landfill to 85% of that landfilled in 1998.

The Principal National Levers for Change

- 1.41 The Government has devised a number of "levers" for change that it intends will drive the national targets forward by amending the behaviour of those generating and managing waste (**Appendix B**); these include:
- Developing the market for recycled materials. *Waste Strategy 2000* therefore announced the establishment of WRAP (the Waste & Resources Action Programme) as a body dedicated to overcome market barriers to re-use and recycling;
 - The introduction of statutory producer responsibility for packaging and packaging waste that involves producers (and others) taking greater responsibility for those goods at the end of their lives;
 - The imposition of a Landfill Tax from October 1996. The tax, which has an explicit environmental objective to reduce the overall volume of biodegradable waste sent to landfill, has had a significant impact upon waste management practices;
 - Another important lever will be the proposed introduction by the Government of a system of tradable landfill permits to minimise the cost of meeting the Landfill Directive and provide local authorities with some flexibility in meeting the targets.

The Challenge facing Buckinghamshire

- 1.42 Buckinghamshire currently produces about 247,000 tonnes of municipal waste a year and this continues to grow at 2%+ annually. About 80% (190,000 tonnes) of the County's municipal waste goes to landfill at present. The remaining 23% (about 57,000 tonnes) is recycled.
- 1.43 Given the above, it is evident that there are two discrete parts to the challenge that Buckinghamshire faces over the next twenty years.
- 1.44 Firstly, it must overcome the problem of the natural decay in the rate of recycling. This occurs when the increase in the volume of waste that is generated each year. By 2020, unless this rate of growth can be slowed, there will be a 46% increase (to some 359,300 tonnes) in our waste. Buckinghamshire needs to develop the existing recycling programmes simply to maintain the existing rate of recycling (23%). In short, more recycling and composting is needed just to stand still. This will especially be the case in those parts of the county where significant new population growth is planned (which the projections underlying this strategy have not included), for example in parts of Aylesbury Vale district. The County Structure Plan requires that some 8,600 new houses should be built in the district between 2001 and 2011. Some 75% of this planned new growth will be at Aylesbury with 25% in the rural

areas, concentrated at Buckingham, Wendover, Haddenham, Winslow, Pitstone and Calvert.

- 1.45 Secondly, even when the problem of decay is tackled, Buckinghamshire will have to meet the mandatory targets contained in the *Waste Strategy 2000* and the Government's Best Value standards. The projected shortfall between the amount of *organic* municipal waste which can be recycled or composted under existing schemes and that to be diverted from landfill (into more-sustainable waste management methods) is set to grow from 24,600 tonnes in 2010 to 108,900 tonnes by 2020. This is an increase of 440% over the course of that decade.
- 1.46 A detailed assessment of the various targets is carried out in section 3 but the indications are that the growth in recycling and composting expected from existing programmes would not meet the mandatory targets for municipal waste and that additional measures will be required. Certainly, the status quo is not a tenable option in the longer term. The Buckinghamshire waste authorities and their partner organisations must start managing the emerging shortfall now.
- 1.47 In addition to the National Waste Strategy and the Landfill Directive, emerging legislation from Europe will place further demands on the waste management industry. While the impact on Local Authorities is at this stage unclear, the developing waste strategy will need to be regularly reviewed in order to make provision for any new requirements that may arise out of future legislation. The new and potential directives are as follows:

- End of Life Vehicle Directive;
- Waste Electrical and Electronic Equipment (WEEE) Directive;
- Batteries and Accumulators Directive;
- Review of Hazardous Waste Directive;
- Review of Waste Incineration Directive;

A brief description of each is given in **Appendix C**. The implications of each will need to be assessed, in the light of progress with the emerging Directives and actual experience with those provisions in operation, when this WSB is reviewed.

2.0 - DEVELOPING A WASTE STRATEGY FOR BUCKINGHAMSHIRE

Process Outline

- 2.1 The process of developing the WSB has been a collaborative one. This has been an essential characteristic of the close working partnership that was necessary between the partner authorities and stakeholders in achieving, for the first time, a commonly agreed over-arching waste strategy for Buckinghamshire.
- 2.2 The day-to-day task of developing the strategy has been the responsibility of an Officer Working Group (OWG). This group has provided the background technical advice and has drafted the WSB on behalf of the Forum. Advice has been provided through a series of reports that have been considered by the Forum over the past eighteen months. This process has enabled the Forum to develop the strategy to the present consultation with stakeholders. The Forum agreed the draft WSB for public consultation at its meeting of 26 June 2001.
- 2.3 To complement the work undertaken by the OWG, expert speakers have been invited to attend the BWF to give presentations on key waste matters of relevance to refining the strategy. Members and officers have also visited waste facilities and projects such as the energy from waste incinerator plant at SELCHP in South London and Hampshire's Project Integra.

Strategy Development

- 2.4 In addition to the mechanics of the preparation process, it is important to understand how the main strands of the strategy (such as Baseline Data, Consultation, and Waste Management Options) have evolved. This is best achieved by looking at each strand in turn.

Baseline Data

- 2.5 On 26 July 2000 the BWF agreed the projections prepared by the OWG that detailed the extent of the expected shortfalls between the projected municipal waste arisings and the Government's statutory targets for the purposes of preparing the strategy. While the format remains the same, further work has been undertaken since then on updating the shortfalls using the latest data that has been collected. The baseline data sets the scene for the next section, Section 3 "The Challenge for Buckinghamshire".

Consultation

- 2.6 At the meeting of the Forum on 1 November 2000 it was agreed that the overall approach to consultation on the WSB should include:
 - a countywide householder survey,

- a period of formal stakeholder consultation on a published draft of the WSB, and
 - open discussions for county, district and parish members delivered via the local area committee structures.
- 2.7 Details of the householder survey and the public consultation on the draft Strategy appear at the end of this Section.

Waste Management Options

- 2.8 In July 2000 the Forum endorsed various bundles of future waste management options (or "building blocks") as a starting point for considering the possible ways of the preparation of the strategy for meeting the Government's targets. These options have since been shaped by the main findings from the countywide householder survey that was undertaken in April of this year and costings that have been prepared by the OWG. These short to medium-term waste management options were then considered and agreed for consultation purposes by the Forum on 23 May 2001. These options were developed in the consultation draft of the Strategy and were subsequently the subject of consultation. Some options have been discarded following further testing and, following consideration of the consultation responses, the Forum has agreed that those remaining should feature in this final WSB as *recommended initiatives* for implementation by the partner authorities.
- 2.9 The process of beginning to consider when Buckinghamshire will need to switch to one or more of the new alternative technologies to landfill.

Commercial and Industrial Waste

- 2.10 The final section of this draft strategy, Section 6, has been prepared by the BWF with advice from the Environment Agency and the waste industry. It considers what steps are needed to tackle the ever increasing amount of commercial and industrial waste that is being produced and the best ways of driving up the recycling rate within this sector.
- 2.11 In the first instance, however, it is important to understand current waste management practice in Buckinghamshire. The logical place to start is the steps being made to avoid waste being generated in the first place.

Current Waste Reduction (Minimisation) Programmes in Buckinghamshire

- 2.12 In recent years there has been an increasing belief amongst consumers and the suppliers of products that reducing unnecessary packaging around goods is a desirable objective. This aspiration, certainly with respect to packaging waste, is now part of European Law in the shape of the EC Directive on Packaging and Packaging Waste.

- 2.13 The UK Government has implemented the Directive through the Producer Responsibility Obligations (Packaging Waste) Regulations 1997. These regulations place certain obligations on businesses including a system that requires the recovery of specified tonnages of packaging waste.
- 2.14 Also, the Government, through the operation of the Waste Hierarchy mentioned in the previous Section, expects waste reduction to be a core consideration whenever decisions are made about the use of resources.
- 2.15 It is not easy to estimate what the cumulative result of these steps will be in minimising the waste stream. It is clear, however, given that waste nationally grows around 3% each year, that there will need to be major changes in people's behaviour and lifestyle before this will be significant. This will take time.
- 2.16 Nevertheless, local authorities are empowered to carry out initiatives to reduce the amount of waste generated in their areas under the Waste Minimisation Act. Indeed, under the Government's Best Value programme, local authorities must set targets for waste reduction. Most of the current initiatives in Buckinghamshire are part of the overall effort of raising people's awareness of waste minimisation and to educate. These are summarised below.

(i) Education

- 2.17 The annual Schools Recycling Awards operating in the CDC area was introduced in the early 90's as a way of directly involving schools in waste reduction and recycling. In March 2001, £3,000 was distributed to the top performing schools in the Chiltern district area for recycling collections. All schools in the area are awarded certificates in recognition of their achievements. The scheme currently has 59 schools competing in the awards scheme, which encourages an awareness of waste related issues. School assemblies and presentations are also offered to schools and a quarterly newsletter was introduced to schools in November 2000 to further promote waste minimisation and recycling issues.
- 2.18 In the WDC area, the School Litter Programme (SLP) was introduced in 1998 as a way of directly involving schools in promoting waste reduction and recycling. Enrolment in the SLP involves 3 litter inspections per year, by the Litter Warden, with a programme of assemblies, presentations, litter surveys and competitions. On enrolment in the programme, schools are provided with a School Litter Pack and are awarded annual certificates in recognition of their achievements. The scheme currently has 67 schools enrolled in the programme which encourages an awareness of litter problems and other waste related issues.
- 2.19 A new marketing campaign, the 'Wycombe Waste Challenge', is under development to re-brand the promotion of waste and will be spearheaded by 'Rufus the Rat'. The new campaign will promote waste reduction, re-use and recycling through leaflets and posters, with logos displayed on the side of

refuse vehicles. The WDC newspaper, 'The Community Voice', will continue to devote a page to waste issues.

2.20 AVDC promotes waste reduction, re-use and recycling through the SAVE (Save Aylesbury Vale Environment) campaign and by regular items in the Council's newspaper the "District Link". The Council actively encourages the participation of schools in the promotion of recycling by supporting various national campaigns and in particular, since 1993 has staged the recycled clothes show a "fun fashion event" for clothing made of recycled materials. It is intended to considerably increase the promotional activities that are currently undertaken.

2.21 SBDC is proposing to work closely with local schools on waste matters in the future.

(ii) Real Nappy Campaign

2.22 Nationally, 4% of domestic waste consists of disposable nappies. The partner authorities are working together to promote the Real Nappy Campaign by offering residents subsidised access to the local nappy laundering service. The campaign is promoted through local hospitals and health clinics, with leaflets, posters and display boards.

(iii) Home Composting Promotions

2.23 Home composting promotions have been provided annually in Buckinghamshire since 1998, offering residents the opportunity to purchase discounted compost bins through either mail order or one day sale events.

2.24 To the end of March 2001, a total of some 19,900 home composting bins have been purchased through the above promotions in Buckinghamshire. This equates to a very encouraging take up rate of nearly 9% of properties across Buckinghamshire. To complement the initiative, a total of 12 home composting workshops have also been offered in the WDC area, where residents are provided with hands on composting advice and information.

2.25 A breakdown between the Buckinghamshire districts at 31 March 2001 is provided in **table 2a** below.

Table 2a: TAKE-UP RATE OF HOME COMPOSTING IN BUCKINGHAMSHIRE (March 2001)

	Estimated No. Households with a Garden.	Composters Purchased.	% Take Up.
AVDC	62,500	7,170	11.5%
CDC	32,000	4,000	12.5%
SBDC	23,500	2,500	10.6%
WDC	55,000	6,200	11.3%
TOTAL	173,000	19,870	11.5%

Source: District Council data.

- 2.26 A further promotion of home composting is being undertaken this year using local garden centres to host the event.
- 2.27 In the next section, a brief outline of existing waste management costs and practice in Buckinghamshire is given.

Current Waste Management Practice in Buckinghamshire

- 2.28 In 2000/01, some 246,600 tonnes of municipal waste was generated in Buckinghamshire including 240,900 tonnes of waste collected from households. The total cost to the residents of Buckinghamshire for dealing with this waste was some £15.8M. It is predicted that if Buckinghamshire is to meet the Government's targets that this figure will almost double to £28 million per annum by 2020.
- 2.29 A summary of the current costs per authority in Buckinghamshire is given in **table 2b** below.

Table 2b: WASTE MANAGEMENT COSTS IN BUCKINGHAMSHIRE 2000/2001

	2000/01
BCC	£6.95M
AVDC	£3.15M
CDC	£1.97M
SBDC	£1.30M
WDC	£2.40M
TOTAL	£15.77M

Source: County and District Council data.

- 2.30 A summary of the existing waste management practice in Buckinghamshire, which varies from district to district, is set out below.

Household Refuse Collection

- 2.31 Buckinghamshire local authorities provide a refuse collection service to over 190,000 properties with the majority either receiving an edge of property wheeled bin collection or back door sack collection, with some waste collected in bulk bins.
- 2.32 All refuse is collected on a weekly basis and taken direct to landfill sites within Buckinghamshire and neighbouring Milton Keynes Borough.

Current Waste Management and Recycling Facilities in Buckinghamshire

Operational Landfill Sites

- 2.33 There are two landfill sites that are licensed to receive both municipal and commercial and industrial waste located within Buckinghamshire. These sites are at Wapsey's Wood (near Gerrards Cross) and Calvert (north of Aylesbury). Another important recipient of Buckinghamshire's waste lies just beyond the county boundary at Newton Longville (near Bletchley), within Milton Keynes Borough.
- 2.34 Each of these landfills is owned by a limited company and is under contract to the Waste Disposal Authority (BCC) for the disposal of municipal waste.

Waste Transfer Stations

- 2.35 There are no household waste transfer stations. All waste collected from householders is taken direct to the landfill site.
- 2.36 Collection and handling arrangements for other wastes differ across Buckinghamshire and the type of material.
- 2.37 Paper from the SBDC and CDC areas is transported to the paper sorting facility at London Road, Amersham where it is separated into newspapers/pamphlets and mixed paper. It is then bulked up and transferred to Shotton and Taplow. Paper from the WDC area is taken direct to the Severnside waste paper plant at Taplow, near Maidenhead, whilst paper bank material is bulked up out of county prior to delivery to Aylesford Newsprint at Aylesford, Kent. All paper collected in the AVDC area is taken to the Vale Contract Services Depot at Pembroke Road, Aylesbury where it is bulked up and taken to Aylesford Newsprint.
- 2.38 Glass from the South Bucks and Chiltern district areas is taken to the London Road depot in Amersham before being bulked up and taken to Yorkshire and Essex for processing. Glass from the WDC area is taken to the County

Council's household waste recycling centre at High Heavens for bulking up. AVDC takes glass to either the Amersham depot or High Heavens.

- 2.39 Materials other than paper and glass are transported to waste transfer stations or sorting facilities outside the county. An exception is foil collected in the Wycombe area which is collected and baled by a local community group. In AVDC, cans and plastic bottles are sorted at the Aylesbury depot and then sent for reprocessing to a variety of locations outside the county.

High Heavens

- 2.40 The High Heavens waste disposal complex consists of a collection of facilities including a household waste and recycling site. Landfilling has ceased and the site is now currently undergoing the final stages of restoration back to agriculture and forestry. There is an electricity generation plant that is powered from landfill gas, as well as a large scrap yard.
- 2.41 Also, there is a redundant waste pulverisor, which has been mothballed pending the outcome of this review of strategy. Other facilities include one of the two glass bulking sites provided in the County which support the County network of glass, bottle and jar bank sites. The other is located at Amersham. The site is presently storing all of the County's redundant refrigerators and freezers awaiting eventual treatment (see paragraph 2.58 below).

Household Waste and Recycling Centre (HWRC)

- 2.42 At present, there are nine HWRCs in Buckinghamshire. These are detailed in the table below together with a brief summary of the range of facilities handled at the site.

Table 2c: BUCKINGHAMSHIRE HOUSEHOLD WASTE AND RECYCLING CENTRES (March 2001)

Site	District Area	Facilities
Buckingham Trading Estate, Buckingham	AVDC	Green waste, glass, metal, paper/cardboard, textiles, paint, used engine oil, gas cylinders, car batteries, furniture and timber.
Rabans Lane, Aylesbury	AVDC	Same as Buckingham above, plus hardcore and top soil.
High Heavens, High Wycombe	WDC	As Buckingham.
Wigans Lane, Bledlow Ridge	WDC	As Aylesbury.

Candlemas Lane, Beaconsfield	SBDC	The Candlemas Lane HWRC is due to be closed and replaced by a new site off the A40 at Hyde Farm, Gerrards Cross. The site has planning permission but no date for construction has been set.
Crowpiece Lane, Burnham	SBDC	As Aylesbury, excluding timber.
Trenches Lane, Langley	SBDC	As Aylesbury.
London Road, Amersham	CDC	As Aylesbury.
Latimer Road, Chesham	CDC	As Aylesbury.

Source: County Council data.

Municipal "Bring" Sites

2.43 Residents are also served by a network of smaller municipal "bring sites" that are located across Buckinghamshire at which they can bring a range of recyclable materials. The distribution (and ratio per household) of these facilities between the four districts as at 31 March 2001 is shown in **table 2d** below.

Table 2d: DISTRIBUTION OF BRING SITES IN BUCKINGHAMSHIRE (March 2001)

	No. Households (rounded)	No. of public bring sites	Ratio per household
AVDC	64,200	85	755
CDC	36,140	52	695
SBDC	26,000	40	650
WDC	64,750	52	1,245
TOTAL	191,100	229	834

Source: District Council data.

Municipal Waste Management in Buckinghamshire

Current Recycling Schemes

(i) Household Collection

- 2.44 A waste paper collection service is provided to over 190,000 households in Buckinghamshire on a fortnightly basis. Kerbside boxes are provided to all properties in Chiltern and South Bucks districts, and baskets to those in Aylesbury Vale. In the WDC area, residents are participating by presenting paper bagged, boxed or bundled. However, kerbside boxes are provided in a trial area of 6,000 properties.
- 2.45 A summary of the overall pattern of household collection of recyclable material for each authority in Buckinghamshire is given in **table 2e** below.

Table 2e: HOUSEHOLD COLLECTION OF RECYCLABLE MATERIAL BY LOCAL AUTHORITY IN BUCKINGHAMSHIRE

	Kerbside Collection (Fortnightly)	Mixed Paper	Newspaper/ magazines	Cans/ Plastics	Glass	Green Waste
AVDC	Y	N	Y	Y	N	N
CDC	Y	Y	Y	N	Y (Monthly)	N
SBDC	Y	Y	Y	N	N	N
WDC	Y	Y	Y	N	N	Y (Trial)

Source: District Council data.

- 2.46 In addition to paper, co-mingled cans and plastics are collected from households in the AVDC area on a fortnightly basis using baskets (36 litre) that are provided. The material is delivered to the Pembroke Road depot in Aylesbury where the steel and aluminium is removed and the plastics sorted into the various polymers for recycling centres. Similarly, within the CDC area, glass is collected from households every four weeks.
- 2.47 A breakdown of the tonnages collected of each material is provided in **table 2f** below.

Table 2f: TONNAGE OF RECYCLABLE MATERIAL COLLECTED FROM HOUSEHOLDS IN BUCKINGHAMSHIRE (tonnes, rounded) (March 2001).

	Paper	Cans/ plastics	Glass	Green Waste
AVDC	5,160	790	0	0
CDC	4,430	0	1,085	0
SBDC	3,100	0	0	0
WDC	4,670	0	0	140 (Trial)
TOTAL	17,360	790	1,085	140

Source: District Council data.

- 2.48 Within Wycombe district, green waste is collected from a trial area in Bourne End on a fortnightly basis. Some 650 participating householders are provided with brown wheeled-bins for the collection of garden waste and green kitchen waste. The material is currently delivered to a composting site at St Albans, Hertfordshire. Participating households account for approximately 1% of all those within the WDC area and regularly present around 140 tonnes of waste a year for composting. AVDC collects garden waste with domestic waste where householders have pre-purchased green bags for the waste but, at present, this is taken to landfill sites.

(ii) Household Waste & Recycling Centres (HWRCs)

- 2.49 Household waste and recycling centres (HWRCs) are facilities provided by Buckinghamshire County Council for residents to dispose of waste that is usually excluded from the regular household waste collection service. At present, there are nine HWRCs in Buckinghamshire. In 2000/01 the HWRCs handled some 66,700 tonnes of waste and achieved a recycling rate of 42%.
- 2.50 In addition to those materials also collected by the district councils for recycling (e.g. paper & card, glass) the HWRCs receive a number of additional materials that fall within the definition of household waste. Some of these are green waste, scrap metals, batteries, hardcore and oils. These materials comprised an estimated 28,100 tonnes in 2000/01. The majority can be recycled and therefore contribute towards the recycling of household waste.

(iii) Municipal Recycling Centres ("Bring" Sites)

- 2.51 Collectively, the four Buckinghamshire District Councils provided 229 municipal recycling centre facilities across Buckinghamshire at the end of March 2001. This equates to the average of one facility per 834 households in Buckinghamshire. These facilities, known as municipal "bring" sites, are

situated in convenient and accessible locations (such as supermarket or public car parks) for residents to bring their recyclates.

- 2.52 These facilities will take glass, newspapers/magazines, mixed cans and plastics. Other recyclates that are collected at some of these facilities, often in partnership with the voluntary sector (such as the Salvation Army or Oxfam) include textiles, shoes, books and aluminium foil. The range of different materials that are taken at municipal recycling centres across Buckinghamshire are shown in **table 2g** below.

