

Waste and Minerals

Work to update regional policy for waste and minerals began before work on development of the South East Plan. Draft strategies were the subject of an Examination in Public (EiP) in November 2004. In spring 2006, the Secretary of State was expected to issue alterations to RPG9 for Waste and Minerals. The policies, including changes proposed by the Secretary of State in autumn 2005, have been rolled forward into the draft South East Plan with only minor amendments. These amendments are highlighted in red; all other policies remain unchanged. In some places the supporting text and data has been edited and updated to reflect the overall approach taken throughout the Plan, as well as new policy and legislation.

1. Waste Management

- 1.1** The South East's waste includes:
- i** Approximately four and a half million tonnes of municipal solid waste (collected by local authorities), of which almost 75% is landfilled and only around 25% recycled
 - ii** Around eight million tonnes of industrial and commercial waste, of which half is landfilled
 - iii** Approximately 12 million tonnes of construction and demolition waste, only a third of which was recycled as aggregates or soil.¹
- 1.2** The total waste managed in the South East is estimated to rise to nearly 35 million tonnes by the year 2025.
- 1.3** If these patterns of waste management continue, the region's landfills will be full

within the decade, creating a management problem but also representing a waste of potentially valuable resources and the storing up of environmental problems for the future. This is clearly not sustainable.

- 1.4** European and national policies demand that we increase the proportion of waste from which we recover value, for example through recycling, composting and recovery of energy, and that we decrease the proportion of waste sent to landfill. In addition, new restrictions on the types of waste that can be accepted at landfill sites in the future will create a need for increased capacity in alternative management methods. This will require rapid development of a significant amount of new infrastructure, the delivery of which in the right timescales presents a major challenge and is a key role for this Plan.

2. A Resource Management Approach

- 2.1** We must reduce the amount of waste we produce in the first place and ensure that we re-use, recycle and recover as much value as possible from materials before they are finally disposed of. This means treating materials that are currently perceived as waste as a resource with value. It also means taking account of the use of resources as a whole, particularly energy, in managing waste. The resource management approach reflects the waste

FOOTNOTES

¹ ERM (for South East England Regional Assembly and SERTAB) 2005. Update of the 'Model for Future Waste Management Capacity Needs in the South East'. Final Report, September 2005. http://www.southeast-ra.gov.uk/publications/strategies/update_of_model-fut_waste_man_cap_needs.pdf

hierarchy (prioritising reduction, re-use, recycling and recovery of value).

- 2.2** Waste is inextricably linked to our lifestyles and the wider economy. Resource use and waste production therefore needs to be de-coupled from economic growth. This, in turn, can create economic opportunities, for example through technological innovation. Together with investment in new facilities, systems and technologies, this represents a major economic development opportunity for the region.
- 2.3** This shift in emphasis will not be easy and will not be achieved immediately or through regional spatial policy alone. In the short and medium term, it is likely that the amount of waste produced will continue to grow. A framework of policies is set out in this chapter that aims to move the region in the desired direction and stresses the urgent need to put the necessary measures in place.
- 2.4** Key actions needed in taking a resource management approach include:
- i** Engaging the process chain of products and goods at all points of the design-production-consumption-waste management chain. This requires the avoidance of unnecessary waste at all stages, recovering and returning materials back into the production system and being efficient in the use of other resources such as energy and water
 - ii** Establishing resource recovery systems based on material streams, serving all sectors. Moving away from landfill towards recycling and recovery for unavoidable waste requires a new infrastructure to recover, reprocess and transform waste material into useful products. This requires a focus on key material streams, segregation of these as far as possible, and assessment of the most appropriate management methods to maximise recovery
 - iii** Facilitating delivery on the ground

through delivering land and infrastructure for resource management use through the planning system. Achieving the vision will require a switch to industrialised waste handling and processing. This will include a range of facility types and activities including reception and storage sites, materials recovery facilities, aggregates processing, composting, anaerobic digestion and other energy recovery plants.

3. Policies

- 3.1** The policies have been subject to extensive consultation and testing as part of the early review of RPG9 for waste. This included an examination in public (EiP) in November 2004. The alterations to RPG9 waste were published by the Secretary of State in early 2006. The majority of the regional waste policies contained in the alterations to RPG9 are reproduced to be carried forward in the South East Plan.
- 3.2** However, a number of amendments have also been made where new information has been obtained and in answer to the recommendations of the EiP Panel. Substantive changes to the policies contained in the alterations to RPG9 include the following:
- i Policy W3 Regional Self-Sufficiency:** changes to the amount of waste exported to the region from London and sub-regional apportionment of this waste
 - ii Policy W10 Regionally Significant Facilities:** specification of the need for resource recovery parks and a network of collection and bulking facilities
 - iii Policy W15 Hazardous Waste:** identification of priority needs for new infrastructure.
- 3.3** Given that the alterations to RPG9 for waste have only recently been adopted, it

is recommended that consultees limit representations to these amendments, and the Examination in Public of the South East Plan focuses on these.