Table 2g: RANGE OF MATERIALS FOR RECYCLING IN BUCKINGHAMSHIRE

	Paper	Plastics	Cans	Glass	Foil	Textiles	Shoes	Books
AVDC	Y	N	Y	Y	Y	Y	Y	Y
CDC	Y	Y	Y	Y	N	Y	Y	Y
SBDC	Y	Y	Y	Y	N	Y	Y	Y
WDC	Y	N	Y	Y	Y	Y	Y	N

Source: District Council data.

- 2.53 Unsurprisingly, given their comparative heavy weight, newspaper and glass account for the bulk of the recyclates collected at municipal recycling centres. Indeed, some 3,300 tonnes of paper and 5,00 tonnes of glass were collected in 2000/2001. All the other materials together accounted for 700 tonnes over the same period.
- 2.54 A breakdown of the tonnage of recyclate collected from the network of municipal recycling centres is shown in **table 2h** below.

Table 2h: TONNAGE OF RECYCLATE COLLECTED FROM MUNICIPAL RECYCLING CENTRES (March 2001) (tonnes)

	Paper	Plastics	Cans	Glass	Foil	Textiles	Shoes	Books
AVDC	219	-	13	1,541	-	115	14	7.3
CDC	1,513	70	120	1,090	-	84	-	-
SBDC	637	35	52	949	-	7	1	7
WDC	959	-	60	1,454	-	118	-	-
TOTAL	3,328	105	245	5,034	-	324	15	14.3

Source: District Council data.

- 2.55 In addition to the municipal recycling centres, CDC has 59 school recycling centres. These are similar facilities to the municipal centres and do have limited public access. Due to Health and Safety reasons there are only a few schools who have glass recycling facilities. There are also 20 sites at flats and Aged

Persons Developments for paper collection. Since 1995, bins for paper collection have also been provided to 57 schools in the WDC area, along with 44 flats and Aged Person Developments.

- 2.56 In Aylesbury Vale, bins have been provided to schools and sheltered housing units for the collection of newspapers, magazines, cans and plastics.

(iv) Bulky Waste

- 2.57 Collections of bulky waste (such as furniture but excluding DIY materials) are offered free in the SBDC area; and on a subsidised basis in WDC, CDC, and AVDC.
- 2.58 All refrigerators and freezers are collected free of charge in the SBDC and CDC areas, and on a subsidised basis within Wycombe and Aylesbury Vale districts. Once collected they are delivered to the County Council at the High Heavens complex. From January 2002, an EU Regulation on ozone-depleting substances requires all chlorofluorocarbons (CFCs) - an ozone depleting gas - to be recovered from the insulation foam in fridges before disposal. This is in addition to the CFC gases used as coolant material in older fridges that was already a requirement to be safely collected to avoid release to the atmosphere. However the necessary foam treatment plants do not yet exist anywhere in the country and so, for the present, WDAs are having to store the fridges that they accept at civic amenity sites or are delivered to them by the WCAs. It is hoped that processing facilities will become available during the course of 2002.
- 2.59 AVDC also partly fund "Furniture Aid" to allow the sale and reuse of serviceable household items; with a similar scheme, Central Aid, provided in Wycombe district.

(v) Clinical Waste

- 2.60 Clinical waste collections are made free of charge to residential properties. The waste collected from the WDC and CDC areas is delivered to Wycombe Hospital under an agreement made by the County Council and it is removed off site for incineration. A similar arrangement is made with St Albans Hospital for the AVDC area. Clinical waste from within the SBDC area is taken to the Grundon incinerator in Colnbrook.

(vi) Abandoned Vehicles

- 2.61 Abandoned vehicles are identified and removed for disposal following display of seven-day-to-destruction notices. Each partner authority has different arrangements for collection and disposal. Vehicles from within WDC are taken to High Heavens and from the CDC area to a local scrapyard.
- 2.62 AVDC has recently entered into a joint initiative with Thames Valley Police for the removal of these vehicles. The scheme, which is the first of its kind in the Thames Valley region, has enabled the council to reduce the time taken to

remove abandoned vehicles from approximately 6 weeks to 2 weeks. The scheme has also greatly helped AVDC to deal with the ever-increasing volume of reported abandoned vehicles which saw the council received 1,722 reports of abandoned vehicles in 2000/01 resulting in 517 removals.

Recent Recycling Performance

- 2.63 Buckinghamshire's recycling rate during 2000/01 was 23%. The recycling performance varies within the County.
- 2.64 A summary of the recycling performance for each Buckinghamshire authority for 2000/01 is set out in **table 2i** below.

Table 2i: RECYCLING PERFORMANCE IN BUCKINGHAMSHIRE (March 2001)

	Collected (tonnes, rounded)	Recycled (tonnes, rounded)	Recycling rate (% , rounded)
AVDC	56,600	7,900	14%
CDC	31,700	8,300	26%
SBDC	25,800	5,000	19%
WDC	65,800	7,200	11%
BCC	72,700	30,300	42%
TOTAL	252,600	58,700	23%

Source: County and District Council data.

Potential for Municipal Waste Arisings to Increase

- 2.65 A key challenge for Buckinghamshire is to stop the gains in recycling being consumed by the increase in the overall volume of waste that is generated each year. However, it is first important to predict the future growth in waste arisings. This in turn requires certain assumptions to be made.

Assumptions about future growth in waste arisings

- 2.66 The OWG has completed a round of spreadsheet projections based upon the following assumptions:
- Municipal waste is projected to grow at 1.5% a year for the Chiltern and South Bucks district council areas and 2.5% a year within the Aylesbury Vale and Wycombe districts. The growth rate selected for the County Council's HWRCs was 1.0% a year. These various growth factors are all based upon recent actual rates;

- Projected household waste is assumed to follow projected municipal waste (with a technical adjustment for AVDC to allow for current trade waste collection by the internal service provider);
- The individual waste streams - cans, glass, paper, textiles and green waste - are each projected forward to 2021 at a rate consistent with the growth in arisings;
- No contribution has been included from home composting in the final projections in accordance with recently received Government advice;
- The recycling rate of waste brought to HWRCs is projected to grow at 1.0% a year for all materials accepted throughout the strategy period to 2020/21.

Projected Buckinghamshire Municipal Waste Arisings to 2021

2.67 Buckinghamshire's municipal and household waste arisings are expected to increase by nearly half in the period to 2021 (table 2j below).

Table 2j: PROJECTED MUNICIPAL WASTE ARISINGS IN BUCKINGHAMSHIRE TO 2021

	Projected Municipal Waste (tonnes, rounded)	Projected Household Waste (tonnes, rounded)
2000/01	246,600	240,900
2005/06	270,500	270,500
2010/11	297,000	297,000
2015/16	326,500	326,500
2020/21	359,300	359,300

Source: County and District Council data.

Stakeholder Participation in Strategy Development

The participatory process

- 2.68 To prepare a comprehensive long-term waste strategy for the county that extends over some twenty years is beyond the ability of any partner organisation or agency to deliver. The involvement of a large number of stakeholders will be necessary to draft and assess the various waste management options that need to be considered in the generation of the final strategy.
- 2.69 The Forum considered that, initially, priority should be given to seeking the views of Buckinghamshire residents that would help form the various waste

management options that would be used for the purposes of stakeholder consultation. In particular, it was considered essential to assess the attitude of residents towards both the new sustainable waste technologies and the new handling and collection arrangements that are likely to be required to help meet the targets.

The Householder Survey (April 2001)

- 2.70 During April 2001 the partner authorities undertook a Householder Survey of waste behaviour and attitudes as a cost-effective method of seeking the views of a large number of people who are statistically representative of the whole population. This comprised a Questionnaire (with accompanying Explanation Notes) the content of which was prepared and agreed by the BWF. Most of the questions related to national waste targets but there were also a number aimed at local waste collection and recycling. The mailing and preliminary analysis of returns was undertaken by a leading market research consultant, Cooper Moruzzi, based locally.
- 2.71 Some 13,200 Buckinghamshire households were asked to complete the Questionnaire and return it in a pre-paid envelope. This sample was designed to achieve a statistically significant level of response for each of the District Council areas as well as for the County. A number of modest prizes were also offered to enhance the response rate. In common with other similar postal surveys, an enclosure with the Questionnaire offered large print or a translation into Urdu or Gujarati.
- 2.72 A very positive overall response rate of 38% was achieved. The preliminary results of the Householder survey were reported to the BWF at its meeting on the 23 May 2001.
- 2.73 The main findings of the survey of particular relevance to the preparation of the WSB were:
- Overall 93% of the households sampled recycle their household waste;
 - Of those who have a garden, 61% already compost their garden waste;
 - Across Buckinghamshire, 43% say they compost kitchen waste;
 - Of those who do not currently compost their garden and kitchen waste, 84% would accept separating these from other waste and placing it in a container for a household collection;
 - Of those who answered, 72% said they would not be prepared to pay an additional charge of, say, £30-£35 per household a year to have garden waste collected fortnightly from their home;

- Of those who answered, 52% would not be prepared to accept alternate weekly collections of refuse with recycling collections with 48% agreeing to this proposal;
- With regard to the aims of the WSB: 99% agreed that it should seek to minimise waste; the same percentage that it should increase re-use, recycling and composting; and 97% that it should reduce the amount of waste sent to landfill sites;
- The most popular measure to encourage people to recycle more was to collect additional recyclable materials from householders' homes (95%);
- Of the various alternatives for managing waste 99% strongly agreed or agreed with a greater role for recycling; 95% with composting of collected green waste; 91% with incineration with energy recovery; and 28% with more landfill.

2.74 These findings have been fed into the waste management initiatives that are recommended in this final Waste Strategy for Buckinghamshire.

The public consultation on the draft WSB (September-October 2001)

2.75 The Forum, at its meeting of 26 June 2001, endorsed the draft Waste Strategy for Buckinghamshire for consultation with the public and interested bodies. It agreed the recommendations for future action contained in the report and the proposed arrangements for consultation.

2.76 The consultation on the draft Strategy took place between Monday, 3rd September 2001 and Friday, 12th October 2001 (6 weeks). Consultees (organisations and individual members of the public) were provided with appropriate consultation materials. These materials were supplemented by press releases and other information made available to the public (e.g. copies of the full document placed in libraries). All consultees were encouraged to make a response upon the proposals and recommendations contained in the draft WSB using a customised form.

2.77 The consultation with organisations primarily took the form of a mailed draft WSB sent to interested bodies (e.g. Parish Councils, adjacent local authorities, the waste industry and environmental groups) together with an associated Response Form. Some 2,000 each were printed of the Strategy and Form, and these were distributed to various consultees. Since the draft WSB was predominantly sent to organisations it was considered reasonable to ask for a response upon each of the Strategy's draft recommendations.

2.78 Consultation with the public was primarily through exhibitions held within each district council area at which a leaflet was distributed setting out the main recommendations of the draft WSB. The leaflet set out the main issues raised by the WSB and included a detachable Freepost questionnaire seeking the public's views upon these issues. Some 15,000 copies of the leaflet were

printed. Public exhibitions were held in all local authority areas in Buckinghamshire.

- 2.79 The response to the consultation was generally good, and the Forum considered all responses made at its meeting of 9 January 2002. As a result it called for a number of changes to the consultation draft report which appear in this *final* Waste Strategy for Buckinghamshire.

3.0 - THE CHALLENGE FOR BUCKINGHAMSHIRE

Introduction

- 3.1 Section 2 above has set out the existing context for waste management in Buckinghamshire. This section identifies the scale of the challenge facing the county in addressing local "Best Value" (*Guidance on Municipal Waste Management Strategies*) and national (*Waste Strategy 2000*) standards and targets. It does this by comparing projections of future arisings with those for the existing recycling and composting schemes identified earlier for the entire Strategy period to 2021.
- 3.2 This exercise has, not surprisingly, identified a significant, and growing, shortfall between the future targets for the recycling or composting of household waste, the recovery of value from municipal waste and the diversion of biodegradable municipal waste and what is expected to result from existing programmes.

Projected Buckinghamshire Municipal Waste and National Targets to 2020/21

- 3.3 The projected future growth in municipal waste arisings has been discussed earlier in paragraphs 2.65 and 2.66 above. The BWF has also projected the performance of existing recycling schemes up to 2020/21 using agreed assumptions for the growth in each material collected up to a maximum ceiling of participation (Appendix E).
- 3.4 **Table 3a** below shows that municipal waste arising in Buckinghamshire is projected to rise from some 246,600 tonnes to 359,300 tonnes at 2021 (an increase of 112,700 tonnes or some 46% over the WSB period).

Table 3a BUCKINGHAMSHIRE: PROJECTED MUNICIPAL WASTE GROWTH, RECYCLING PERFORMANCE AND NATIONAL TARGETS (tonnes)

	Projected Municipal Waste	Estimated Recycling or C'posting	National Target for Recovery	Balance for Recovery
2000/01	246,600	56,700 (23%)	-	-
2005/6	270,500	60,600 (22%)	108,200 (40%)	47,600
2010/11	297,000	64,700 (22%)	133,700 (45%)	68,900
2015/16	326,500	69,200 (21%)	218,800 (67%)	149,600
2020/21	359,300	74,000 (21%)	No target	No target

Source: County and District Council data

Arisings @ +1.5% pa for CDC & SBDC; +2.5% pa for AVDC & WDC; +1% pa for HWRCs.

- 3.5 Over the strategy period the percentage of municipal waste that is recycled or composted is projected to increase at a rate consistent with the growth in arisings as a "robust" assumption. When compared to the national recovery targets (*Waste Strategy 2000*), the indicated shortfall rises from some 47,600 tonnes at 2005/06 to 149,600 tonnes at 2015/16 (or by 214%).
- 3.6 There is no national target for 2021 but if the Government were to maintain the 67% recovery requirement beyond 2016, the indicated shortfall would be some 166,700 tonnes by the end of the WSB period.
- 3.7 From the predicted growth rate of municipal waste and of the various materials currently collected for recycling, it is clear that the county will not meet the targets in the Government's waste strategy without additional provision being made to divert waste from landfill. The indicated shortfall which remains between what is recycled or composted and the recovery targets for municipal waste indicates the need for additional recovery of value and further opportunities for diversion of waste from landfill.

Projected Biodegradable Municipal Waste (BMW) and EC Landfill Directive Targets to 2020

- 3.8 **Table 3b** below shows the expectations arising from the projections with regard to future BMW compared to the mandatory targets of the EC Landfill Directive (see Appendix A, *Glossary*).

Table 3b BUCKINGHAMSHIRE: PROJECTED BIODEGRADABLE MUNICIPAL WASTE (BMW) AND REQUIRED DIVERSION FROM LANDFILL (tonnes, rounded)

	Projected BMW¹	Permitted Landfill	Required Diversion of BMW	Projected Amount of BMW Diverted	Shortfall
1995/96	136,400	-	-	-	-
2009/10	174,900	102,300	72,600	48,000	24,600
2012/13	185,100	68,200	116,900	49,900	67,000
2019/20	211,500	47,800	163,700	54,800	108,900

Source: County and District Council data.

¹BMW @ 60% of municipal waste

- 3.9 The required recovery of BMW, after permitted landfilling, will rise from some 72,600 tonnes at 2010 to 163,700 tonnes in 2019/20 – an increase of 125% (91,200 tonnes) over the decade. However the estimated increase in the recycling or composting of BMW under existing programmes during this

period is only from some 48,000 tonnes to 54,800 tonnes.

- 3.10 The projected **shortfall** between the amount of BMW which can realistically be recycled or composted under existing schemes and that which should be diverted from landfill grows by some 440% to 108,900 tonnes at 2019/20.

Indicated Requirement for Municipal Waste Treatment Capacity.

- 3.11 The identified potential shortfalls against targets shown above can be used to indicate the requirement for municipal waste management capacity that the WSB should seek to address.
- 3.12 **Table 3c** below shows, again, the amount of municipal waste likely to be generated in Buckinghamshire to 2021 (Row A), together with the amount of waste that is expected to be recycled or composted under existing programmes (Row B). Row D shows the tonnage of municipal waste recovered if the national target is to be met.
- 3.13 Row C shows the amount of "recovery" capacity that will be required as a minimum in order to meet the government's targets, once the recycling figure has been subtracted from the total recovery figure ("recovery" includes recycling, composting, and energy from waste incineration). **This identifies one area in which Strategy decisions will be required.**
- 3.14 Row E shows the amount of waste that must still be handled after the municipal waste recovery targets set out in *Waste Strategy 2000* have been met i.e. what could still be landfilled. Row F shows the maximum amount of biodegradable municipal waste (BMW) that can be landfilled in Buckinghamshire if the county stays within Landfill Directive target limits.
- 3.15 Row G shows the remainder to be disposed of after the EU Landfill Directive and national targets have been met. **This is another key area in which strategy decisions will need to be made.**

Table 3c BUCKINGHAMSHIRE: INDICATED REQUIREMENT FOR MUNICIPAL WASTE TREATMENT CAPACITY, 2000 TO 2020 (tonnes, rounded).

		2000/01	2005/06	2010/11	2015/16	2020/21
A	Municipal waste arisings	246,600	270,500	297,000	326,500	359,300
B	Household waste recycling and composting (growth of existing schemes)	56,700	60,600	64,700	69,200	74,000
C	Additional recovery of municipal waste to meet government targets (i.e. by further recycling and composting or by "high tech" solution)	No target	47,600	68,900	149,600 <i>NB that at least 40,170 tonnes of this will have to be by recycling or composting</i>	[166,700] <i>NB assumes that recovery target for 2015 (67%) is rolled forward</i>
D	Recovered municipal waste (national target met)	No target	108,200 (40%)	133,700 (45%)	218,800 ¹ (67%) <i>NB at least 109,400 tonnes to be recycled or composted</i>	[240,700] [67%] <i>NB assumes target for 2015 (67%) is rolled forward</i>
E	Total amount of municipal waste requiring treatment after recovery targets have been met ("maximum permitted landfill")	189,800	162,300 (60%)	163,400 (55%)	107,800 (33%)	[118,600] [33%] <i>NB assumes that recovery target for 2015 (67%) continues</i>
F	EU Landfill Directive limits for BMW ("permitted BMW landfill")	No target	No target	102,300 (75%)	68,200 (50%)	47,800 (35%)
G	Remainder requiring disposal after recovery and BMW landfill targets have been met.	189,800	162,300	61,000	39,500	70,800

¹ At least half of the recovery target at 2015 is to be met by recycling or composting.

Projected Buckinghamshire Household Waste, Statutory Performance Standards and National Targets to 2020/21

3.16 **Table 3d** below shows the amount of household waste projected to arise in the county to 2021 and that which is projected to be recycled or composted by the WCAs and at the County Council’s HWRCs. This latter is then compared with the *Waste Strategy 2000* targets.

3.17 Household waste arisings show a projected growth of 118,400 tonnes (49%) to 359,300 tonnes at 2021. The indicated increase in the amount of waste recycled or composted over the period is from 56,700 tonnes last year to 74,000 tonnes at 2020/21 (some 17,300 tonnes or 30%). The projected recycling rate gently falls through the strategy period from 23.6% at present to 20.6% in 2021. For much of this period the rate of growth in existing recycling and composting programmes is largely absorbed by growing arisings.

Table 3d BUCKINGHAMSHIRE: PROJECTED HOUSEHOLD WASTE GROWTH, RECYCLING PERFORMANCE, STATUTORY PERFORMANCE STANDARDS AND NATIONAL TARGETS.

	Projected Household Waste (HW) (tonnes, rounded)	HW Recycled/ Composted (tonnes, rounded)	Projected Percentage HW Recycled or Composted	SPS or Nat. Target	Shortfall (tonnes, rounded)
2000/01	240,900	56,700	23.6%	-	-
2003/4	260,600	59,000	23.2%	33%	27,000
2005/6	270,500	60,600	22.4%	36%	36,800
2010/11	297,000	64,700	21.8%	[30% ¹]	-
2015/16	326,500	69,200	21.2%	[33% ¹]	-
2020/21	359,300	74,000	20.6%	-	-

Source: County & District Council data.

¹ National recycling target

3.18 At 2003/04, to meet the 33% statutory performance standard (SPS) for Buckinghamshire set out in Table A-2 of the *Guidance on Municipal Waste Management Strategies*, the county should be recycling or composting some 86,000 tonnes of household waste, rather than the 59,000 tonnes expected – a shortfall of some 27,000 tonnes. This implies a need to be recycling at a level one-fifth above that projected in 2003/04, if the standard is to be achieved.

- 3.19 By 2005/06, to meet the corresponding 36% standard for the county, we should be recycling or composting some 97,400 tonnes (rounded) of household waste, rather than the 60,600 tonnes expected – a shortfall of some 36,800 tonnes. This implies a need to be recycling at a level 60% higher than that projected for 2005/06, if the standard is to be achieved.
- 3.20 The Government has, as yet, not identified any SPS targets beyond 2005/06 (although these are likely to be set in later years). The latest national target for the recycling and composting of household waste is for at least 33% to be so managed at 2015. This implies that a higher standard will be in force for Buckinghamshire at that time (for example, although the national target for 2005 is 25%, our SPS is 33%). For this reason, and because the Buckinghamshire authorities will expect to consistently improve recycling performance even where targets have already been achieved, we have assumed that a rate of 40% for the county will prevail at 2015 (or some 130,600 tonnes to be recycled or composted). This is the same percentage as the 2005/06 SPS shown for the best performing authorities in the *Guidance*. On this basis the projected shortfall at 2015 would be some 61,400 tonnes. We have assumed that this rate will be maintained thereafter to 2021.
- 3.21 In summary, the indication is that the growth in recycling and composting expected from existing programmes will not meet the mandatory targets for household waste and that additional measures will be necessary.
- 3.22 The SPS targets contained in the *Guidance* are also applied at the district council level. **Table 3e** below shows the respective performance of the authorities when the projected household waste arisings and the projected output from existing recycling schemes are compared to the individual performance standards.
- 3.23 Each district area will have a shortfall against its SPS targets for 2003/04 and 2005/06. The extent of the shortfall varies considerably between the districts, with the greatest shortfalls occurring in WDC (some 14,500 tonnes) and AVDC (some 14,300 tonnes) at 2005/06. This relates to the lower recycling performance of the larger urban areas of High Wycombe and Aylesbury.

Table 3e: BUCKINGHAMSHIRE: INDICATED RECYCLING SHORTFALLS AT 2003/04 AND 2005/06 AGAINST STATUTORY PERFORMANCE STANDARDS

	Projected Household Waste (HW) Arising (tonnes, rounded)	Projected HW Recycled/ Composted under existing programmes (tonnes, rounded)	Statutory Performance Standard (percent)	SPS Requirement (tonnes, rounded)	Indicated Shortfall (tonnes, rounded)
AVDC					
2003/04	60,900	8,400	26%	15,800	7,500
2005/06	64,000	8,800	36%	23,000	14,300
CDC					
2003/04	33,100	8,800	33%	11,000	2,100
2005/06	34,100	9,100	40%	13,600	4,600
SBDC					
2003/04	27,000	5,100	33%	8,900	3,800
2005/06	27,800	5,300	40%	11,100	5,800
WDC					
2003/04	70,800	7,700	20%	14,200	6,500
2005/06	74,400	7,900	30%	22,300	14,500
HWRCs					
2003/04	68,800	29,000	N/A	N/A	N/A
2005/06	70,100	29,600	N/A	N/A	N/A
BUCKINGHAMSHIRE					
2003/04	260,600	59,000	33%	86,000	27,000
2005/06	270,500	60,600	36%	97,400	36,800

Source: County and District Council data

Future Waste Shortfalls

3.24 **The above comparisons of projected municipal and household waste together with the projected performance of current recycling arrangements in Buckinghamshire indicate that, whilst successful, the latter will not be sufficient. There will be shortfalls against future targets.** We shall be unable to achieve the requirements of the forthcoming SPS standards, the targets in the Government's waste strategy or EU Landfill Directive without additional measures to increase recycling and composting and to divert waste from landfill.

3.25 The indications are that Buckinghamshire will have:

Municipal Waste

- **a 149,600 tonne shortfall in the "recovery" (by recycling, composting or energy recovery) of municipal waste at 2015**
- **a 108,900 tonne shortfall in diverting organic household waste from landfill to other treatment processes by 2020**

Household Waste

- **a 27,000 tonne shortfall in the recycling and composting of household waste at 2003/04**
- **a 36,800 tonne shortfall in the recycling and composting of household waste at 2005/06**

3.26 **The WSB therefore proposes additional and new ways of managing our waste to meet our performance standards and national targets. These follow in section 4 below.** The projection exercise has shown the importance of enhancing existing recycling schemes, introducing new ones, and of the fundamental need to address the diversion of biodegradable wastes from landfill to achieve local compliance with the EC Landfill Directive.

4.0 - RECOMMENDED INITIATIVES FOR FUTURE WASTE MANAGEMENT IN BUCKINGHAMSHIRE

Introduction

- 4.1 This section of the WSB considers additional and new ways of managing our waste to meet our local performance standards and national targets through to 2021 and makes consequent *recommendations* for action that should be taken by the partner authorities during this period. Due to the increasing uncertainties that arise with time - both in projecting waste arisings and diversion and the national policy context - the Forum has felt able (after evaluation) to recommend more detailed initiatives for the earlier part of the strategy period, say to 2010, than for later years. The structure of this section of the WSB reflects this difference.

The Core Principles to 2021

- 4.2 The WSB will be guided by the following core principles which will promote action to achieve more environmentally sustainable waste management in Buckinghamshire.

The Waste Strategy for Buckinghamshire will:

Secure a long term and sustainable strategy for the management of wastes for which the Buckinghamshire authorities are collectively responsible (under the EPA 1990);

Develop a way forward that recognises the funding constraints of the local authorities and the long-term financial commitment that will be required to implement the Strategy;

Implement initiatives that will increase the sustainability of waste management, and improve recycling and recovery rates in line with national policy objectives and the EU Landfill Directive;

Continue to promote waste minimisation, increase recycling and composting through a combination of intensive kerbside collection, more bring sites, more materials recovered from HWRCs, and centralised composting (subject to stable markets, consistent products and sufficient demand to provide cost-effective collection services);

Recognise that the transportation of waste itself has an environmental impact and, that in accordance with the Proximity Principle, Buckinghamshire's waste should generally be managed as near as possible to its place of production;

Be broadly self-sufficient in dealing with our waste and to send our waste outside Buckinghamshire for treatment only where this is the best environmental option and a necessary process is not available within the county;

Recognise that there will be a longer-term role for high technology waste management methods, including incineration with energy recovery, for the management of Buckinghamshire's biodegradable waste in line with national policy objectives and the EU Landfill Directive.

4.3 A number of goals flow from the above principles. The WSB should aim to:

- minimise waste in the first instance and, thereafter, to stimulate recycling and recovery of waste so as to increasingly reduce the need to landfill. Disposal at landfill will normally be the last resort;
- get more material from existing schemes ("enhancement") and the provision of additional bring facilities;
- increase the recycling of waste materials through the separate kerbside collection of more (pre-sorted) recyclable materials from residents' homes;
- maximise recycling and the segregation of Green Waste at the Household Waste and Recycling Centres (HWRCs) for composting and provide sufficient processing capacity at a central composting facility;
- increase the composting of Green Waste, where necessary, by the kerbside collection of separated Green Waste (garden waste) from households and processing it at a managed central composting facility;
- increasingly make use of high technology waste recovery methods, including energy from waste (EfW), in order to achieve the diversion targets for biodegradable waste that cannot be recycled or composted;
- within the context of the BPEO, and mindful of the need to restore existing landfills, continue to landfill the residue which is left after recycling or recovery processes to around the permitted level whilst this remains cost-effective;
- strengthen joint working arrangements between the partner authorities by agreeing a formal "Memorandum of Understanding".

4.4 Each authority will need to undertake some investment in new waste management measures to achieve their respective targets. However Wycombe and Aylesbury Vale districts have to make the largest increases to meet their individual Statutory Performance Standards in the period to 2005/06 (see

paragraph 3.22 above). The strategy will adopt a flexible approach to establish both the best practical environmental option and the most cost-effective solution for the municipal waste stream that arises in each partner authority's area.

The environmental case for exceeding national recovery targets

- 4.5 While the *Waste Strategy 2000* targets set a challenging agenda for Buckinghamshire, the initiatives identified in this strategy could lead to Buckinghamshire exceeding some of the national targets.
- 4.6 The partner authorities are bound by the Best Value legislation to deliver good quality services in a cost-effective manner. Nevertheless, the BWF has also agreed that maximum environmental protection is to be the guiding principle for the preparation of the WSB. Therefore, as part of this commitment to the environment, provided it is cost-effective, the partner authorities will wish to proceed with identified options even where a relevant target is likely to be exceeded.

Partnership Arrangements to Deliver the Waste Strategy for Buckinghamshire

- 4.7 To achieve the aims of the WSB and to meet the respective targets for recycling, recovery and diversion will require even closer working between the partner authorities than has hitherto been the case. This will extend to the matters contained within future waste management contracts. As a vehicle to assist this high level of co-operation the BWF recommends that the Buckinghamshire local authorities agree a formal *Memorandum of Understanding* covering the period to 2021 (see **RECOMENDATION 01 - "REC 01"** - at the end of this section, and the *Foreword* to this Strategy).

Short and Medium-term Waste Minimisation Initiatives

- 4.8 The partner authorities will continue to develop and extend their existing and proposed waste minimisation projects (see paragraphs 2.12 to 2.26 above), and the Buckinghamshire waste minimisation initiative. The latter is expected to suggest further projects to promote increasing home composting, market development for recycle, re-use of unwanted clothes and household goods and packaging waste reduction. The authorities will continue to extend the scope of waste minimisation initiatives and will be proactive in devising projects eligible for partnership and external sources of funding (**REC 02**). The main aims of the waste minimisation initiatives are to reduce the level of household waste requiring treatment or disposal, and working with other waste producers in Buckinghamshire to reduce the amount of waste they produce. The overall target for waste minimisation (table 4a) [recommended initiative1] is a **0.5% per annum reduction in waste arising per household by 2003/2004**. The main indicator of this will be a reduction in the average tonnage of household waste collected from each household. This "headline" target will only be

achieved through the promotion of a number of linked waste minimisation initiatives. Many of these already exist; others will be commenced before 2003/04. Specific targets for each initiative are set out below. Progress against targets will be directly monitored as initiatives are progressed and also by a survey of householders when this WSB is reviewed.

Minimising Household Waste

Householder Education and Publicity

- 4.9 An important mechanism to help achieve the reduction of waste will be the education of householders to understand the environmental, social and resource consequence of high levels of waste production. Waste minimisation initiatives will therefore include regular radio advertisements across the county focussing on home composting and the reuse of clothes and textiles. A number of roadshow events are also planned which will focus on the larger food supermarkets. Information leaflets will be distributed to the public to support these initiatives, and guidance upon waste minimisation will be included on the County Council's web site. The target will be:

- **To run a series of public awareness campaigns, to include radio advertising, minimisation "roadshow events, leafleting of communities, and a dedicated Web Site by 2003/04.**

Home Composting

- 4.10 The enhancement of the existing countywide home composting promotion will be an important initiative. To the end of March 2001 some 19,900 home compost bins had already been distributed to residents within Buckinghamshire. The authorities will increase composting by running "workshops" which will target communities that presently have a low uptake of compost bins. There will also be an initiative to provide all schools that wish to participate with a compost bin(s). The relevant targets are:

- **To distribute at least another 10,000 compost bins by 2003/2004.**
- **At least 50% of householders with gardens to be home composting kitchen and garden waste by 2005/6.**

- 4.11 Further initiatives to increase home composting which will be considered will include:

- Regular newsletters to existing compost bin owners to encourage continued use of bins,
- The establishment of a countywide home composter advisor network to help ensure that householders carry on composting once they have purchased a compost bin. Possible partners in the delivery of this

project include British Trust for Conservation Volunteers and the Henry Doubleday Research Association ("the Organic Association"),

- The support of community composting initiatives.

Real Nappy Campaign

4.12 The existing Real Nappy Campaign offers parents subsidised access to the local nappy laundering service and promotes the use of real nappies via leaflets and posters and display boards in local hospitals, surgeries and health clinics. The authorities are presently encouraging maternity units and nurseries to adopt real nappy policy. The Real Nappies target is for:

- **At least 2 maternity units and 2 nurseries within Buckinghamshire to be using reusable nappies by 2003/2004.**

4.13 Future possible initiative to encourage use of Real Nappies which will be assessed include:

- Establishment of real nappy advice networks. Such a network would actively engage and encourage community group involvement. Potential delivery partners include the National Childbirth Trust and the Women's Environmental Network;
- Introduction of a voucher scheme to subsidise both parents choosing to buy and wash their own reusable nappies and those who wish to use a nappy laundry service;
- Leaflets and posters to be placed in baby changing rooms at major retail stores.

Repair and Reuse and goods and furniture

4.14 Two household goods/furniture repair and reuse projects already exist within the County. The Forum wishes to encourage further waste exchanges; scrap stores and furniture reuse organisations. The target will be:

- **To assess the potential for a countywide repair and re-use action programme and Directory by 2003/2004.**

New Households

4.15 Recognising that there will be future major household development within Buckinghamshire, particularly around Aylesbury, it will be important to ensure that land-use development plans include policies that will facilitate the provision of on site recycling and possibly composting facilities within these developments and households. The target will be:

- **All new development plans within Buckinghamshire to include waste recycling and minimisation policies.**

Minimising Waste in Schools

4.16 Whilst public education will be an important part of achieving waste minimisation, the inevitable long-term success of reducing waste will be via schools education. The District Councils currently work closely with their respective schools in delivering the recycling and waste minimisation messages and such initiatives should be supported and expanded. A number of initiatives are underway and will be further developed e.g. the provision of composting bins to schools, where requested, in order for teachers and pupils to actively undertake waste minimisation; the provision of information to schools, via waste minimisation teaching packs; a waste minimisation theatre-in-education programme; and the development of a pilot school waste minimisation programme (which will recycle a number of materials), and possible extension throughout the county. The target for this area of work will be:

- **To provide all schools in Buckinghamshire with the opportunity to have a compost bin(s) by 2003/2004.**

Minimising Waste in Local Authorities

4.17 All member local authorities by their own actions can have a significant impact on waste productions. All service areas have the potential to generate a wide and significant range of waste. Therefore an important initiative will be to ensure that member authorities aim to minimise waste through their own and associated contractors activities. It is very important that member authorities set a good example by ensuring that internal waste minimisation practices have high-level support within the respective organisations. There is an existing active programme to provide paper-recycling facilities in all local authority offices in Buckinghamshire. The target will be:

- **All council offices will have access to paper-recycling facilities by 2003/04.**

4.18 Possible further local authority initiatives, which will be considered by the partner authorities, will include:

- Enhancement of office recycling to include recyclable materials other than paper;
- Carry out internal waste audits of council premises and services,
- Introduce a programme to all council departments of EMAS (Environmental Management Assessment System) or ISO14001 certification;
- Introduction of a corporate green purchasing policy;

- Carry out staff waste minimisation awareness programme;
- Supply/construction contracts to include clauses on take back and use of recycled materials;
- Development of corporate IT policies to specify double sided printers and photocopiers and reuse of obsolete computers.

Minimising Waste in Business

4.19 There are already a number of organisations actively working with businesses with respect to the minimisation of business waste. Indeed CEAC (the Corporate Environmental Advisory Centre of Buckinghamshire Chilterns University College) in partnership with the County Council have already run a number of workshops on the advantages of waste minimisation for small and medium sized businesses. Existing and committed initiatives include the enhancement of the existing seminar programme established for small and medium sized enterprises (SMEs); and the encouragement of business recycling networks, which could include collective waste collection, possible on site reprocessing, and collective green purchasing contracts. The target will be:

- **30% of Buckinghamshire's businesses that have attended a Green Business seminar to initiate a waste minimisation programme(s) by 2003/04.**

4.20 Further business waste minimisation initiatives could include:

- The establishment of a Green Business Award Scheme;

Short and Medium-term initiatives for dealing with the identified recycling shortfalls

4.22 Paragraphs 4.27 to 4.61 below contain a number of identified initiatives designed to address the indicated recycling shortfalls against standards and targets through to about 2010 that were identified in section 3 above (in addition, each authority has its own, and in some cases different, targets to be achieved also). For Government-set targets this period embraces the 2003/04 and 2005/06 Statutory Performance Standards (the "Best Value standards"), the national municipal waste recovery targets for 2005 and 2010, and the first Landfill Directive target. The year 2010 has a particular significance since the forthcoming system of tradable landfill permits (see paragraph 4.50 below) introduces the possibility of financial penalties for non-compliance at that time. The Bucks Waste Forum (BWF) has considered what might be done to address these emerging shortfalls and is recommending a number of *initiatives* that should be implemented by the partner authorities. The recommended initiatives are the result of the options proposed by each authority to meet it's identified

shortfall at 2003/04 and then at 2005/06 which were set out in full in the consultation draft WSB. These options were tested in the draft report and some were subsequently discarded by the Forum. The initiatives so derived appear in table 4a below. Each of the proposals contained in this WSB is consistent with current services provided within each district.

- 4.23 A major "theme" of the options advanced for consideration in the *draft* WSB was the possible adoption of kerbside collection of Green Waste (garden and kitchen waste) by each of the district councils as a way of securing significant tonnage to address the identified SPS shortfalls. These were accompanied by the contingent provision by the County Council of composting facilities at the High Heavens waste disposal complex and Amersham London Road depot sites.
- 4.24 However the estimated costs were substantially higher than for general waste collection and treatment. The Householder Survey (see paragraph 2.71) has shown that, whilst such an option would have been popular with residents, paying for it separately would not. There is also the risk of "inflating" the total amount of waste collected. The success of such schemes would be dependent upon the voluntary participation of householders.
- 4.25 **For these reasons the BWF has concluded that potential shortfalls in meeting the Statutory Performance Standard targets should not be met by the introduction of Green Waste (garden and kitchen waste) collection schemes in Aylesbury Vale, Chiltern and South Bucks districts where other measures are available and more cost-effective.**
- 4.26 Within **table 4a** there are a number of broad "themes" of initiatives which underlie the Forum's detailed recommendations, which are to be found at the end of this section.
- 4.27 The first relate to achieving greater efficiency at the County Council's HWRCs. Recommended actions range from the provision of new sites, the relocation of the site currently serving Beaconsfield, to the re-modelling of existing sites to improve operational efficiency.
- 4.28 The next initiative proposes the introduction of kerbside collection of Green Waste within Wycombe district by the WCA. WDC should progress the development of such a service such that the majority of its households would be so served by 2005/06. The material would then be centrally composted, and a facility should be provided by 2003/04 in the High Wycombe area at High Heavens. Centralised composting - using technology that avoids complaints of smells will be necessary with close collaboration with the provision of infrastructure to contain costs.
- 4.29 Other initiatives are for the kerbside collection of glass (AVDC and SBDC) and kerbside box provision for existing paper collections (WDC). In addition, there are more general themes of enhancements to existing collections and provision of more bring sites.

BCC recommended short and medium-term initiatives for dealing with the identified recycling shortfalls

- 4.30 The County Council can have the greatest effect upon recycling rates by making its HWRCs more operationally efficient. It has identified a number of opportunities that are set out in **table 4a** below. These range through the *relocation of the existing HWRC site for Beaconsfield* [03], to the *extension within the site of the High Heavens* [04] and *Amersham* [08] HWRCs, all by 2003/04. Each of these initiatives would allow a greater throughput of materials and hence facilitate the collection of more recycle.
- 4.31 The projected effect of a new Beaconsfield HWRC site relocated from the existing cramped site at Candlemas Lane, Beaconsfield to a more spacious 1.6 hectare location at Hyde Farm is to provide for three times the current level of recycling - from 1,260 tonnes in 2000/01 to some 3,700 tonnes at the new site by 2003/04 (a net gain of some 2,410 tonnes of new recycled waste).
- 4.32 The net potential gain from all of these HWRC improvements is estimated to be an additional 3,750 tonnes a year diverted from landfill by 2003/04. This would be a major contribution to the Buckinghamshire SPS shortfall at that time.
- 4.33 Developing a *central composting facility* (to support the kerbside collection of Green Waste by Wycombe District Council and the growing need to compost the Green Waste separated at Household Waste Sites) at *High Heavens* [05] HWRC by 2003/04.
- 4.34 *Provide one or more new HWRCs* [02] and *extend within site at Buckingham* [06] and *Chesham* [07] HWRCs by 2005/06 to meet increasing demand and reduce queuing.
- 4.35 The recommended actions identified above for completion by 2005/06 would make an estimated 2,970 tonne contribution to the Buckinghamshire SPS requirement at that time.

AVDC recommended short and medium-term initiatives for dealing with the identified recycling shortfalls

- 4.36 The early proposals for Aylesbury Vale by 2003/04 include the provision of additional bring scheme facilities. These are proposed *for cardboard and mixed paper* [14] and for *25 new sites for various materials* [15] – and will include facilities to serve areas of new properties.
- 4.37 However further recycling will be necessary if the 2003/04 SPS is to be met. An additional recommended initiative is therefore for the *kerbside monthly collection of glass using box/basket to 60% of premises* [12]. For both materials separate collection guarantees material that is cleaner and has a higher value to the reprocessors, but success depends upon the

householder being willing to separate and store waste, and on there being a market for the material.

- 4.38 However these recommended actions would still leave AVDC with a 2003/04 SPS shortfall of 3,870 tonnes (**Appendix F**).
- 4.39 Further action would therefore be necessary after 2003/04. That recommended is for the *kerbside monthly collection of glass using box/basket to remaining 40% of premises* [13] by 2005/06.
- 4.40 AVDC would have a considerable deficit of some 9,760 tonnes at 2005/06. However there is an alternative, which could be available from 2004 (see paragraph 4.48).

CDC recommended short and medium-term initiatives for dealing with the identified recycling shortfalls

- 4.41 In order to optimise recycling rates and to divert biodegradable waste from landfill in line with the targets set by the European Landfill Directive beneficial waste management measures include the enhancement of the existing waste paper collection.
- 4.42 *Enhanced kerbside collection of glass* [17] and the *Enhanced kerbside collection of paper* [16] by 2003/04. Chiltern's Waste Paper Collection is made available to 100% of the District and the participation rate is around 85%. There also seems to be a small decay in the quantity of material collected. One measure would be to tackle both increasing the participation rate and to increase the volume of material collected. This would be a function of an increase in information and advice.
- 4.43 These recommended actions could give CDC a 2003/04 SPS surplus of 634 tonnes, but would not meet the standard at 2005/06 leaving the district with a modest indicated shortfall of some 1,800 tonnes.
- 4.44 In addition, it may be possible to add additional materials to the existing glass collection rounds such as mixed cans, textiles and plastics. The latter would create problems with volume on the existing vehicle but if a market were available for shredded mixed plastics this could be considered.