- 3.4** National and international policies and targets provide the context for this Plan. They set a clear direction and sense of priority for the region. The policies reflect this and follow the sequential approach required by the waste hierarchy - aiming to reduce waste generation in the first place, increase re-use, recycling, composting, and other forms of recovery before final disposal.

4. Waste Reduction

- 4.1** The profiles of waste growth used in these policies require a significant slowing in the growth rate so that by the end of the period of the Plan the amount of waste produced will have largely stabilised. This reflects aspirations for waste minimisation as well as the likely effects of waste reduction measures. Ongoing monitoring of growth rates will be essential and forecasts will be regularly reviewed.
- 4.2** It is important not to make overly optimistic assumptions in order to avoid underestimating the scale of waste management facilities that will be required. However, reducing waste growth is the minimum we should be aiming for and, if possible, we should aim to reduce the amount of waste generated in the longer term. This may require the use of fiscal measures, such as Landfill Tax and the use of other targeted resources to encourage waste reduction and sustainable waste management.
- 4.3** Declining growth rates may be achieved by a combination of producer responsibility legislation, raised awareness and behavioural changes by both consumers and industry. Initiatives that attempt to reduce waste generation have been implemented in the UK.

- 4.4** These rely on changing people's attitudes and behaviour through education or encouragement. The Government is committed to raising the level of landfill tax significantly over the next decade and introducing new funding to encourage waste reduction and introduction of new systems and technologies. All tiers of local government have a potentially important community role in helping to raise awareness of the need to reduce waste, within a framework set at national and regional level.
- 4.5** Commercial and industrial waste generation and management has a direct financial impact on businesses and the cost of disposal is set to increase. It therefore makes good sense to reduce waste generation in the first place and to get as much value out of materials as possible. A number of networks promote good practice such as sustainable business partnerships; the Envirowise programme and SEEDA's sustainable business awards schemes.
- 4.6** In order to minimise waste and also to facilitate re-use and recycling, it will be necessary to engage more closely with the supply chain. This will require working through the Environment Agency, SEEDA and Sustainable Business Partnerships with industries to identify means of reducing waste through improved resource efficiency, use of reprocessed materials, designing for re-use and longevity, reducing excessive packaging and labelling to inform choice. In particular, action can be taken to start to address the design of, and materials used in, products (eco-design) as well as the wider supply chain.
- 4.7** The Regional Assembly will continue to review existing practice in waste reduction and work with local authorities, regional organisations and industry to identify what has worked, why and what the results have been. The results will be widely disseminated to raise awareness and encourage changes in practice and to inform advocacy of changes required in legislation and support.

POLICY W1: WASTE REDUCTION

The Regional Assembly, SEEDA, the Environment Agency and other regional partners will work together to reduce growth of all waste to 1% per annum by 2010 and 0.5% per annum by 2020 by:

- Encouraging waste reduction in all regional and local strategies
- Identifying and disseminating examples of good practice and encouraging local authorities and businesses to implement waste minimisation programmes
- Establishing a regional working group to identify opportunities and priorities for waste reduction in relation to supply chains, product design, manufacture, labelling, retailing, procurement, consumption and resource recovery
- Developing enhanced regional information and awareness programmes to alter individual and corporate behaviour.

5. Sustainable Design, Construction and Demolition

- 5.1 Building development and re-development is a significant contributor to waste production, for example construction and demolition waste currently forms half of the total controlled waste stream. Improved waste management in this sector is a key dimension for advocacy and action.
- 5.2 This can be affected through consideration of materials and techniques used in construction, construction site waste management plans, and the design of buildings to accommodate space which will facilitate recycling and re-use when operational.
- 5.3 The large-scale development proposed in the region's strategic Growth Areas

(Thames Gateway, Milton Keynes, and Ashford) presents a major opportunity to put into practice and demonstrate best practice in waste minimisation and integration of recycling into development. Provision of recycling space in new and existing developments may be appropriate at the level of the individual building and dwelling, or on a communal basis serving a number of buildings/dwellings.

POLICY W2: SUSTAINABLE DESIGN, CONSTRUCTION AND DEMOLITION

Local Development Documents will require development design, construction and demolition which minimises waste production and associated impacts through:

- The re-use of construction and demolition materials
- The promotion of layouts and designs that provide adequate space to facilitate storage, re-use, recycling and composting.

In particular, development in the region's strategic Growth Areas should demonstrate and employ best practice in design and construction for waste minimisation and recycling.