SBDC recommended short and medium-term initiatives for dealing with the identified recycling shortfalls

- 4.45 *Enhancement of existing recycling schemes* [19] and the *provision of a kerbside glass collection scheme* [20] by 2003/04.

- 4.46 These initiatives would be almost sufficient to meet the expected 2003/04 SPS shortfall for SBDC, leaving an estimated 294 tonnes deficiency.
- 4.47 SBDC would have a modest shortfall of some 2,390 tonnes against its 2005/06 SPS target. This could be addressed in other ways (see paragraph 4.48).

WDC recommended short and medium-term initiatives for dealing with the identified recycling shortfalls

- 4.48 In order to optimise recycling rates and divert biodegradable waste from landfill, the suggested waste management actions for Wycombe district include the enhancement of the existing waste paper collection and the introduction of the kerbside collection of Green Waste. The collection is to build on the success of the existing trial (Bio-Back) in the Bourne End area.
- 4.49 Wycombe's waste paper collection is currently provided to around 85% of the district (some 55,000 properties). Although the majority of the district present their paper in carrier bags or cardboard boxes, a kerbside box trial to 6,000 properties has demonstrated an average increase in the tonnage of waste paper collected of around 88% in that area. Providing kerbside boxes to the rest of the paper collection will therefore work to optimise usage rates. An initiative to provide a *paper collection service with kerbside boxes to 85% households* [22] by 2003/04 has therefore been advanced for consideration. It is estimated that this may initially increase the amount of paper collected by approximately 60% from 4,670 tonnes to around 7,000 tonnes.
- 4.50 The WDC Bio-Back trial is provided to 650 residents (1% of district) and green kitchen and garden waste is collected from brown-wheeled bins on a fortnightly basis. The trial was first introduced in 1994 and has proven to be very popular with residents. The area has a high recycling rate and new residents are keen to join the scheme. Expanding the collection to the 85% of the district that has wheeled bins would work to optimise the diversion of organic material from the waste stream. A proposal to provide a *Wheeled bin Green Waste collection to 85% of households* [24] by 2003/04 therefore features in table 4a. However, this enhancement is dependent on the provision of a locally based centralised facility. It is estimated that some 9,500 tonnes could be recovered through a kerbside collection. Kerbside collection of green waste has the potential to increase the total quantity of material being offered for collection. The size and nature of the collection container will have to be given detailed consideration along with the total volume of capacity being offered to residents. The extent and nature of collection facilities provided will also be dependent on the process available for treatment of the waste. Initially collections will be limited to green and unprocessed kitchen waste. Once the regulatory requirements have been resolved and facilities developed that meet the prescribed treatment levels it will be possible to consider expansion of the collections to include a wide variety of putrescible kitchen wastes.
- 4.51 It is estimated that these actions could give WDC a 2003/04 SPS surplus of 6,132 tonnes

- 4.52 Further initiatives would be necessary by 2005/06 and so extension of the *paper collection with kerbside boxes* [23] and of the *wheeled bin Green Waste collection* [25] to the remaining 15% of households within the district has been suggested.
- 4.53 In addition, there is a proposal to *phase in a reduction in the size of the general waste bin* [28]. *the general waste bin* [28]. The introduction of initiatives to collect different elements of the waste stream separately has the potential to increase the total volume of capacity available to residents for presenting waste for removal. This, in turn, will increase the overall amount of waste presented for collection and will work against the over-riding principle to reduce the waste stream wherever and whenever possible. Reduction of the size in the general waste bin was considered as an option once alternative collection schemes are in place. This was the preferred approach expressed in the consultation carried out to inform development of the strategy.
- 4.54 Having considered the options WDC Members' preference is to investigate retaining existing containers and moving to an alternate week collection of general waste. This will be subject to the successful introduction of other dry waste collections and looking closely at the experiences of other authorities where this approach has been adopted. This approach will enable the existing bins to be retained and to reduce collection costs. Reduction in cost will not be proportional as there will inevitably be exceptions to any such arrangements with selected premises requiring weekly collections and excess waste from non-participants.
- 4.55 These measures together would leave a modest shortfall of 623 tonnes against the 2005/06 SPS requirement.
- 4.56 However there are three further identified initiatives for Wycombe district after 2005/06: namely the *kerbside collection of plastic, glass & cans with boxes to 85% of households* [26] by 2008/09, and to the *remaining 15% of households* [27] by 2010/11. These could contribute another 2,550 tonnes of recycle. In addition, consideration will be given to the potential of offering financial incentives to residents who participate in recycling initiatives. If viable, this would be a "carrot" to encourage greater participation in these schemes.

The Recommended Recycling and Composting Initiatives for the short and medium term

- 4.57 **The BWF has considered the identified short and medium-term initiatives at length against the arising need and has developed a series of recommendations for action that can be found at the end of this section.** These initiatives are presented over the page in **table 4a** - this gives details of the recommended schemes, which of the partner authorities will be responsible

for implementation, and the expected tonnage of waste that can be so diverted from landfill.

Additional Recycling and Composting at the HWRCs

- 4.58 Turning first to the recommended actions identified for the County Council's HWRCs [initiatives 02-04 and 06-08 - see **table 4a**], these should be implemented in order to maximise the sites' contribution to overall recycling and composting within Buckinghamshire (**REC 03**).

Enhancement of existing District Council recycling schemes

- 4.59 Next, it is clearly a very cost-effective strategy for the district councils to "enhance" (i.e. increase local resident participation in) existing recycling schemes [initiatives 16,17 and 19] wherever practicable. Under this heading the Forum also includes the provision of additional bring sites [initiatives 14 and 15]. Therefore we see the enhancement of existing services and the provision of more bring sites as early priorities (**REC 04**).

The kerbside collection of dry recyclable materials

- 4.60 The next priority for action would seem to be the kerbside collection of dry recyclable materials because they have existing markets and are have considerable potential for further diversion. Paper has an additional advantage since it is a biodegradable waste. Initiatives 12,13, 20 (for glass), 22 and 23 (for paper), and 26 and 27 (plastic, glass & cans) are all desirable actions that should be progressed at the earliest stage (**REC05**)

The kerbside collection of Green Waste within the WDC area

- 4.61 Wycombe district is projected to have a major shortfall between the performance of existing programmes and the 2003/04 SPS target of some 6,450 tonnes (**Appendix F**). It will therefore need to progress those waste initiatives that can divert a significant tonnage by 2003/04. Given the negative impact of large wheeled bins on recycling performance, it is likely that the kerbside collection of paper will be insufficient to meet targets. Therefore, the early introduction of a Green Waste collection service to 85% of households is also indicated [initiative 24]. The decision to extend the scheme to the remaining 15% of households [25], however, will be a judgement based on acceptable costs and performance of the earlier initiatives (**REC 10**). This initiative should be supported by the development by the County Council of a central composting facility [05] by 2003/04 at High Heavens (**REC 11**).

Table 4a: RECOMMENDED SHORT AND MEDIUM TERM WASTE MANAGEMENT INITIATIVES TO ADDRESS THE STATUTORY PERFORMANCE STANDARD SHORTFALLS

INITIATIVE	NEW NON-BMW RECYCLED (tonnes)	NEW BMW DIVERTED (tonnes)	ALL NEW WASTE DIVERTED (tonnes)
01 Waste Minimisation Initiatives to achieve c. 0.5% p.a. reduction in arisings per household by 2003/04 (BCC)	650. (reduction)	650 (reduction)	1,300 (reduction)
02 Provide one or more new HWRCs by 2005/06 (BCC)	510	1,380	1,890
03 Relocate HWRC site for Beaconsfield by 2003/04 (BCC)	510	1,380	1,890
04 High Heavens HWRC. Extend within site by 2003/04 (BCC)	700	400	1,100
05 High Heavens waste disposal complex. Develop composting facility by 2003/04 (BCC)	N/A	N/A	N/A
06 Buckingham HWRC. Extend within site by 2005/06 (BCC)	350	0	350
07 Chesham HWRC. Extend within site by 2005/06 (BCC)	155	465	620
08 Amersham HWRC. Extend within site by 2003/04 (BCC)	240	0	240
12 Kerbside monthly collection of glass using box/basket to 60% of premises by 2003/04 (AVDC)	1600	0	1600
INITIATIVE	NEW	NEW	ALL

	NON-BMW RECYCLED (tonnes)	BMW DIVERTED (tonnes)	NEW WASTE DIVERTED (tonnes)
13 Kerbside monthly collection of glass using box/basket to remaining 40% of premises by 2005/06 (AVDC)	900	0	900
14 Bring scheme facilities for cardboard & mixed papers by 2003/04 [based on 25 sites] (AVDC)	0	1,000	1,000
15 Increased bring scheme provision of 25 new sites for various materials By 2003/04 (AVDC)	500	500	1,000
16 Enhanced kerbside collection of paper by 2003/04 (CDC)	0	2,380	2,380
17 Enhanced kerbside collection of glass by 2003/04 (CDC)	377	0	377
19 Enhancement of existing recycling schemes by 2003/04 (SBDC)	2,700	0	2,700
20 Provision of kerbside glass collection scheme by 2003/04 (SBDC)	780	0	780
22 Paper collection with kerbside boxes to 85% households by 2003/04 (WDC)	0	Additional 3,085 tonnes	Additional 3,085 tonnes
23 Paper collection with kerbside boxes to remaining 15% of households by 2005/06 (WDC)	0	245	245
24 Wheeled bin Green Waste collection to 85% of households by 2003/04 (WDC)	0	9,500	9,500
INITIATIVE	NEW NON-BMW RECYCLED (tonnes)	NEW BMW DIVERTED (tonnes)	ALL NEW WASTE DIVERTED (tonnes)

25 Wheeled bin Green Waste collection to remaining 15% of households by 2005/06 (WDC)	0	1,000	1,000
26 Kerbside collection of plastic, glass & cans with boxes to 85% of households by 2008/09 (WDC)	2,000	0	2,000
27 Kerbside collection of plastic, glass & cans with boxes to remaining 15% of households by 2010/11 (WDC)	550	0	550
28 Phase in alternate week collections of household waste by 2008/09 (WDC)	Not applicable	Not applicable	Not applicable
SUB-TOTAL BY 2003/04	8,057	18,895	26,952
SUB-TOTAL BY 2005/06	1,915	3,090	5,005
SUB-TOTAL BY 2010/11	2,550	0	2,550
TOTAL	12,522	21,985	34,507

Source: County and District Council data.

Notes

- 01 Achieves an estimated 0.5% p.a. reduction in msw arisings by 2003/04 across the county. Equates to some 1,300 tonnes split evenly between non-BMW and BMW.
- 05 Assumes that Green Waste collected by WDC at 2003/04 would go to High Heavens for composting. Also that only 20% of this would be new waste.

New waste infrastructure site selection criteria

- 4.62 To achieve more recycling, composting and energy recovery from waste that we presently landfill we shall need some new facilities for waste handling, sorting and processing. Where possible, these should be local to where the waste originates. We should provide the necessary composting and storage/sorting facilities (for sorting recyclables) to enable our waste targets to be achieved. This strategy has identified the need for provision of one or more new Household Waste and Recycling Centres to accommodate the future growth in housing in the county. During the life of this Strategy there may be a need for waste transfer sites to serve various parts of the county. **Appendix G** sets

out the various **site section criteria** that the Forum considers should be employed in assessing the suitability of any site for new waste infrastructure facilities.

The Need for some High Tech Treatment Capacity in the Short to Medium-term

- 4.63 **However, the BWF considers that the above identified recycling and composting initiatives, on their own, will be insufficient to achieve the medium-term targets and that still more will have to be done.** Participation rates in the larger urban areas are normally well below those of suburbs. Socio-economic factors also play a big part in the ability of collection-based solutions to achieve high rates of recycling and composting figures. However *value* also can be extracted from waste through its use as a fuel to power electricity generators. Any shortfalls in meeting the SPS and later targets should, where possible, be met by waste from these authorities going straight to a recovery process that (after minimisation and source separation) can handle mixed waste. **The BWF is therefore recommending an "early move" to the use "high tech" waste technologies to supplement the development of recycling and composting programmes recommended in this WSB in order to meet prevailing targets.**
- 4.64 Although compliance with the Landfill Directive will be necessary at 2010 it would be possible, in the event of delay in progressing these major projects during the period up to 2010, to buy landfill permits as a temporary "safety-valve". Current expectations are that these will settle down at a cost equivalent to the difference in cost between the high tech solutions and prevailing landfill costs. Given the emergence of the permit system, there is a strong case to consider the adoption of higher waste technologies sooner than the Landfill Directive targets actually requires. Buckinghamshire could then bank permits for use later on or to trade with other authorities to help reduce costs.
- 4.65 However (EfW) incinerators are very expensive, and suitable sites within the county will be hard to find. The Forum therefore takes the view that when the use of energy-from-waste (EfW) proves necessary, capacity should be sought at proposed facilities adjacent to the county. The Forum is not recommending, in this WSB, that there is a need for such a facility located within Buckinghamshire. There are two regionally important high tech waste management facilities proposed for development just outside Buckinghamshire. One scheme is located at Colnbrook, near Slough, and is expected to be in operation after 2005/06. The other is located at the opposite end of Buckinghamshire at Newton Longville, just inside the neighbouring authority of Milton Keynes and is proposed for mid-2004. These two developments have the potential to enable the partner authorities to meet and, if desired, exceed their statutory obligations set out in the *Waste Strategy 2000*. In each case, the Forum considers that the County and relevant district council(s) should agree the routing of waste by road, rail or waterway to the relevant high tech waste

facility at the time that contractual arrangements are made to safeguard the amenity of adjacent communities.

- 4.66 For those parts of the county (broadly the Wycombe District Council area and those areas where, for environmental or economic reasons, waste transfer is a better solution) that are not well located to directly access available energy from waste capacity there should be a contingent strategy based upon waste transfer.

Longer-term initiatives to address future recovery and diversion targets: the increasing need for high technology waste management in the longer-term

- 4.67 The Forum further takes the view that increasing use of these higher waste management technologies, as sustainable alternatives to landfill, will be necessary to meet the Government's longer-term statutory targets that will run from 2010 onwards. *Waste Strategy 2000* contains a range of *recovery* targets such that value should be recouped from 45% of municipal waste at 2010, rising to 67% at 2015. The Government acknowledges that recycling and composting alone will not achieve these very high levels of recovery. In addition there are national targets for the *diversion* of waste from landfill (resulting from the UK's obligations under the EC Landfill Directive) that are expected to be the single most important driver from 2010. Disposal authorities are statutorily required to reduce the proportion of biodegradable municipal waste (BMW) going to landfill to 75% (by weight) of the 1995 level by 2010; and thereafter to 50% by 2013, and to 35% by 2020. Government advice is that, nationally, biodegradable municipal waste accounts for around 60% of the municipal waste stream.

- 4.68 The BWF therefore considers that the use of high tech solutions will be increasingly necessary from 2010 onwards if Buckinghamshire is to meet both the EU Landfill Directive targets for diverting organic waste from landfill and national waste recovery targets. **Therefore it recommends greater use of the Colnbrook and Newton Longville facilities later in the strategy period.**

Other potential longer-term recovery technologies

- 4.69 The BWF has considered other "high tech" processes e.g. such as Pyrolysis (a high temperature thermal treatment) and Anaerobic Digestion (an advanced composting process in an enclosed vessel). However, neither of these alternative technologies is being promoted in or near to Buckinghamshire. In addition, the technologies are also presently unproven in the UK. **Therefore, the Bucks Waste Forum is not recommending that such facilities be developed within Buckinghamshire.**

The proposed facility at Colnbrook

The Colnbrook energy from waste (EfW) plant is promoted by S. Grundon (Services) Limited. The facility is to be sited at the Lakeside Industrial Estate, which is located to the north of the A4 Colnbrook Bypass. The site has already received planning permission from Slough Borough Council and is expected to be in operation after 2005/06.

The EfW plant would have a capacity to burn 400,000 tonnes of waste per annum comprising of municipal waste, residual municipal waste arising from Household Waste and Recycling Centres (HWRCs) and transfer sites, non-hazardous commercial and industrial waste, and recycling residues. The process is expected to generate 30 megawatts of electricity and heat, which would be sold to the National Grid.

The scheme includes a Materials Recycling Facility (MRF) which is designed to handle 40,000 tonnes of pre-sorted recyclable waste from doorstep recycling schemes and other source-separation schemes.

The facility is intended to serve a 25-mile catchment area that would include Slough, the southern parts of Buckinghamshire, as well as some of Berkshire, Surrey and West London. Grundon have indicated that they will not accept more than half of any authority's waste stream; this indicates a desire to take account of the need for recycling and composting.

The scheme also makes provision for a rail link to the Colnbrook branch line. The railhead could be used for the importation of wastes and the removal of residues from the plant, namely ash.

- 4.70 Given that the facility has planning consent and the commercial interest that is being shown in such schemes by the waste management industry, the BWF is of the view that the EfW plant at Colnbrook is likely to be built. Whilst the facility does not fall within Buckinghamshire, it is sufficiently well placed for the Chiltern and South Bucks areas in particular for the Colnbrook EfW facility to represent the best practical environmental option for municipal waste from these areas. Also, it would be consistent with the "Proximity Principle". The facility, when built, will have finite capacity with very little capacity to increase throughputs over time. The OWG judge that it would be prudent to secure access to sufficient capacity for the needs of Chiltern and South Bucks districts as soon as it becomes available.
- 4.71 Use of the Colnbrook facility could be the most cost-effective way to manage waste arisings (including BMW) within South Bucks and Chiltern districts post 2005/06. Whilst the likely cost for this facility is not yet known, the indicative cost used for the modelling in *Waste Strategy 2000* (see table C6a) for treatment alone were assumed by the Government's consultants to be around £48 tonne.

- 4.72 **The BWF therefore recommends that the County Council should seek to secure, from the date of its opening, capacity at the Colnbrook EfW facility to cater for a significant proportion of the household waste arising in South Bucks and Chiltern districts. In the longer term the Forum recommends that Colnbrook should eventually handle all of the municipal waste that arises in the Chiltern and South Bucks areas that cannot recycled or composted (REC 08).**

The Newton Longville Proposal

The Newton Longville proposal is being promoted by Shanks Waste Services (SWS) at the site of the former Newton Longville brickworks (near Bletchley). The site is used for clay extraction, providing a significant void of approximately 25 million cubic metres, and active landfill. This scheme is at a much earlier stage in the planning process but is a strategically important waste management resource.

The facility is intended to be a regionally significant scale on such that SWS can achieve affordable unit costs, and also through enhanced size, favourably influence the supply side of the recycling markets.

The development is planned in three phases. Vehicular access is a major concern to neighbouring villages. Thus, Phase 1 is “business as usual” (landfill) but vehicular access is improved to the site via a new access to the southern side of the site and the construction of the Stoke Hammond by-pass which is expected to be completed around the end of 2004. By this means, SWS maintain that no traffic entering or leaving the site will pass near to any housing.

Phase 2 is the deployment of a process known as “Bio-drying”. In this process waste is tipped into an enclosed building, with vehicles entering through rapid opening doors. The waste is automatically handled in an enclosed building by machines throughout. Firstly, the waste is coarse shredded and arranged in windrows to a depth of 4.5 metres on a suspended floor- one row for one day’s waste. A natural fermentation process begins spontaneously, in which the bacteria in the waste start to digest some of the putrescible content of the waste – starches, and sugars. The heat generated in this reaction causes the temperature of the waste to rise, whereafter the temperature is controlled by drawing air through the waste from under the suspended floor.

After 10 to 15 days the reaction slows to a halt, by which time the waste is dry, sanitised, and biologically stabilised and its weight is reduced by 25% on

account of the water evaporation. The dry stabilate is easily separated into heavy and light fractions, from which further materials recovery is possible – stones/ glass, ferrous metals, non-ferrous metals. A fine compostable organic fraction can also be separated from the stabilate.

The resulting light fraction constitutes significantly less than 50% of the material received. This material is ideally used as a substitute for coal, having benign characteristics because of its low ash content, and low metal content. Moreover, because two thirds of the energy content of the fuel comes from biological sources, the greater part of this fuel is truly renewable energy.

The bio-drying and materials recovery technology is supplied by an Italian company, Ecodeco, who have already four plants in successful operation in Italy, with two more currently under construction.

Together with a modest level of source separation, and efficient operation of HWRC sites, the Biodrying system has the performance to enable local authorities to meet targets for landfill diversion, recycling and recovery up to 2010, without deploying any thermal processes for energy recovery.

Stage 3 is the recovery of energy from the stabilised fuel fraction. The plan is to build an advanced fluidised bed gassifier which will produce a fuel gas which can be used to generate steam for electricity generation and district heating. SWS maintains that it will be one of the cleanest forms of energy production known, moreover the use of combined heat and power will enable very efficient use of the energy, two thirds of which is renewable.

A phased implementation of the project is planned. Phase 1 is expected to be completed during 2004, thereby enabling an improved access to the site. Phase 2 will be implemented in stages to suit the winning of municipal contracts, i.e. Phase 2a, Phase 2b, Phase 2c etc. Similarly, SWS has stated that Phase 3 will be implemented in stages to suit the requirements of customers.

Subject to the timing of the completion of the Stoke Hammond by-pass, Phase 1 may be completed during 2004, Phase 2a for the same time, with phases 2b, 2c etc timed to suit customers' requirements thereafter. Phase 3a and so on will be implemented as appropriate to suit target-led demand from Waste Disposal Authorities and with the objective of achieving economical critical mass.

- 4.73 The Newton Longville facility is at an early stage in the planning process. However, the BWF considers that the project has the potential to succeed as a regionally important waste management facility and to offer benefits for future waste management in northern Buckinghamshire. The ability to phase the development is viewed positively by the Forum. Whilst the facility does not fall within Buckinghamshire, it is sufficiently well placed for Aylesbury Vale in

particular to represent the best practical environmental option for municipal waste from this area and to be consistent with the "Proximity Principle".

- 4.74 Newton Longville could be an effective treatment for waste (including BMW) collected within Aylesbury Vale district. Although, at present, AVDC makes use of Calvert to a greater extent than Newton Longville the latter is accessible from most of the district. It would therefore be possible for AVDC to take some or all collected household waste to Newton Longville for recycling or treatment/disposal. These proposals are at an early stage and so we have no information on cost per tonne at present. The effect on total costs will be a relevant factor when the cost per tonne is known. The main saving resulting from use of the Biodrying/EfW facility would be that AVDC could continue with its existing refuse collection system and only have the differences in cost between transport to Calvert and Newton Longville.
- 4.75 **For these reasons the BWF recommends that, if the facility is implemented, the County Council should seek to secure capacity at the Newton Longville Biodrying/EfW facility from the date of opening to cater for a significant proportion of the household waste arising in Aylesbury Vale district. In the longer term this should increase to all the municipal waste that arises in Aylesbury Vale that cannot be recycled or composted (REC 09).**

The Wycombe District Area

- 4.76 **This area does not easily relate to either the permitted Colnbrook EfW or the proposed Newton Longville Bio-drying/EfW facilities.** The BWF therefore recommends a contingent strategy for this area and concludes that there is a need for a facility in the High Wycombe area to transfer and bulk up household waste prior to its transportation to either Colnbrook, Newton Longville, or to landfill (**REC 12**). Waste transfer and/or storage/sorting facilities within the Wycombe district would also enable WDC to optimise existing recycling schemes and to introduce new ones; for example, bulking facilities would enable cans and plastics to be stored prior to delivery to the reprocessors. The High Heavens waste disposal complex has been identified as the preferred location.
- 4.77 In the longer-term it may be desirable to consider the merits of some local waste processing. It might be appropriate, for example, to site a Biodrying plant (of about 60,000 tonnes per annum throughput) here (**REC 12**) and to transport the stabilised products to Newton Longville. Much depends on logistics and the availability of suitable sites and the likelihood of getting planning consent for waste management activities. The provision of bio-drying and waste transfer facilities at the High Heavens waste disposal complex would enable WDC to make sensible use of the longer-term waste management options available to south-eastern or northern Buckinghamshire. The BWF does not feel sufficiently confident of the projections incorporated in this document to recommend at this stage the adoption of "local" Bio-drying. Rather the Forum recommends that the initiatives proposed for the short to

medium term should first be implemented and monitored. Then, at the first review of this strategy, suitable further options will be considered for this area, which should include Bio-drying and transfer of waste to an EfW plant (probably at Newton Longville).

Summary - The Waste Strategy for Buckinghamshire to 2021.

The Waste Minimisation Strategy to 2021

- 4.78 The partner authorities will continue to develop and extend their existing and proposed waste minimisation projects (e.g. home composters, the real nappy campaign, and the Buckinghamshire waste minimisation initiative). The latter is expected to suggest further projects to promote increasing home composting, market development for recycle, re-use of unwanted clothes and household goods and packaging waste reduction. The authorities will continue to extend the scope of waste minimisation initiatives and will be proactive in devising projects eligible for partnership and external sources of funding.

The Recycling and Composting Strategy to 2021

- 4.79 The recommended recycling and composting strategy is for a "mixed-bag" approach - the provision of more bring sites; enhancements to existing recycling and composting schemes; measures to improve the throughput and recovery of materials at the HWRCs, the kerbside collection of new dry recyclables (notably glass); and finally, the kerbside collection of green waste only where unavoidable to meet the Statutory Performance Standard target (e.g. Wycombe). The recycling and composting strategy for the longer-term will embrace all of the earlier recommended measures and extend them. Beyond this, it will be an objective of the adoption of any high tech waste management technologies during this period that they should allow for the maximum recycling and recovery of materials practicable.

The Recovery through High Tech Strategy to 2021

- 4.80 The "high tech" strategy is to make early use (from the date of opening) of recovery treatment capacity at both the Colnbrook EfW and Newton Longville Biodrying/EfW facilities for all local waste that cannot be recycled or composted through existing recycling and composting programmes. This is to avoid the need to introduce expensive kerbside Green Waste collection and centralised composting facilities to serve Aylesbury Vale, Chiltern and South Bucks districts. The use of high tech solutions will be increasingly necessary from 2010 if Buckinghamshire is to meet the second and third Landfill Directive targets and the national municipal waste recovery targets. The WDA should, therefore, make greater use of these high tech facilities in the longer-term to recover value from residual waste. Transfer facilities (which might later need to be supplemented with biodrying ability) should be provided at the High Heavens waste complex to meet the needs of Wycombe to allow that district's residual waste to be taken to the Colnbrook or Newton Longville

facilities (or, as a contingency, to landfill). Transfer may also be appropriate in other areas for environmental or economic reasons.

The Landfill Strategy to 2021

- 4.81 The national waste strategy allows, even at 2015, for one-third of municipal waste to be landfilled ("permitted landfill"). Buckinghamshire has a plentiful landfill capacity and, where consistent with the BPEO, the need to restore existing landfills, and where cheaper than alternative waste management processes the Forum recommends that the County Council should landfill residual waste to the permitted level. The Forum will expect operators to achieve the maximum practicable recovery of energy from landfill sites. The relative cost of landfill may change in response to increases in landfill tax and future Government policy, or the price of alternative processes may decline as volume is achieved. In this event the Forum will reconsider its recommended landfill strategy.

Waste Strategy for Buckinghamshire Recommendations to 2021

WASTE STRATEGY FOR BUCKINGHAMSHIRE - RECOMMENDATIONS TO 2021.

This schedule contains **all of the BWF's recommendations** made in section 4 above concerning **the future management of municipal and household waste** in Buckinghamshire for the period to 2021. Recommendations relating to *industrial and commercial waste* are to be found at the end of section 6.

The recommendations show what should be done and which authority(ies) will be primarily responsible for implementing a given recommendation. **Numbers shown within square brackets, e.g. [01], refer to the options identified in table 4a (page zz) above.**

REC 01

Agree a formal "Memorandum of Understanding" between the partner authorities to deepen and strengthen the process of joint working to facilitate an effective implementation of the strategy.

Action: BCC/AVDC/CDC/SBDC/WDC

REC 02

Further enhancement of waste minimisation initiatives in Buckinghamshire.

Action: BCC/AVDC/CDC/SBDC/WDC

REC 03

The initiatives [02-04 and 06-08] shown in table 4a relating to the County Council's Household Waste and Recycling Centres (HRWCs) should be implemented in order to maximise their contribution to overall recycling and composting within Buckinghamshire.

Action: BCC

REC 04

Enhancement of existing District Council and County Council recycling schemes and the provision of more bring sites as an early priority.

Action: BCC/AVDC/CDC/SBDC/WDC

REC05

Maximise the potential recycling of glass, paper, cans and plastics by introducing kerbside collection for these materials

Action: AVDC/CDC/SBDC/WDC

REC 06

Within the context of the Best Practicable Environmental Option (BPEO), continue to landfill the residue that is left after recycling or recovery processes to around the permitted level, whilst this remains cost-effective.

Action: BCC

REC 08

To support and seek to secure, from the date of its opening (after 2005/06), capacity at the permitted Colnbrook EfW facility to cater for an increasing proportion of the household waste arising in South Bucks and Chiltern districts that cannot be recycled or composted.

Action: BCC

REC 09

To support, and if implemented, to seek to secure, from the date of its opening (earliest mid-2004), capacity at the Newton Longville Biodrying/EfW facility to cater for an increasing proportion of the household waste arising in Aylesbury Vale district.

Action: BCC/AVDC/CDC/SBDC/WDC

REC 10

Introduce initiative 24 for a wheeled bin kerbside Green Waste collection to 85% of households in Wycombe district by 2003/04, with consideration to be given to extending the service to the remainder by 2005/06 [initiative 25] if costs are acceptable.

Action: WDC

REC 11

Introduce a central composting facility by 2003/04 at High Heavens to provide for Green Waste composting in southern Buckinghamshire (including the composting of WDC's Green Waste collections), to service HWRC sites and to improve sustainability through reduced transport of waste [initiative 05].

Action: BCC

REC 12

Establish a facility in the Wycombe area to transfer and bulk up household waste prior to its transportation to either Colnbrook, Newton Longville or to landfill depending upon circumstances. The provision of bio-drying facilities at this location will be considered at the first review of this Strategy.

Action: BCC/WDC

5.0 - DISTRICT COUNCIL RECYCLING PLANS

Introduction

5.1 Government advice (Guidance on Municipal Waste Management Strategies, DETR, March 2001) is that the waste collection authorities (WCAs) and waste disposal authority (WDA) in an area should jointly develop and subscribe to a Municipal Waste Management Strategy ("MWM Strategy"), such as this WSB, to set out a strategic framework for the future management of municipal waste. Strategies should:

- clearly set out the authorities' objectives and standards for the service;
- include policies and plans on how to achieve these objectives and standards;
- provide a framework for monitoring and evaluating progress;
- communicate these plans to Government, key stakeholders, partners and the wider community.

5.2 The Guidance further indicates that the statutory content of *Recycling Plans*, as prepared by the Waste Collection Authorities, should be incorporated into the MWM Strategy.

Recycling Plans

5.3 Under current legislation, each individual waste collection authority is required to prepare a *Recycling Plan* (Section 49 of the Environmental Protection Act 1990). This plan sets out the authority's proposals to increase recycling in its own area. The plan must contain specified information, including:

- The kinds and quantities of controlled waste which the authority expects to collect or purchase during the period specified in the plan;
- The kinds and quantities of controlled waste which the authority expects to deal with for the purposes of recycling;
- The arrangements which the authority expects to make during that period with waste disposal contractors.

5.4 The Government intends that waste collection and disposal authorities should set out joint policies and plans for recycling in their emerging MWM Strategies. The *Guidance* therefore proposes that the specific information above (which is required by statute for each WCA) should be placed in a separate part of a Strategy. Together the separate statutory information and the joint policies and plans for recycling will allow WCAs to fulfil their obligations under Section 49 through their MWM Strategy. As previously with Recycling Plans, the

Government's Regional Offices will approve draft Strategies to ensure that each WCA fulfils these requirements. When MWM Strategies are made statutory, it is intended that the statutory duty will incorporate the duty to prepare Recycling Plans.

- 5.5 The BWF has therefore agreed that the Waste Strategy for Buckinghamshire should include the "Recycling Plan" information set out in paragraph 5.3 above for each of the WCAs. This information is to be found in **Appendix H**.

6.0 - INDUSTRIAL AND COMMERCIAL WASTE

Introduction

- 6.1 The Environment Agency conducted a survey in 1998-99 to collect data needed to support national and regional estimates of waste production from the industrial and commercial sector. This would also form the basis of achieving the Government's target to reduce levels of landfill to 85% of the 1998 figure by 2005.
- 6.2 The data showed that the South East region produced 9 million tonnes of industrial and commercial waste in 1998-99. Just over half of this waste was from industry. The remaining proportion of waste produced by commerce in the region is much higher than the national average which reflects the importance of commerce to the economy of the South East.
- 6.3 Table 7a below sets out the amount and composition of industrial and commercial waste produced in the South East.

Table 6a: AMOUNT AND COMPOSITION OF INDUSTRIAL AND COMMERCIAL WASTE PRODUCED IN THE SOUTH EAST (000's tonnes)

Waste type	Industry	Commerce	Total	% England & Wales
Inert/C & D	180	29	209	8.8
Paper & card	373	421	794	15.1
Food	232	65	297	11.5
General industrial & commercial	1,360	2,928	4,289	15.1
Other general & biodegradable	856	318	1,174	13.4
Metals & scrap equipment	313	98	411	8.6
Contaminated general	297	117	414	10.3
Mineral wastes & residues	713	4	716	5.6
Chemical & other	633	63	696	11.7
TOTAL	4,958	4,043	9,001	12.0

Source: Strategic Waste Management Assessment 2000: South East

- 6.4 It can be seen that general waste was the most common waste stream generated by both industry and commerce. In the case of commerce, general wastes were more than 70% of the waste generated and 27% of industrial waste.

Waste Management Options in the South East

- 6.5 Landfill was the major waste management method for both commercial and industrial wastes, with about 50% of all waste going through this route.

However, there was some difference between industry and commerce with 46% of industrial waste and 56% of commercial waste going to landfill. Both industry and commerce recycled significant quantities of waste. Industry recycled 33% and commerce 22% (see Table 7b below).

Table 6b: WASTE MANAGEMENT METHODS USED FOR DIFFERENT TYPES OF INDUSTRIAL AND COMMERCIAL WASTE PRODUCED IN THE SOUTH EAST (000s tonnes)

Waste type	Land dis-posal	Land re-cove-ry	Re-used	Re-cycled	Ther-mal	Trans-fer	Treat-ment	Un-recorded	Total	% England & Wales
<i>Industrial wastes</i>										
Inert/C & D	102	-	0	74	-	0	1	2	180	
Paper & card	15	-	0	340	3	6	2	7	373	
Food	62	19	105	45	1	0	0	1	232	
General industrial	1,233	-	0	72	1	14	4	37	1,360	
Other general & biodegradable	166	291	52	254	28	8	44	14	856	
Metals & scrap equipment	24	-	3	272	0	5	3	6	313	
Contaminated general	148	4	5	118	-	5	11	5	297	
Mineral wastes & residues	392	-	-	315	0	-	0	5	713	
Chemical & other	154	1	31	123	20	12	284	8	633	
INDUSTRY TOTAL	2,297	315	196	1,613	52	51	350	85	4,958	
<i>Commercial</i>										
Inert/C & D	20	-	0	9	-	0	0	0	29	
Paper & card	19	-	0	381	3	7	2	8	421	
Food	26	4	21	14	0	0	0	1	65	
General commercial	2,056	-	4	215	8	12	1	633	2,928	
Other general & biodegradable	64	58	24	127	13	4	18	10	318	
Metals & scrap equipment	8	-	1	85	0	1	1	1	98	
Contaminated general	56	2	1	49	-	2	5	1	117	
Mineral wastes & residues	2	-	-	2	0	-	0	0	4	
Chemical & other	13	0	3	15	3	2	26	1	63	
COMMERCE TOTAL	2,263	64	55	898	27	28	52	656	4,043	
TOTAL	4,560	379	250	2,510	80	78	402	740	9,001	12.0

Source: Strategic Waste Management Assessment 2000: South East

Notes: Around 5% of general industrial & commercial waste goes through a transfer process, more than 90% of this material then went for landfill disposal.

Unrecorded: Many of the smaller commercial companies were surveyed by telephone and information on the waste management method was not always collected. Comparison with similar companies which were fully surveyed, suggests that more than 90% of this material went to landfill.

6.6 Over 90% of general industrial waste and 70% of general commercial waste was sent to landfill, with only 5% and 7% respectively being recycled. The trend was reversed however in relation to other general and biodegradable waste. 34% of industrial and 18% of commercial waste of this type went to

land recovery, with 30% and 40% respectively being recycled. Only 19% and 20% respectively went to landfill.

- 6.7 Minerals wastes and residues account for 14% of the total waste stream in the South East, the majority being industrial. About 55% of this type of waste was sent to landfill, whilst 44% was recycled (see Table 7b).
- 6.8 Paper and card waste accounted for 10% of the total commercial waste, of which just over 90% was recycled. Industry produced almost as much paper and card (370,000t) as commerce, of which 91% was recycled.

Buckinghamshire Position

- 6.9 The following aims will form the basis of the strategy regarding industrial and commercial waste in Buckinghamshire.

The Waste Strategy for Buckinghamshire will:

Encourage the reduction of the amount of industrial and commercial waste being exported from Buckinghamshire to other regions;

Support the increase from 65% of self-sufficiency in relation to the disposal of industrial and commercial waste;

Encourage the reduction of Buckinghamshire's industrial and commercial waste arisings and the amount sent to landfill to 85% of 1998 figure by 2005.

- 6.10 Tables 6c and 6d below set out the type of waste produced in Buckinghamshire and the comparison with the South East region.

Table 6c: COMPARISON OF THE TYPE OF WASTE PRODUCED IN BUCKINGHAMSHIRE AND THE SOUTH EAST (000s) tonnes

	Buckingham -shire	% of Industrial Total	South East Total	% of Industrial Total	Bucks % of South East Total
<i>Industrial Wastes</i>					
Inert/C&D	15	3.5	180	3.6	8.3
Paper & card	37	8.7	372	7.5	10.0
Food	24	5.7	232	4.7	10.3
General industrial	138	32.6	1,360	27.4	10.2
Other general & biodegradable	81	19.1	856	17.3	9.5
Metals & scrap equipment	35	8.3	315	6.4	11.1
Contaminated general	37	8.7	297	6.0	12.5
Minerals wastes & residues	5	1.2	713	14.4	0.7
Chemicals & other	52	12.3	633	12.8	8.2
INDUSTRY TOTAL	424		4,958		8.6
<i>Commercial Arisings</i>		% of commercial total		% of commercial total	
Inert/C&D	3	0.8	29	0.7	10.3
Paper & card	44	11.0	420	10.4	10.5
Food	6	1.5	65	1.6	9.2
General commercial	277	69.4	2,929	72.5	9.5
Other general & biodegradable	35	8.8	318	7.9	11.0
Metals & scrap equipment	11	2.8	99	2.5	11.1
Contaminated general	14	3.5	117	2.9	12.0
Minerals wastes & residues	1	0.3	4	0.1	25.0
Chemicals & other	8	2.0	63	1.6	12.7
COMMERCE TOTAL	399		4,043		9.7
TOTAL	823		9,001		9.1

Source: Strategic Waste Management Assessment 2000: South East

Table 6d: COMPARISON OF THE TOTAL INDUSTRIAL AND COMMERCIAL WASTE PRODUCED IN BUCKINGHAMSHIRE AND THE SOUTH EAST (000s total).

	Buckingham-shire	% of Total	South East Total	% of South East Total	Bucks % of South East Total
Inert/C&D	18	2.2	209	2.3	8.6
Paper & card	81	9.8	792	8.8	10.2
Food	30	3.7	297	3.3	10.1
General industrial & commercial	415	50.4	4,289	47.7	9.7
Other general & biodegradable	116	14.1	1,174	13.0	9.9
Metals & scrap equipment	46	5.6	414	4.6	11.1
Contaminated general	51	6.2	414	4.6	12.3
Minerals wastes & residues	6	0.7	717	8.0	0.8
Chemicals & other	60	7.3	696	7.7	8.6
TOTAL	823		9,001		

Source: Strategic Waste Management Assessment 2000: South East

- 6.11 The tables show that by far the greatest amount of both industrial and commercial waste generated in Buckinghamshire was of a general nature. 138,000 tonnes of industrial and 277,000 tonnes of commercial waste (32.6% and 69.4% respectively) represented 50.4% of the total waste of the county. These figures compare similarly with those of the South East region (27.4%, 72.5% and 47.7%).
- 6.12 The second largest amount of waste varied between the two sectors. In the industrial sector, other general and biodegradable waste accounted for 81,000 tonnes (19.1%) of the county's industrial total, whereas not unexpectedly paper and card was the second largest type of commercial waste accounting for 44,000 tonnes (11.0%).
- 6.13 Although general waste accounted for the greatest amount produced in the county, it still conformed with the Buckinghamshire trend of producing approximately 10% of the South East total for all types of waste. The exception to this trend is mineral waste. The county only produced 5,000 tonnes of industrial mineral waste, which represented 0.7% of the South East total. In contrast, commercial mineral waste accounted for the least amount of any type of waste produced in Buckinghamshire (1,000 tonnes), yet this figure represented 25% of the South East total. Table 6d shows that the Buckinghamshire percentage of the South East total was around 10% (8.6%-12.3%) with the exception of minerals waste which only accounted for 0.8%.

Waste Management methods used in Buckinghamshire

- 6.14 Tables 6e and 6f set out the methods used in the disposal of waste in Buckinghamshire compared to those used in the South East.

Table 6e: WASTE MANAGEMENT METHODS USED IN BUCKINGHAMSHIRE AND THE SOUTH EAST (000s tonnes).

Industry Group	Buckingham-shire	% of Industrial Total	South East Total	% of Industrial Total	Bucks % of South East Total
Industrial					
Land disposal	196	46.2	2,297	46.3	8.5
Land recovery	1	0.2	315	6.4	0.3
Re-used	23	5.4	196	4.0	11.7
Recycled	163	38.5	1,613	32.5	10.1
Thermal	1	0.2	52	1.1	1.9
Transfer	7	1.7	51	1.1	13.7
Treatment	26	6.1	350	7.1	7.4
Unrecorded	6	1.4	85	1.7	7.1
INDUSTRY TOTAL	424		4,958		8.6
Commercial		% of commercial total		% of commercial total	
Land disposal	220	55.1	2,263	56.0	9.7
Land recovery	0	0.0	64	1.6	0.0
Re-used	6	1.5	55	1.4	10.9
Recycled	90	22.6	898	22.2	10.0
Thermal	5	1.3	27	0.7	18.5
Transfer	8	2.0	28	0.7	28.6
Treatment	5	1.3	52	1.3	9.6
Unrecorded	65	16.3	656	16.2	9.9
COMMERCIAL TOTAL	399		4,043		9.9
TOTAL	823		9,001		9.1

Source: Strategic Waste Management Assessment 2000: South East

Note: Unrecorded – many of the smaller commercial companies were surveyed by telephone and information on the waste management method was not always collected. Comparison with similar companies which were fully surveyed, suggests that more than 90% of this material went to landfill.

Table 6f: TOTAL INDUSTRIAL AND COMMERCIAL WASTE PRODUCED IN BUCKINGHAMSHIRE AND THE SOUTH EAST (000s tonnes)

	Bucks Total	% of Bucks Total	South East Total	% of South East Total
Land disposal	416	50.6	4,560	50.7
Land recovery	1	0.1	379	4.2
Re-used	29	3.5	251	2.8
Recycled	253	30.7	2,511	27.9
Thermal	6	0.7	79	0.9
Transfer	15	1.8	79	0.9
Treatment	31	3.8	402	4.5
Unrecorded	71	8.6	741	8.2
TOTAL	823 (rounded)		9,001 (rounded)	

Source: Strategic Waste Management Assessment 2000: South East

- 6.15 Table 6e breaks down the waste management methods into industrial and commercial categories within Buckinghamshire and the South East region. Landfill accounted for the greatest proportion of waste management in both the industrial and commercial sectors with 196,000 tonnes (46.2%) and 220,000 tonnes (55.1%) respectively. This compared favourably with the South East percentages of 46.3% (industrial) and 56% (commercial).
- 6.16 Recycling represented the second most significant method of waste management in both sectors with 163,000 tonnes (38.5%) of industrial waste and 90,000 tonnes (22.6%) of commercial waste being treated this way. These percentages were again in line with the South East region figures of 32.5% and 22.2% respectively.
- 6.17 In the industrial sector, Buckinghamshire fell short of the South East percentage in two groups. These groups were land recovery and thermal with 1,000 tonnes being disposed of this way in each group. In both cases this represented 0.2% of the total industrial waste compared with South East region figures of 6.4% and 1.1% respectively.
- 6.18 Buckinghamshire matched or exceeded the South East region percentages in all of the commercial sector with the exception of land recovery where none of the county's waste used this method. However, the county exceeded the South East percentages in relation to both thermal and transfer.
- 6.19 In the majority of categories Buckinghamshire's percentage of the South East region's total centres around the 10% mark (7% - 13%). However, in the industrial sector, it was particularly low in both the land recovery (0.3%) and thermal (1.9%) groups. Again land recovery in the commercial sector featured with a nil return, but thermal and transfer were higher, with 18.5% and 28.6% respectively. Buckinghamshire contributed 9.1% (823,000 tonnes) of industrial and commercial waste to the South East total of 9,001,000 tonnes.
- 6.20 Table 6f sets out the combined totals of industrial and commercial waste management in Buckinghamshire and the South East. 416,000 tonnes of Buckinghamshire's industrial and commercial waste was sent to landfill, which represented 50.6% of the total waste. This followed the regional pattern of 50.7% being landfilled.
- 6.21 Recycling was the second most significant method of waste management, with 253,000 tonnes (30.7%) being recycled in the county. This was above the South East figure of 27.9%.
- 6.22 Land recovery accounted for only 0.1% (1,000 tonnes) of waste managed in Buckinghamshire compared with 4.2% for the South East region. In contrast, transfer methods accounted for 1.8% of waste managed in Buckinghamshire compared to only 0.9% in the South East.

Industrial and Commercial Waste Movements

6.23 Of the 823,000 tonnes of industrial and commercial waste produced in Buckinghamshire, 65% (535,000 tonnes) was disposed of within county with 24% (198,000 tonnes) being exported outside the South East region. The remaining 11% (90,000 tonnes) was disposed of elsewhere within the South East region. Imports into the South East have not been taken into account. For instance, imports from London far exceeded exports from the South East.

Conclusions

6.24 Although Buckinghamshire recycles an above average portion of its waste (30.7%) compared with the South East (27.9%), there is still scope to increase this percentage.

6.25 The majority of Buckinghamshire's industrial and commercial waste consists of general and other general and biodegradable, which accounts for 64.5% (531,000 tonnes) of the total.

6.26 51% of all the county's industrial and commercial waste goes to landfill, with another 31% being recycled, which leaves only 18% being disposed of by other methods.

6.27 It would therefore appear that several courses of action need to be undertaken to achieve the aims set out above:

- reduce the amount of industrial and commercial waste arisings;
- by 2005, reduce Buckinghamshire's industrial and commercial waste sent to landfill to 85% of the 1998 total.

6.28 There are several ways in which action could be taken to attain the required results. In the first instance industry should be made aware that it needs to reduce the amount of waste and how this can be achieved. Secondly, there are several means of reducing the amount of waste going to landfill. For example, recycling can play an increasingly important role even though the county is already recycling an above average amount of waste compared to the South East region. In addition, incineration with energy recovery is another means by which the landfill of industrial and commercial waste can be reduced.

6.29 The appointment of a Waste Minimisation Officer (WMO) will have a considerable effect on achieving the above aims. The WMO will be able to actively promote waste minimisation by informing businesses of the means of reducing their waste and how this can be of benefit to the company. This could be through initiatives such as:

- Formation of Green Business Clubs aimed at highlighting waste reduction through the identification of the "best practice" in manufacturing processes that reduce waste.

- Promotion of waste separation and recycling in businesses.
- Publicity and information.
- Promoting reuse of materials (e.g. avoiding single use containers).
- Establishment of commercial waste exchange directories (i.e. “one man’s waste is another’s resource”).
- Identifying outlets for waste materials from small and medium companies.
- Running seminars etc for businesses identifying the financial advantages in waste minimisation.
- Working with other agencies within Bucks (e.g. the Corporate Environmental Advisory Centre of Buckinghamshire Chilterns University College, High Wycombe) to assist businesses.

Also, the Association of Councils in the Thames Valley Region (ACTVaR) has a role by acting as an information exchange across the sub-region and between the public and private sectors. It can also provide a mechanism for local authorities engaging in dialogue with a range of private sector waste interests.

Waste Strategy for Buckinghamshire – Recommendations for industrial and commercial waste to 2010

WASTE STRATEGY FOR BUCKINGHAMSHIRE – RECOMMENDATIONS FOR INDUSTRIAL AND COMMERCIAL WASTE TO 2010.

REC 13

To promote the county becoming more self-sufficient in the disposal of industrial and commercial waste by the means of minimisation, recycling and incineration with energy recovery.

REC 14

To support the reduction of Buckinghamshire’s industrial and commercial waste sent to landfill to 85% of the 1998 total by 2005.

REC 15

To encourage a reduction in the amount of industrial and commercial waste being exported from Buckinghamshire to other regions.

GLOSSARY OF TERMS

Anaerobic digestion - a process where biodegradable material is encouraged to break down in the absence of oxygen. Material is placed into an enclosed vessel and in controlled conditions the waste breaks down into *digestate* and *biogas*.

Best Practicable Environmental Option (BPEO) - the BPEO is the option that provides the most benefits or least damage to the environment as a whole, at acceptable cost, over the longer term as well as the short term. It is the outcome of a “systematic and consultative decision making procedure which emphasises the protection of the environment across land, air and water” (12th Report of the Royal Commission on Environmental Pollution, 1988).

Best Value - places a duty on local authorities to deliver services (including waste collection and waste disposal management) to clear standards – covering both cost and quality – by the most effective, economic and efficient means available.

Biodegradable municipal waste - that component of municipal waste which is "biodegradable". The EC Landfill Directive itself defines biodegradable waste as "any waste that is capable of undergoing anaerobic or aerobic decomposition" [Article 2(1)]. The House of Lords in its report *Sustainable Landfill* has noted that this definition is inadequate since it omits any reference to time. It therefore recommended that biodegradable waste should be defined in terms of its ability to degrade completely within the aftercare period set out in the Directive "for leaving the site in an environmentally benign state". That period is now given as 30 years (Common Position, European Environment Council, 23 March 1998).

Buckinghamshire Waste Authorities - Buckinghamshire County Council is the Waste Disposal Authority (WDA) for the county. It is legally responsible for the safe disposal of household waste and to provide Household Waste Recycling Centres (HWRCs).

The four District Councils (Aylesbury Vale, Chiltern, South Bucks and Wycombe District Councils) are the *Waste Collection Authorities* (WCAs) within Buckinghamshire. They have a statutory responsibility to provide a waste collection service to householders and, on request, to local businesses. WCAs also collect bulky household waste and cleanse the streets.

BWF - the "Bucks Waste Forum" - includes members and officers from Buckinghamshire County Council, Aylesbury Vale District Council, Chiltern District Council, South Bucks District Council, and Wycombe District Council. Other stakeholders are represented including the Environment Agency, and the waste management industry (in the form of the Environmental Services Association).

Centralised composting - large-scale schemes which handle kitchen and garden waste from households and which may also accept suitable waste from parks and gardens. Schemes may rely on aerobic methods or use anaerobic digesters.

Composting - an aerobic, biological process in which organic wastes, such as garden and kitchen waste are converted into a stable granular material which can be applied to land to improve soil structure and enrich the nutrient content of the soil.

Composting (Enclosed Reactor) - shredded waste is placed inside a container or chamber through which air is forced. This method allows good control of temperature, moisture and aeration leading to rapid composting (sometimes as little as two weeks) although it will then need a period of outdoor maturation.

Composting (Windrowing) - shredded waste is placed in elongated heaps, called *windrows*, normally outdoors. The windrows are turned mechanically to periodically aerate the composting waste. The process takes at least 16 weeks, at the end of which the compost represents half the weight of the input material.

Civic Amenity Waste - a sub-group of household waste, normally delivered by the public direct to sites provided by the local authority. Consists generally of bulky items such as beds, cookers and garden waste as well as recyclables.

Clinical Waste - waste arising from medical, nursing, dental, veterinary, pharmaceutical or similar practices, which may present risks of infection.

Combined Heat and Power - a highly fuel-efficient technology which produces electricity and heat from a single facility.

Commercial Waste - waste arising from premises which are used wholly or mainly for trade, business, sport, recreation or entertainment, excluding municipal and industrial waste.

Construction and Demolition Waste - arises from the construction, repair, maintenance and demolition of buildings and structures. It mostly includes brick, concrete, hardcore, subsoil and topsoil, but it can also contain quantities of timber, metal, plastics and (occasionally) special (hazardous) waste materials.

Controlled Waste - comprised of household, industrial, commercial and clinical waste which requires a waste management licence for treatment, transfer or disposal. The main exempted categories comprise mine, quarry and farm wastes. Radioactive and explosive wastes are controlled by other legislation and procedures.

Energy from waste - the combustion of waste under controlled conditions in which the heat released is recovered to provide hot water and steam (usually) for electricity generation.

Environment Agency - established in April 1996, combining the functions of former local waste regulation authorities, the National Rivers Authority and Her Majesty's Inspectorate of Pollution. Intended to promote a more integrated approach to waste management and consistency in waste regulation. The Agency also conducts national surveys of waste arisings and waste facilities.

EU Landfill Directive - adopted by the Member States during 1999, is intended to reduce the environmental effect of the landfilling of waste by introducing uniform standards throughout the European Union. The main objectives are to stimulate recycling and recovery of waste, and to reduce emissions of methane (a powerful greenhouse gas). The Directive requires the UK to reduce the proportion of biodegradable municipal solid waste going to landfill to 35% (by weight) of the 1995 level by 2020. It also introduces the mandatory "pre-treatment" of putrescible waste and a ban on the co-disposal of hazardous and non-hazardous wastes.

Home Composting - compost can be made at home using a traditional compost heap, a purpose-designed container, or a wormery.

Household Waste - includes waste from household collection rounds (waste within Schedule 1 of the Controlled Waste Regulations 1992), waste from services such as street sweeping, bulky waste collection, hazardous household waste collection, litter collections, household clinical waste collection and separate garden waste collection (waste within Schedule 2 of the Controlled Waste Regulations 1992), waste from civic amenity sites and wastes separately collected for recycling or composting through bring/drop off schemes, kerbside schemes and at civic amenity sites (Source: *Municipal Waste Management 1995/96*, DETR, June 1997).

Household Waste and Recycling Centres (HWRCs) - facilities provided by Buckinghamshire County Council for the disposal of waste that is usually excluded from the regular household waste collection service (Civic Amenity Waste).

Incineration - is the controlled burning of waste, either to reduce its volume, or its toxicity. Energy recovery from incineration can be made by utilising the calorific value of paper, plastic, etc to produce heat or power. Current flue-gas emission standards are very high. Ash residues still tend to be disposed of to landfill.

Industrial Waste - waste from any factory and from any premises occupied by an industry (excluding mines and quarries).

Inert Waste - waste which, when deposited into a waste disposal site, does not undergo any significant physical, chemical or biological transformation and which complies with the criteria set out in Annex III of the EC Directive on the Landfill of Waste.

Integrated Waste Management - involves a number of key elements, including: recognising each step in the waste management process as part of a whole; involving all key players in the decision-making process; and utilising a mixture of waste management options within the locally determined sustainable waste management system.

Kerbside Collection - any regular collection of recyclables from premises, including collections from commercial or industrial premises as well as from households. Excludes collection services delivered on demand.

Land-Use Planning - the Town and Country Planning system regulates the development and use of land in the public interest, and has an important role to play in achieving sustainable waste management.

Landfill Sites - are areas of land in which waste is deposited. Landfill sites are often located in disused quarries or mines. In areas where there are limited, or no ready-made voids, the practice of *land raising* is sometimes carried out, where some or all of the waste is deposited above ground, and the landscape is contoured.

Licensed Site – a waste disposal or treatment facility which is licensed under the Environmental Protection Act for that function.

Minimisation - see **Reduction**.

Municipal waste - includes household waste and any other wastes collected managed by a Waste Collection Authority, or its agents, such as municipal parks and gardens waste, beach cleansing waste, commercial or industrial waste resulting from the clearance of fly-tipped materials. It also includes rubble. (Source: *Monitoring and evaluating recycling, composting and recovery programmes*, DETR, February 1999). It should be noted that some definitions of municipal waste (such as that used by the Audit Commission for the preparation of the Citizens' Charter monitoring figures) include street sweepings and the figures used in this report follow this convention.

Proximity principle - the proximity principle (as applied to wastes) is that they should be treated or disposed of as near to their place of origin as possible so as to minimise the distance that they are moved.

Recycling - involves the reprocessing of wastes, either into the same product or a different one. Many non-hazardous industrial wastes such as paper, glass, cardboard, plastics and scrap metals can be recycled. Special wastes such as solvents can also be recycled by specialist companies, or by in-house equipment.

Reduction - achieving as much waste reduction as possible is a priority action. Reduction can be accomplished within a manufacturing process involving the review of production processes to optimise utilisation of raw (and secondary) materials and recirculation processes. It can be cost-effective, both in terms of lower disposal costs, reduced demand for raw materials and energy costs. It can be carried out by householders through actions such as home composting, reusing products and buying goods with reduced packaging.

Re-Use - can be practised by the commercial sector with the use of products designed to be used a number of times, such as re-usable packaging. Householders can purchase products that use refillable containers, or re-use plastic bags. The processes contribute to sustainable development and can save raw materials, energy and transport costs.

Self-sufficiency - dealing with wastes within the region or country where they arise.

Separate collection - kerbside schemes where materials for recycling are collected either by a different vehicle or at a different time to the ordinary household waste collection.

Special Waste - is defined by the Control of Pollution (Special Wastes) Regulations 1980 as any controlled waste that contains any of the substances listed in Schedule 1 to the Regulations, or is dangerous to life, or has a combustion flashpoint of 21°C or less, or is a medical product as defined by the Medicines Act 1968.

Sustainable Development - development which is sustainable is that which can meet the needs of the present without compromising the ability of future generations to meet their own needs.

Treatment - involves the chemical or biological processing of certain types of waste for the purposes of rendering them harmless, reducing volumes before landfilling, or recycling certain wastes.

Unitary Authority - a local authority which has the responsibilities of both Waste Collection and Waste Disposal Authorities.

Waste - is the wide-ranging term encompassing most unwanted materials and is defined by the Environmental Protection Act 1990. Waste includes any scrap material, effluent or unwanted surplus substance or article which requires to be disposed of because it is broken, worn out, contaminated or otherwise spoiled. Explosives and radioactive wastes are excluded.

Waste Arisings - the amount of waste generated in a given locality over a given period of time.

Waste hierarchy - the waste hierarchy ranks the main waste management options in order of “environmental friendliness” as follows:

- Minimise waste;
- Re-use;
- Recover value (recycling, composting or treatment with energy recovery);
- Disposal to landfill as a *last* resort.

Waste Management Industry - the businesses (and not-for-profit organisations) involved in the collection, management and disposal of waste.

Waste Management Licensing - licences are required by anyone who proposes to deposit, recover or dispose of waste. The licensing system is separate from, but complementary to, the land use planning system. The purpose of a licence and the conditions attached to it is to ensure that the waste operation which it authorises is carried out in a way which protects the environment and human health.

Waste Transfer Station - a site to which waste is delivered for sorting prior to transfer to another place for recycling, treatment or disposal.

THE PRINCIPAL NATIONAL LEVERS FOR CHANGE

Markets for recyclable materials

- B1 One key consideration in moving towards an intensive waste diversion strategy under which materials recovery and composting will be maximised will be to secure long-term markets for the recyclable materials recovered and the products produced. A 3 to 4-fold increase in national current markets will be needed to support this high diversion strategy. This will require the development of new uses for the materials produced or collected (i.e. the use of Green Waste-derived compost in agriculture, alternative uses for glass to recycling into more bottles). The benefits of a successful market development strategy are not limited to increased diversion and recycling of wastes, but can include the local development of small to medium firms engaged in recycling.
- B2 In setting the national recycling and recovery targets and the statutory performance standards the Government has recognised that the necessary changes cannot take place without an aggressive agenda to develop new commercial applications for the materials recovered from the waste stream. If there is to be a sustainable increase in recycling, then it must be economically viable. And that will depend on the development of markets for recycled materials. *Waste Strategy 2000* therefore announced the establishment of WRAP (the Waste & Resources Action Programme) as a body dedicated to overcome market barriers to re-use and recycling. It will aim to do this through a programme of market facilitation, promotion of investment, strategic research and the provision of advice. Local authorities will engage with WRAP to seek out examples of best practice and to develop demonstration projects that could be extended locally.

Producer Responsibility and the Packaging Regulations

- B3 Producer responsibility initiatives involve producers (and others) taking greater responsibility for those goods at the end of their lives. They can take the form of voluntary agreements or mandatory obligations. The Government has introduced statutory producer responsibility for packaging and packaging waste. The packaging Regulations require such businesses to recover 52% of packaging waste to be recovered in 2001, and at least half of that to be recycled. These actions may be undertaken by the producer or an accredited agent. The Government is considering new packaging targets for 2006. European Directives on end of life vehicles and electrical and electronic goods, and batteries (see paragraphs 1.56 to 1.65 below) are forthcoming examples of producer responsibility.

Landfill Tax

- B4 The Government introduced the Landfill Tax in October 1996. The tax, which has an explicit environmental objective to reduce the overall volume of biodegradable waste sent to landfill, has had a significant impact upon waste management practices. There are two tax rates, currently £13 per tonne for active wastes and £2 per tonne for inactive wastes. The rate of Landfill Tax for *active* wastes will increase at £1.00 per tonne each year until 2004/5. The Government has yet to announce what its intentions for the tax are beyond this date. However it is expected that a significant "step change" in the rate will be introduced to encourage more rapid diversion of waste from landfill.

Tradable Landfill Permits

- B5 Another important lever will be the introduction by the Government of a system of tradable landfill permits to minimise the cost of meeting the Landfill Directive and provide local authorities with some flexibility in meeting the targets. A framework for the new system is set out in a DETR consultation paper published in March 2001 but the precise details of the scheme have yet to be announced.
- B6 Nevertheless, under the proposed system, waste disposal authorities (such as Buckinghamshire County Council) would be allocated an initial number of free permits at a level, which, when aggregated, would be consistent with the UK meeting the national target. Moreover, the allocation would be reduced for each successive year towards the statutory target years which are 2010, 2013 and 2020.
- B7 A disposal authority will need to ensure that it holds sufficient permits to cover the actual amount of biodegradable municipal waste that it intends to landfill over a given period. Those disposal authorities that successfully divert waste away from landfill such that they do not need all of their allocation of permits will then be able to trade the surplus permits with those authorities that have a shortfall. The Government favours financial penalties for those authorities that landfill more waste than it has permits for and that do not acquire permits to meet the shortfall.
- B8 The benefits to individual authorities of tradable permits will depend partially on the price of the permits, and in turn, on the number of buyers and sellers. There will only be a finite number of permits available in any year. The allocation of the permits will ensure that it will not be possible for all disposal authorities to buy permits in preference to taking positive action to divert from landfill. Therefore, if past national recycling performance is a guide to the future, there is likely to be a shortage of permits of one sort or another in the future. The Government is not in favour of setting any maximum price restriction.

B9 Indeed, a key feature of the trading system is that in "interim" years (not statutory target years or across such years) local authorities may be given the power to bank permits for use at a later date or to trade with other authorities.

EMERGING WASTE LEGISLATION

End of Life Vehicle Directive (ELV) – planned implementation date 2 July 2002

- C1 Abandoned vehicles are usually collected by local authorities as required by the Refuse Disposal (Amenity) Act 1978. Many are stolen, untaxed or uninsured and the numbers of vehicles collected has increased dramatically over the last two years due to the fall in scrap metal value. Abandoned vehicles may be dealt with by scrap dealers or car breakers which tend to be small businesses. Larger, more professionally run operations, dismantlers, remove hazardous items from the vehicle, such as tyres, fluids and batteries. Once the spare parts have been removed, the crushed vehicles will be sold on to shredder operators, where they are mixed with other discarded equipment such as cookers and bicycles.
- C2 The hazardous nature of shredder residue and the growing number of vehicles in use pushed the European Commission into proposing a Directive on End of Life Vehicles in 1997. The Directive was adopted by the Commission last year and is due to be transposed into domestic law. The ELV Directive works to the principle of Producer Responsibility and from July 2002, a network of authorised treatment facilities must be in place in the UK.
- C3 Member States must bring into force legislation to comply with the ELV Directive by the 21 April 2002. Thereafter:
- For new vehicles put on the market from 1 July 2002.
 - Member States must ensure that delivery of a vehicle to an authorised treatment facility can happen without any cost for the last owner;
 - Vehicle producers must meet all, or a significant part of the take-back provision;

Authorised treatment facilities will be permitted to issue Certificates of Destruction (CoDs) as a condition for deregistration of the ELV. Member States may allow vehicle producers, dealers and collectors to issue CoDs on behalf of facilities provided they guarantee that the ELV is sent to an authorised facility.

- By 21 October 2002, the Commission must have established rules to control the compliance of Member States with the national reuse/recovery targets as listed below.

- By 1 July 2003, vehicle materials and components must no longer contain lead, mercury, cadmium or hexavalent chromium.
- By 1 January 2005, new type-approved vehicles must be at least 85% by weight per vehicle reusable an/or recyclable and at least 95% reusable and/or recoverable. The Commission will promote European standards.
- By 1 January 2006, the first set of national reuse/recycling and reuse/recovery targets must be in place. Member States must ensure that at least 85% of all ELVs are reused or recovered by average weight per vehicle per year. At least 80% must be reused or recycled.
- By 1 January 2007, free take-back of ELVs to authorised treatment facilities will apply to vehicles, including those put on the market before 1 July 2002.
- By 1 January 2015, the second set of national reuse/recycling and reuse/recovery targets must be in force. At least 95% of ELVs must be reused or recovered and at least 85% reused or recycled.

Waste Electrical and Electronic Equipment (WEEE) - planned implementation date 2005/06

- C4 The WEEE Directive was adopted by the European Parliament in May 2001 and requires producers to contribute towards the costs of collecting and recycling redundant electrical equipment. It will also set minimum operating standards for recyclers and ban the use of heavy metals and some brominated flame-retardants.
- C5 The first reading of the proposals saw a number of amendments:
- Producers should finance the collection of WEEE from drop off facilities as well as finance the treatment, recovery and disposal of items. Finance can be channelled through individual or collective systems.
 - Collection systems, retailer take-back, authorised treatment facilities and systems to channel finance from producers will have to be up and running 30 months after the WEEE Directive's entry into force.
 - Product levies will be allowed on voluntary basis to ensure costs are passed down the chain to retailers for a transitional period (based on the average life of the equipment), but for no longer than ten years after Directive comes into force.

- Retailers do not have to provide free take back services as long as alternative return routes are available, free of charge. Equipment containing hazardous materials must be taken back by specific collection facilities.
- There will be a ban on the use of hazardous substances (e.g. mercury, lead, cadmium, hexavalent chromium, two types of brominated flame-retardants, PDDs and PBDEs) from January 2006.
- At least 5% (by weight) of plastic components of WEEE will have to be recycled.
- The mandatory collection target will be to collect 6kg of WEEE per household per capita per year until 31 December 2005.
- A new target, expressed as percentage of equipment sales to households in preceding years, must be set by 3 December 2007.
- Member States will have to ensure that WEEE is collected separately and is no longer disposed of together with unsorted domestic waste.

Proposed Targets

	Recover	Reuse/Recycling
Large household appliance	90	85
Small household appliance	70	60
Consumer equipment	85	70
Tools	70	60
Lighting equipment	70	60
Toys, leisure & sports equipment	70	60
IT & telecoms	85	70
Gas discharge lamps & light bulbs	-	85
WEEE containing CRTs	85	70
Automatic dispensers	90	85
Monitoring & control instruments	70	60

The Batteries and Accumulators Directive

C6 The European Commission issued its first draft proposal on batteries in 1997. The second draft was issued in April 2001 and is still under discussion. The following proposals are outlined in the draft:

- By 1 January 2008, a ban on nickel/cadmium (ni-cad) batteries with exemptions for those used in railway and aviation applications, and power supplies for hospitals, utilities and telecommunication facilities. The list will be revised by the end of 2005, and every three years thereafter.

Within two years of the Directive's implementation:

- 75% of all consumer batteries, disposable or rechargeable, will have to be separately collected, including at least 75% of those containing cadmium or lead;
- 95% of all industrial and car batteries, including at least 95% of those containing cadmium or lead;
- For both of the above categories, 55% of the batteries collected will have to be recycled;
- Collection targets to be achieved no later than 31 December 2004;
- Targets to be reviewed by 31 December 2008.

C7 Unlike WEEE and ELV Directives, manufacturers will not necessarily be made legally and financially responsible for ensuring recovery and proper disposal.

Review of the Waste Incineration Directive

C8 The new incineration law will replace the two previous 1984 Directives on municipal incineration and also the 1994 Directive on hazardous waste incineration. It will also apply to the burning of waste as fuel in cement kilns, boilers etc. The Directive will apply to new facilities from autumn 2002 and to existing plants after autumn 2005. Challenging emission limits for nitrogen oxides from existing municipal incinerators and cement kilns that burn waste will apply from January 2008.

C9 Other amendments:

- Animal carcass incinerators will not fall under the Directive – many would be forced to close if the Directive covered them. However, a revision is proposed to the 1990 Directive on animal waste to provide for high environmental standards;
- Other exemptions include the burning of vegetable waste from the food processing industry (but only if heat is recovered) and to certain wastes from the pulp and paper industry;
- There are no exemptions for burning wood waste from construction and demolition, to any waste that contains halogenated organics, or heavy metals as a result of coating or treatment with wood preservatives, or for waste oil;

- Hazardous waste must be burnt at 1,100degrees C. rather than the normal 850 degrees – this excludes household waste and PVC;

C10 Controls:

- Total organic carbon content of bottom ash must be less than 3%;
- Emissions of nitrogen oxides must be below 500mg/m³;
- The limit for Hydrogen Chloride emissions is 10mg/m³.

NATIONAL AND LOCAL WASTE TARGETS / STANDARDS

National Waste Targets

2005

- to recycle or compost at least 25% of household waste by 2005 (*Waste Strategy 2000, May 2000*)
- to recover value from 40% of municipal waste by 2005 (*Waste Strategy 2000, May 2000*)
- by 2005 to reduce the amount of industrial and commercial waste sent to landfill to 85% of that landfilled in 1998 (*Waste Strategy 2000, May 2000*)

2010

- to recycle or compost at least 30% of household waste by 2010 (*Waste Strategy 2000, May 2000*)
- to recover value from 45% of municipal waste by 2010 (*Waste Strategy 2000, May 2000*)
- by 2010 to reduce biodegradable municipal waste landfilled to 75% of that produced in 1995 (*EU Landfill Directive*)

2013

- by 2013 to reduce biodegradable municipal waste landfilled to 50% of that produced in 1995 (*EU Landfill Directive*)

2015

- to recycle or compost at least 33% of household waste by 2015 (*Waste Strategy 2000, May 2000*)
- to recover value from 67% of municipal waste by 2015 (*Waste Strategy 2000, May 2000*)

2020

- by 2020 to reduce biodegradable municipal waste landfilled to 35% of that produced in 1995 (*EU Landfill Directive*)

Local Waste standards

Standards for Household Waste Recycling and Composting (*Guidance on Municipal Waste Management Strategies*, March 2001).

	2003-04 Standard	2005-06 Standard
BCC	33%	36%
AVDC	26%	36%
CDC	33%	40%
SBDC	33%	40%
WDC	20%	30%

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<u>COUNTY</u>	Projected Municipal Waste Arisings	Proportion of Municipal Waste that is biodegradable (60%) Projected BMW 60%	Amount of BMW Being diverted	Amount of BMW going to landfill	New BMW diverted	Amount to landfill after new diversions	Govt. Targets	Difference
1995/96	227382	136429						
1996/97		0						
1997/98		0						
1998/99		0						
1999/00	248230	148938	32920	116018				
2000/01	246552	147931	42624	105307				
2001/02	251140	150684	43181	107503				
2002/03	255823	153494	43747	109747				
2003/04	260605	156363	44321	112042	18125	93917		
2004/05	265488	159293	44904	114388	21503	92885		
2005/06	270473	162284	45496	116788	21746	95042		
2006/07	275563	165338	46096	119241	21991	97250		
2007/08	280760	168456	46706	121750	22240	99510		
2008/09	286068	171641	47325	124315	22491	101824		
2009/10	291488	174893	47954	126939	22746	104193	102322	1871
2010/11	297022	178213	48592	129621	23004	106618		
2011/12	302675	181605	49240	132365	23265	109100		
2012/13	308447	185068	49898	135170	23529	111641	68215	43426
2013/14	314343	188606	50566	138040	23797	114243		
2014/15	320364	192218	51244	140974	24068	116906		
2015/16	326514	195908	51933	143975	24342	119633		
2016/17	332796	199677	52633	147045	24620	122425		
2017/18	339212	203527	53343	150184	24901	125283		
2018/19	345766	207459	54065	153395	25186	128209		
2019/20	352461	211476	54797	156679	25475	131204	47750	83454
2020/21	359300	215580	55542	160038	25767	134271		

<u>Household Waste Sites</u>	Projected Municipal Waste Arisings	Proportion of Municipal Waste that is biodegradable (60%) Projected BMW	Amount of BMW Being diverted 1.01	Amount of BMW going to landfill	New BMW diverted	Amount to landfill after new diversions	Govt Targets	Difference
Year								
Projected Growth	1.010	60%	1.045					
1995/96	65583	39350						
1996/97		0						
1997/98		0						
1998/99		0						
1999/00	70313	42188	13223	28965				
2000/01	66741	40045	21431	18614				
			0					
2001/02	67408	40445	21645	18800				
2002/03	68082	40849	21861	18988				
2003/04	68763	41258	22080	19178	2160	17018		
2004/05	69451	41671	22301	19370	4107	15263		
2005/06	70145	42087	22524	19564	4148	15416		
			0					
2006/07	70847	42508	22749	19759	4189	15570		
2007/08	71555	42933	22976	19957	4231	15726		
2008/09	72271	43363	23206	20156	4273	15883		
2009/10	72994	43796	23438	20358	4316	16042	29513	-13471
2010/11	73724	44234	23673	20562	4359	16202		
2011/12	74461	44676	23909	20767	4403	16364		
2012/13	75205	45123	24148	20975	4447	16528	19675	-3147
2013/14	75957	45574	24390	21185	4491	16693		
2014/15	76717	46030	24634	21396	4536	16860		
2015/16	77484	46491	24880	21610	4582	17029		
2016/17	78259	46955	25129	21826	4627	17199		
2017/18	79042	47425	25380	22045	4674	17371		
2018/19	79832	47899	25634	22265	4720	17545		
2019/20	80630	48378	25890	22488	4768	17720	13773	3947
2020/21	81437	48862	26149	22713	4815	17897		

<u>Aylesbury District Council</u>	Projected Municipal Waste Arisings	Proportion of Municipal Waste that is biodegradable (60%) Projected BMW	Amount of BMW Being diverted	Amount of BMW going to landfill	New BMW diverted	Amount to landfill after new diversions	Govt Targets	Difference
Projected Growth	1.025	60%						
1995/96	51211	30727						
1996/97		0						
1997/98		0						
1998/99		0						
1999/00	56329	33797	5278	28520				
2000/01	56561	33937	5470	28467				
2001/02	57975	34785	5606	29179				
2002/03	59424	35655	5746	29908				
2003/04	60910	36546	5890	30656	1000	29656		
2004/05	62433	37460	6037	31422	1025	30397		
2005/06	63994	38396	6188	32208	1051	31157		
2006/07	65593	39356	6343	33013	1077	31936		
2007/08	67233	40340	6502	33838	1104	32735		
2008/09	68914	41348	6664	34684	1131	33553		
2009/10	70637	42382	6831	35552	1160	34392	23045	11347
2010/11	72403	43442	7001	36440	1189	35252		
2011/12	74213	44528	7176	37351	1218	36133		
2012/13	76068	45641	7356	38285	1249	37036	15364	21672
2013/14	77970	46782	7540	39242	1280	37962		
2014/15	79919	47952	7728	40223	1312	38911		
2015/16	81917	49150	7921	41229	1345	39884		
2016/17	83965	50379	8120	42260	1379	40881		
2017/18	86064	51639	8322	43316	1413	41903		
2018/19	88216	52930	8531	44399	1448	42951		
2019/20	90421	54253	8744	45509	1485	44024	10754	33270
2020/21	92682	55609	8962	46647	1522	45125		

<u>Chiltern District Council.</u>	Projecte d Municipa l Waste Arising	Proportion of Municipal Waste that is biodegradable (60%) Projected BMW	Amount of BMW Being diverte d	Amount of BMW going to landfill	New BMW diverte d	Amount to landfill after new diversion s	Govt Targets	Differenc e
Projecte d Growth	1.015	60%						
1995/96	28803	17282						
1996/97		0						
1997/98		0						
1998/99		0						
1999/00	30923	18554	5971	12582				
2000/01	31666	19000	5983	13016				
2001/02	32141	19285	6073	13212				
2002/03	32623	19574	6164	13410				
2003/04	33112	19867	6257	13611	2380	11231		
2004/05	33609	20165	6350	13815	2416	11399		
2005/06	34113	20468	6446	14022	2452	11570		
2006/07	34625	20775	6542	14233	2489	11744		
2007/08	35144	21087	6640	14446	2526	11920		
2008/09	35672	21403	6740	14663	2564	12099		
2009/10	36207	21724	6841	14883	2602	12280	12962	-682
2010/11	36750	22050	6944	15106	2641	12465		
2011/12	37301	22381	7048	15333	2681	12652		
2012/13	37860	22716	7154	15563	2721	12841	8641	4200
2013/14	38428	23057	7261	15796	2762	13034		
2014/15	39005	23403	7370	16033	2804	13229		
2015/16	39590	23754	7480	16273	2846	13428		
2016/17	40184	24110	7593	16518	2888	13629		
2017/18	40786	24472	7707	16765	2932	13834		
2018/19	41398	24839	7822	17017	2976	14041		
2019/20	42019	25212	7939	17272	3020	14252	6049	8203
2020/21	42650	25590	8059	17531	3065	14466		

South Bucks D. C	Projecte d Municipa l Year Waste Arisings	Proportion of Municipal Waste that is biodegradeable (60%) Projected BMW	Amount of BMW Being diverte d	Amoun t of BMW going to landfill	New BMW diverte d	Amount to landfill after new diversion s	Govt Targets	Differenc e
Projecte d Growth	1.015	60%						
1995/96	21950	13170						
1996/97		0						
1997/98		0						
1998/99		0						
1999/00	24073	14444	3545	10899				
2000/01	25841	15505	3838	11667				
	0							
2001/02	26229	15737	3896	11842				
2002/03	26622	15973	3954	12019				
2003/04	27021	16213	4013	12200	0	12200		
2004/05	27427	16456	4074	12383	0	12383		
2005/06	27838	16703	4135	12568	0	12568		
	0							
2006/07	28256	16953	4197	12757	0	12757		
2007/08	28680	17208	4260	12948	0	12948		
2008/09	29110	17466	4323	13142	0	13142		
2009/10	29546	17728	4388	13339	0	13339	9878	3461
2010/11	29990	17994	4454	13540	0	13540		
	0							
2011/12	30439	18264	4521	13743	0	13743		
2012/13	30896	18538	4589	13949	0	13949	6585	7364
2013/14	31359	18816	4658	14158	0	14158		
2014/15	31830	19098	4727	14370	0	14370		
2015/16	32307	19384	4798	14586	0	14586		
	0							
2016/17	32792	19675	4870	14805	0	14805		
2017/18	33284	19970	4943	15027	0	15027		
2018/19	33783	20270	5018	15252	0	15252		
2019/20	34290	20574	5093	15481	0	15481	4610	10871
2020/21	34804	20882	5169	15713	0	15713		

Wycombe District Council	Projecte d Municipa l Year Waste Arising	Proportion of Municipal Waste that is biodegradeable (60%) Projected BMW	Amount of BMW Being diverte d	Amount of BMW going to landfill	New BMW diverte d	Amount to landfill after new diversion s	Govt Targets	Differenc e
Projected Growth	1.025	60%						
1995/96	59835	35901						
1996/97								
1997/98								
1998/99								
1999/00	66592	39955	4904	35052				
2000/01	65743	39446	5903	33543				
	0							
2001/02	67387	40432	5962	34470				
2002/03	69071	41443	6021	35422				
2003/04	70798	42479	6081	36397	12585	23812		
2004/05	72568	43541	6142	37399	13956	23443		
2005/06	74382	44629	6204	38426	14095	24330		
	0					0		
2006/07	76242	45745	6266	39479	14236	25243		
2007/08	78148	46889	6328	40560	14379	26182		
2008/09	80101	48061	6392	41669	14523	27147		
2009/10	82104	49262	6455	42807	14668	28139	26926	1213
2010/11	84157	50494	6520	43974	14814	29160		
	0					0		
2011/12	86261	51756	6585	45171	14963	30209		
2012/13	88417	53050	6651	46399	15112	31287	17951	13336
2013/14	90627	54376	6718	47659	15263	32396		
2014/15	92893	55736	6785	48951	15416	33535		
2015/16	95215	57129	6853	50277	15570	34707		
	0					0		
2016/17	97596	58558	6921	51636	15726	35911		
2017/18	100036	60021	6990	53031	15883	37148		
2018/19	102537	61522	7060	54462	16042	38420		
2019/20	105100	63060	7131	55929	16202	39727	12565	27162
2020/21	107728	64637	7202	57434	16364	41070		

APPENDIX F

SHORT AND MEDIUM TERM WASTE MANAGEMENT INITIATIVES - CONTRIBUTION TO MEETING SHORTFALLS IN EXISTING RECYCLING PROGRAMMES AGAINST THE STATUTORY PERFORMANCE STANDARD REQUIREMENTS

AVDC

2003/04 indicated shortfall of existing recycling programmes against the Statutory Performance Indicator = 7,471 tonnes

Initiatives recommended for 2003/04

Initiative 14	=	1,000 tonnes
Initiative 15	=	1,000 tonnes
Initiative 12	=	1,600 tonnes
Total	=	3,600 tonnes

- **Shortfall at 2003/04 of - 3,871 tonnes**

2005/06 indicated shortfall of existing recycling programmes against the Statutory Performance Indicator less 2003/04 shortfall = 6,787 tonnes (14,258 - 7,471 tonnes)

Initiatives recommended for 2005/06

Carried forward from 2003/4	=	-3,871 tonnes
Initiative 13	=	900 tonnes
Total	=	-2,971 tonnes

- **Shortfall at 2005/06 of -9,758 tonnes**

CDC

2003/04 indicated shortfall of existing recycling programmes against the Statutory Performance Indicator = 2,123 tonnes

Recommended Initiatives for 2003/04

Initiative 17	=	377 tonnes
Initiative 16	=	2,380 tonnes
Total	=	2,757 tonnes

- **Surplus at 2003/04 of +634 tonnes**

2005/06 indicated shortfall of existing recycling programmes against the Statutory Performance Indicator less 2003/04 shortfall = 2,452 tonnes (4,575 – 2,123 tonnes)

Recommended initiatives for 2005/06

Carried forward from 2003/4 = +634 tonnes

Total = +634 tonnes

- **Shortfall at 2005/06 of -1,818 tonnes**

SBDC

2003/04 indicated shortfall of existing recycling programmes against the Statutory Performance Indicator = 3,774 tonnes

Recommended initiatives for 2003/04

Initiative 19 = 2,700 tonnes

Initiative 20 = 780 tonnes

Total = 3,480 tonnes

- **Shortfall at 2003/04 of -294 tonnes**

2005/06 indicated shortfall of existing recycling programmes against the Statutory Performance Indicator less 2003/04 shortfall = 2,093 tonnes (5,837 - 3,744 tonnes)

Recommended initiatives for 2005/06

Carried forward from 2003/4 = - 294 tonnes

Total = -294 tonnes

- **Shortfall at 2005/06 of -2,387 tonnes**

WDC

2003/04 indicated shortfall of existing recycling programmes against the Statutory Performance Indicator = 6,453 tonnes

Recommended initiatives for 2003/04

Initiative 22 = 3,085 tonnes

Initiative 24 = 9,500 tonnes

Total = 12,585 tonnes

- **Surplus at 2003/04 of +6,132 tonnes**

2005/06 indicated shortfall of existing recycling programmes against the Statutory Performance Indicator less 2003/04 shortfall = 8,000 tonnes (14,453 – 6,453 tonnes)

Options proposed for 2005/06

Carried forward from 2003/4	=	+ 6,132 tonnes
Initiative 23	=	245 tonnes
Initiative 25	=	1,000 tonnes
Total	=	7,377 tonnes

- **Shortfall at 2005/06 of -623 tonnes**

(NB additional 2,550 tonnes beyond 2005/06 in kerbside collection of plastic, glass & cans by 2010/11).

SITE SELECTION CRITERIA FOR NEW HOUSEHOLD WASTE RECYCLING CENTRES AND WASTE TRANSFER STATIONS.

G.1 This WSB identifies the need for the provision of one or more new Household Waste and Recycling Centres (Initiative 02, REC 03) to accommodate the growth in Civic Amenity Waste arisings consequent upon planned future housing and population increases in parts of the county. **There are a number of criteria that will need to be applied in the identification of a suitable site(s) for a new HWRC(s). It will be appropriate to require that a number of service-based criteria should be satisfied. These will include:**

- a site area of at least 1.6 hectares (about 4 acres);
- a location close to areas where there has been significant population growth since the existing network of HWRC sites was created (around 1980), or where significant new housing and population growth is planned for the future;
- a location where a new site could be expected to reduce queuing times at one or more of the existing HWRC sites by providing alternative convenient Civic Amenity Waste capacity;
- a location that could also provide a service to significant areas of population that currently are located beyond a 5 mile radius of an existing HWRC site.

G.2 During the life of this Strategy there may be a need for waste transfer sites to serve various parts of the county. Due to the nature of these operations, **the site section criteria for waste transfer will be both service- and transport-based. In assessing the suitability of any site for waste transfer the criteria to be applied will include:**

Service-Based Criteria

- a site area of at least 4.0 hectares (about 10 acres) for a fully-equipped facility;
- the ability of the site to accommodate waste processing/waste transfer and the bulking of large quantities of recyclable materials;

Transport-Based Criteria

- a location near to the major urban areas ("proximity principle") where most recyclable material and residual waste is generated;

- a location which will minimise the total length of waste movements within the catchment served by the transfer site;
- the site should have efficient links and access to:
 - the Strategic Highway Network, and
 - the County Rail Network, and/or
 - the Canal and waterway network.

DISTRICT COUNCIL RECYCLING PLANS

- H.1 Section 5 of this Waste Strategy for Buckinghamshire sets out the requirement for the WCAs in the county to each prepare a *Recycling Plan*. The Government's *Guidance on Municipal Waste Management Strategies* indicated that certain specified recycling information should appear in a separate part of a Strategy. The relevant information for each Buckinghamshire district council is set out below.

Aylesbury Vale District Council - Recycling Position Statement (2002)

Current Position (January 2002)

- H.2 The Aylesbury Vale District covers approximately 350 square miles and the District Council has a duty to collect refuse from 64200 domestic properties, using either 140 or 240 litre wheeled bins, dependant on household size, or black sacks where a wheeled bin is inappropriate. The recycling rate for 2000/01 was 13.93%, with statutory performance standards set at achieving 26% by 2003/04 and 36% by 2005/06.
- H.3 A curtilage collection of newspapers and magazines and co-mingled cans and plastics is provided to over 99.9% of all domestic properties on a fortnightly basis. Residents are required to present their newspapers and magazines in one basket and the co-mingled cans and plastics in another; they may then either purchase additional baskets for collection, or present additional recyclates alongside the baskets, which will also be collected.
- H.4 A curtilage collection of garden waste is provided through pre-paid green sacks, the waste is mixed with the domestic waste for landfill.
- H.5 There are currently 90 recycling centres in the Aylesbury Vale District, which represents a ratio of 1 site per 713 properties. Recycling provision at these sites is:
- 63 provide facilities for collecting glass
 - 59 provide facilities for newspapers/magazines
 - 10 provide facilities for mixed cans
 - 11 provide facilities for textiles
 - 5 provide facilities for books
 - 3 provide facilities for aluminium foil.
 - 6 provide facilities for shoes

- H.6 In line with Best Value Performance Indicator 99. 9%+ of the district live within 1 km of a recycling centre or have access to kerbside collections.
- H.7 Home composting promotions have been offered since 1997, resulting in the sale of approximately 9000 composting units.
- H.8 Since 1999 we have supported education in schools through the “out of the bin” programme.

Planned Expansion for period 2002 to 2003

- H.9 Planned expansion in recycling activity for period 2002/03 is to:
- Promote the existing schemes through publicity campaigns;
 - Adapt the existing can banks to allow for the depositing of plastic bottles;
 - Install up to 20 additional bring sites for glass;
 - Trial between 5 and 10 sites for cardboard;
 - Develop an educational resource at the Council’s materials recycling facility.

Planned Expansion for period 2003 to 2004

- H.10 By the end of this period, we plan to install a further 10 bring sites for glass and 10-15 sites for card (dependant on the success of the trial). The latter will allow for the extraction of more of the biodegradable elements of the waste stream.
- H.11 We plan (subject to funding) to introduce a curtilage collection service for glass to approximately 60% of the district. Initially the service will focus on the more urban areas of the district. This will allow for the extraction of more of the heavy non-biodegradable elements of the waste stream.
- H.12 The proposals will yield additional tonnages to help progress towards the first statutory performance standard.

Planned Expansion for period 2005 to 2006

- H.13 We plan (subject to funding) to expand the curtilage collection service for glass to approximately 35% of the district. The service will focus on the more rural areas of the district. This will allow for the extraction of more of the heavy non-biodegradable elements of the waste stream.

- H.14 Of key significance during this period will be the proposed change of the disposal route for the household waste from landfill to the proposed EcoDeco plant at the Newton Longville (Bletchley) landfill site. This change will allow for the drying of the waste and the extraction of large proportion of any remaining dry-recyclates in the waste e.g. metals.

Planned Expansion beyond 2006

- H.15 Proposals will be linked to the increases in population/household numbers from the residential development of the “Major Development Areas” in the district. These schemes which are green field sites will necessitate the introduction of the appropriate mix of curtilage schemes allied to bring schemes.

Existing Contracts

Kerbside Newspaper and Magazines Collection

- H.16 The collection contract is currently held with Vale Contract Services (the Council’s DSO). The paper is bulked at the Council’s depot and delivered directly to Aylesford Newsprint Ltd. for reprocessing at their mill at Aylesford Kent.

Kerbside co-mingled cans and plastics:

- H.17 The collection contract is currently held with Vale Contract Services who are the Council’s DSO. The co-mingled cans and plastics are taken to the Council’s depot where they are sorted into steel, aluminium, and various plastic polymers. Residual plastics are sent to the MRF at Milton Keynes where the operators carry out further segregation. The materials separated at the Aylesbury MRF are dealt in the following manner:

- Steel cans are sold to Corus
- Aluminium cans are sold to Alupro
- Plastic polymers are sold to RECOUP

Bottle Banks:

- H.18 Aylesbury Vale District Council works with the County Council and Buckinghamshire Districts to collect glass through the Bucks Glass Consortium. The current collection contract for the “large banks” is held by the County Council with Shanks Waste Services Ltd. Collections from the small banks (1100 litre) is arranged through a partnership with Chiltern DC and the collections are made by Onyx. All glass is taken to bulk holding facility is Wycombe and Chiltern The contract for the sale of glass is held individually by each of the Councils with Midland Glass. The glass is delivered to Hampshire for reprocessing.

Can Banks:

H.19 The contract for servicing mixed can banks is currently held with Vale Contract Services who are the Council's DSO, the collected materials being sorted at the Council's depot. Steel is supplied to British Steel and aluminium is reprocessed by Alupro.

Paper Banks:

H.20 The paper is mixed with that collected through the door-to-door scheme and sold to Aylesford Newsprint.

Textile Banks:

H.21 Banks on the AVDC sites are provided either by Salvation Army, Black County Rag and Planet Aid.

Aluminium Foil:

H.22 The foil is collected and sorted through the Aylesbury Recycling and Reuse Centre (ARRC) a centre to provide a basic employment for adults with learning difficulties.

Shoes:

H.23 These are collected by The European Recycling Company Ltd.

Estimated Tonnages of Materials

H.24 The table below indicates the additional material that may be collected as a result of the planned expansions, by each of the key dates and the additional percentage that each expansion contributes towards the overall recycling rate.

Material	2002/3	Additional % recycled	2004/5	Additional % recycled	2005/6	Additional % recycled
Glass	200 tonnes		1600 tonnes		900	
Card	200 tonnes		800 tonnes			
All (promoting of existing)	500 tonnes		300		200	
Total	900	1.8%	2700	2%	1100	2%

Chiltern District Council - Recycling Position Statement (2002)

Current Position (January 2002)

- H.25 The Chiltern District Council covers 19648 hectares and the District Council has a duty to collect refuse from 36,000 domestic properties using a one for one maximum of two back door black sack collection. An experiment with bulk delivery of sacks will take place in part of the District in 2002. The recycling rate for 2001/2 was 26% with statutory performance standards set at achieving 33% by 2003/04 and 40% by 2005/06.
- H.26 A kerbside collection of mixed waste paper is collected from boxes on a two weekly basis and a four weekly collection of glass collected from boxes both from the whole of the District.
- H.27 There are currently 52 recycling centres in the Chiltern District and a further 60 recycling sites located in schools. All of these sites offer facilities for the collection of mixed paper, cans and plastic bottles and those not located in schools also collect glass. In addition on larger sites textiles and books are collected.
- H.28 In line with Best Value Performance Indicator 91, 100% of the district live within 1 km of a recycling centre or have access to kerbside collections.
- H.29 Home composting promotions have been offered since 1997, resulting in the purchase of approximately 4000 composting units. The promotions will be supported by a programme of composting workshops.
- H.30 The schools recycling programme is supported by an annual award to the best improved schools of prizes totalling £2500. This also provides speakers for key stage work and a school newsletter 3 times a year.

Planned Expansion for period 2003 to 2004

- H.31 The expansion planned for the 2003/04 target of 33% will be based on improving the participation rate of the kerbside collection of mixed paper and glass and by increasing the volume of material from those who are already involved in the scheme. Initial indications from the waste study show that there should be sufficient material to meet the 33% target. In the Chiltern area green waste has not been allowed in the waste stream and the aim will be to increase the take up of home composting.
- H.32 The mixed paper is separated in a Paper Sorting Facility in the District to separate newspapers and magazines from cardboard and these are sold to different markets. It is planned to extend this facility to carry out further separation of material and to increase mechanisation and capacity. It is also intended that the value of the material can be further enhanced by separation of the cardboard stream.

Planned Expansion for period 2005 to 2006

- H.33 The mixed paper and glass remaining in the waste stream if this can be accessed could enable the 40% target to be achieved. If this is not possible there are additional options of adding can and or textile collections to existing collections. It is possible that waste minimisation and reducing the total refuse arising will have a greater effect than additional collections of material such of green waste

Planned Expansion for period 2008 to 2009

- H.34 The diversion of all waste which is not recycled to the Energy from Waste Plant in Colnbrook

Existing Contracts

Kerbside and Recycling site Paper Collection:

- H.35 The collection contract is currently held Onyx UK Ltd, who is the existing refuse contractor. The paper is processed in the Paper Sorting Facility with the newspapers and magazine sold to Shotton Paper Company and the residual mixed paper sold to Severnside Waste Paper at Taplow.

Kerbside Glass collection and Recycling Banks:

- H.36 The kerbside glass and most of the glass from recycling sites are collected by Onyx and delivered to the glass bulking bays in Amersham. A further nine sites are collected as part of Bucks Glass Consortium by the term contractor. However, the contract for the supply of glass is held individually by each of the Councils with Midland Glass. The glass is delivered to Hampshire for reprocessing to a new facility at Southampton Docks.

Can Banks:

- H.37 The can banks are emptied by Onyx as part of their contract.

Plastic Banks:

- H.38 Plastic banks are collected by Onyx as part of their contract.

Textile Banks:

- H.39 Textile banks are serviced by Black Country Rag and Wiper Company, with a contract for the supply of the material.

Book Banks:

H.40 A number of sites have book banks provided and serviced by Oxfam.

Estimated Tonnages of Materials

H.41 The table below indicates the additional material that may be collected as a result of the planned expansions, by each of the key dates and the additional percentage that each expansion contributes towards the overall recycling rate.

Material	2003/04	Additional % recycled	2005/06	Additional % recycled	2008/09	Additional recycled	%
Mixed Paper	2380	7					
Glass	377	1					

South Bucks District Council - Recycling Position Statement (2002)

Current Position (January 2002)

- H.42 The South Bucks District Council covers 14,157 hectares and the District Council has a duty to collect household refuse from 27,000 domestic properties. We currently provide a maximum of two free black sacks for a weekly back door collection. The recycling rate for 2001/2 was 19% with statutory performance standards set at achieving 33% by 2003/04 and 40% by 2005/06.
- H.43 Mixed waste paper is collected separately from household back doors in the free plastic boxes provided on a fortnightly basis from the whole of the District.
- H.44 There are currently 40 recycling centres in the South Bucks District. All of these sites offer facilities for the collection of mixed paper, cans and plastic bottles. Those not located in schools also collect glass. In addition textiles and books are collected.
- H.45 In line with Best Value Performance Indicator 91, 100% of the district live within 1 km of a recycling centre or have access to kerbside collections.
- H.46 Home composting promotions have been offered since 1997, resulting in the purchase of approximately 3000 composting units.

Planned Expansion for period 2003 to 2004

- H.47 The expansion planned to achieve the 2003/04 target of 33% will be based on improving the participation rate of the household collection of mixed paper and by increasing the volume of material from those who are already involved. Also, the introduction of a household collection of glass and cans is being considered. Initial indications from the waste study show that there should be sufficient material to meet the 33% target. In the South Bucks area green waste has not been allowed in the waste stream and the aim will be to increase the take up of home composting.
- H.48 The mixed paper is separated in a Paper Sorting Facility in the Chiltern District Council's area. This separates newspapers and magazines from cardboard and these are sold to different markets. It is planned to extend this facility to carry out further separation of material to increase their sale value and also to increase mechanisation and plant capacity.

Planned Expansion for period 2005 to 2006

- H.49 Our plan is to improve **the participation rate** of the household mixed paper and glass and cans household collection schemes by increasing our promotional activities. If more of the material not collected at present can be accessed this

should enable the 40% target to be achieved. If this is not achievable other options will be considered.

- H.50 It is possible that waste minimisation and reducing the total refuse arising will have a greater effect than additional collections of material such of green waste

Planned Expansion for period 2008 to 2009

- H.51 This should be possible by the use of Energy from Waste (incineration) at Grundons Colnbrook if the government will allow this method to be counted.

Existing Contracts

Household Paper Collection

- H.52 The collection contract is currently held by Biffa Waste Services Ltd. The paper is processed in the Chilton Paper Sorting Facility and the separated newspapers and magazines sold to Shotton Paper Company. The residual mixed paper is sent to Severnside Waste Paper at Taplow currently at a loss.

Recycling Centres

Glass Banks:

- H.53 Most of the glass from recycling sites are collected by Biffa and delivered to the glass bulking bays at the PSF. A further nine sites are collected from as part of Bucks Glass Consortium by the term contractor . However, the contract for the supply of glass is held individually by each of the Councils with Midland Glass. The glass is delivered to Hampshire for reprocessing.

Can Banks and Plastic Banks:

- H.54 These banks are emptied currently by Biffa as part of their contract and sent free to the household waste site in Maidenhead.

Textile Banks:

- H.55 A number of sites have textile banks provided and serviced by the Salvation Army.

Book Banks:

- H.56 A number of sites have book banks provided and serviced by Oxfam.

Estimated Tonnages of Materials

H.57 The table below indicates the additional material that may be collected as a result of the planned expansions, by each of the key dates and the additional percentage that each expansion contributes towards the overall recycling rate.

Material	2003/04	Additional % recycled	2005/06	Additional % recycled	2008/09	Additional recycled	%
Mixed Paper	3100	10	1900	6			
Glass & Cans	1100	4	200	1			

Wycombe District Council - Recycling Position Statement 2002)

Current Position (January 2002)

- H.58 The Wycombe District covers approximately 125 square miles and the District Council has a duty to collect refuse from 64,956 domestic properties, using 240 litre wheeled bins. The recycling rate for 2000/01 was 11%, with statutory performance standards set at achieving 20% by 2003/04 and 30% by 2005/06.
- H.59 A kerbside collection of mixed waste paper is offered to 85% of the district (approximately 56,000) on a fortnightly basis. Residents are required to present their mixed paper in their own plastic bags or cardboard boxes. Kerbside boxes were introduced to a trial area of 6000 properties in August 2000 and a further 21,000 will receive boxes in April 2002. It is planned that this provision will be further expanded in 2003.
- H.60 A kerbside collection of kitchen and garden waste (Bio-Back Trial) has been provided to 650 properties since 1994. This is a fortnightly collection based on brown wheeled-bins. Expansion of this scheme has been hindered by the lack of local composting facilities.
- H.61 There are currently 51 recycling centres in the Wycombe District, which represents a ratio of 1 site per 1273 properties. Of these sites, 50 provide facilities for collecting glass, 25 for newspapers/magazines and mixed cans, 17 for textiles and 7 for aluminium foil.
- H.62 In line with Best Value Performance Indicator 91, 95% of the district live within 1 km of a recycling centre or have access to kerbside collections.
- H.63 Home composting promotions have been offered since 1997, resulting in the purchase of approximately 7500 composting units. A programme of composting workshops has supported the promotions.
- H.64 The School Litter Programme has enrolled 85% of Wycombe District schools (67) into an ongoing educational scheme, which aims to raise awareness of litter and waste related issues, e.g., reduce, re-use, and recycle.

Planned Expansion for period 2003 to 2004

- H.65 By the end of this period, kerbside boxes will be issued to the 85% of the district that currently have access to the paper collection (approximately 56,000 properties). Boxes were provided to 6000 properties in 2000. A further 21,000 properties will receive boxes in 2002, with the provision expanded to 29,000 properties in 2003. The remaining 15% of properties in the district (8,956) are predominantly rural settlements that are difficult to access and have not been offered access to the scheme under the current collection contract.
- H.66 Drawing on the experiences of the Bio-Back Trial, it is also planned that a wheeled bin green waste collection is introduced to 85% of the district.

However, this planned expansion is entirely dependant on the provision of a centralised composting facility by the County Council and on the availability of capital and revenue funding.

- H.67 Both of these planned expansions are targeting the heavier, biodegradable elements of the domestic waste stream and will therefore yield the tonnage that is required to meet the first statutory performance standard.

Planned Expansion for period 2005 to 2006

- H.68 It is planned that this period will work to recover material from the harder to reach properties, bringing them in line with the rest of the district.
- H.69 The paper collection will be offered to the remaining 15% (8,956 properties), with kerbside boxes provided.
- H.70 Wheeled bin green waste collections will be offered to the remaining 15%.
- H.71 District wide coverage of both of these schemes will work to maximise the diversion of biodegradable waste from landfill, in response to the targets set by the Landfill Directive.

Planned Expansion for period 2008 to 2009

- H.72 The period 2008/09 will plan to maximise recovery of dry recyclables by introducing kerbside collections of plastic, glass and cans to 85% of properties, using a system of kerbside boxes.

Planned Expansion for 2010/11

- H.73 By 2010/11, the remaining 15% of properties will also have access to kerbside collections of plastic, glass and cans.

Existing Contracts

Kerbside Paper Collection:

- H.74 The collection contract is currently held with Ecovert Ltd and will be taken over by Onyx UK Ltd, who are the existing refuse contractors, in September 2003. The mixed paper is delivered directly to Severnside Waste Paper Ltd for reprocessing at Taplow, Maidenhead.

Bio-Back Trial:

- H.75 The Bio-Back collection is undertaken by Onyx UK Ltd and the material is delivered directly to EQ, St Albans, Hertfordshire.

Bottle Banks:

H.76 Wycombe District Council works with the County Council and Buckinghamshire Districts to collect glass through the Bucks Glass Consortium. The current collection contract is held by the County Council with Shanks Waste Services Ltd. However, the contract for the supply of glass is held individually by each of the Councils with Midland Glass. The glass is delivered to Hampshire for reprocessing.

Can Banks:

H.77 The contract for servicing mixed can banks and for the supply of the material is held by Firbank Recycling Ltd. Steel is supplied to British Steel and aluminium is reprocessed by Alupro.

Paper Banks:

H.78 The contract for servicing paper banks and for the supply of newspapers and magazines is held by Aylesford Newsprint Ltd.

Textile Banks:

H.79 Textile banks are serviced by Sam Greenberg Ltd, with a contract for the supply of the material.

Aluminium Foil:

H.80 The foil banks are owned by Wycombe District Council and are sited at Council recycling centres, but are serviced independently by a community group.

Estimated Tonnages of Materials

H.81 The table below indicates the additional material that may be collected as a result of the planned expansions, by each of the key dates and the additional percentage that each expansion contributes towards the overall recycling rate.

Material	2003/04	Additional % recycled	2005/06	Additional % recycled	2008/09	Additional % recycled	2010/11	Additional % recycled
Mixed Paper	3085 tonnes	4.35%	245 tonnes	0.32%				
Green Waste	9500 tonnes	13.41%	1000 tonnes	1.34%				
Plastic/ cans/ glass					2000 tonnes	2.55%	550 tonnes	0.67%