6. Regional Self-sufficiency

- 6.1 Regional self-sufficiency in waste management needs to be interpreted pragmatically, as waste movements across administrative boundaries will be likely and indeed necessary, in certain circumstances, to make use of the nearest appropriate facilities.
- 6.2 Net self-sufficiency will be achieved by providing for waste management capacity equivalent to the waste forecast to require management within its boundaries, plus an allowance for disposal of a declining amount of waste from London for landfill. The mix of management methods and associated facilities will need to be such as to achieve

the regional targets for recovery, and other diversion from landfill. This will not preclude cross-border movements with other regions but the provision of capacity equivalent to forecast management needs will help to ensure that there is not a shortfall in capacity in the future. It is assumed that adjoining regions will follow a similarly pragmatic approach to self-sufficiency and plan for increasing diversion of waste from landfill and for the necessary infrastructure to support this.

- 6.3 There are currently significant inter-regional movements of waste including imports from London but also exports to neighbouring regions. In particular, there are exports of municipal waste from Kent to landfill in the East of England and large quantities of commercial and industrial waste from Hampshire, Kent and Surrey. The South East is also a major importer of waste, mostly from London, with a smaller amount from the South West. The London Plan² sets targets for recovery, composting and increasing self-sufficiency, and proposes a large increase in capacity and a number of new facilities to achieve this. Exports from London into the South East of municipal, commercial and industrial waste are currently estimated to be approximately 1.8 million tonnes per year.³ Projections of future imports to landfill are based on a declining rate equal to that applied to the landfill for South East's own waste.

- 6.4 London currently has limited capacity for waste processing and recovery (with recycling dominated by construction and demolition capacity) and very little landfill capacity. The current and planned waste management capacity in London falls well short of its current and future management requirements. It is clear that London will be

reliant on capacity in surrounding counties and regions into the future.⁴

- 6.5 Beyond 2016 new provision for landfill to accept London's waste will be limited to residues. In addition, it is assumed that London's exports to landfill in the region will gradually decline (at a rate comparable to the region's own reduction in reliance on landfill as set out in Policy W13), reflecting the achievement of greater self-sufficiency by London. It is anticipated that exports of municipal and commercial and industrial waste from London to the South East for disposal in landfill will gradually decline from the current total of around 1.8 million tonnes per annum to less than one million tonnes in 2026. The Assembly will continue to work with the GLA and East of England Regional Assembly to monitor inter-regional waste movements and coordinate development and implementation of respective policies.
- 6.6 A methodology to apportion these exports has been developed⁵ taking into account existing landfill voidspace, geology and environmental constraints to development of new landfill, proximity to London, and sustainable transport. The resulting apportionment is set out in Policy W3. This should be used as the basis for further testing in production of Waste Development Frameworks taking into account more detailed information about site suitability and availability. Land raising should also be considered as an option.
- 6.7 There may be situations where the use of facilities within the region for recovery or processing of waste materials from London or other regions would be appropriate, for example where the facility is the nearest available to the source of

FOOTNOTES

² Greater London Authority (Feb 2004) *The London Plan, Policy 4A.1*

³ ERM (for South East England Regional Assembly and SERTAB) 2003. *South East Regional Waste Management Statement. Final Report, June 2003.* http://www.southeast-ra.gov.uk/publications/strategies/waste_statement/sertsab_report.pdf

⁴ Greater London Authority (May 2003) *Technical Assessment for Waste Management in London. A report by Enviro Consulting Ltd. Figures 56, 57 & 58, Table 60, and Chapter 7.*

⁵ Jacobs Babbie (2005) for South East England Regional Assembly and SERTAB. *Towards a methodology for apportionment of London's Exported Waste, Final Report July 2005.* http://www.southeast-ra.gov.uk/publications/strategies/waste/research/londons_exported_waste.pdf

materials, where there are good sustainable transport links, and this would make provision of recovery or reprocessing capacity more viable. Conversely, London might be able to provide facilities for waste from the South East with the overall objective of achieving a net balance in the flows of materials for recovery and reprocessing. The reference to 'recovery' in Policy W3 excludes incineration with energy recovery.

6.8 The waste management capacity requirements for recovery (including recycling, composting and energy from waste) and landfill that need to be planned and provided for are set out in Policies W5, W6, W7 and W13.

6.9 Residues of waste are defined as "waste where further value cannot be recovered". There are, however, economic and market limitations on how strictly residues can be interpreted at any one time.

POLICY W3: REGIONAL SELF-SUFFICIENCY

Waste authorities and waste management companies should provide management capacity equivalent to the amount of waste arising and requiring management within the region's boundaries, plus a declining amount of waste from London. Provision of capacity for rapidly increasing recycling, composting and recovery should be made reflecting the targets and requirements set out in this chapter.

Provision for London's exports¹ will usually be limited to landfill in line with the Landfill Directive targets and, by 2016, new permissions will only provide for residues of waste that have been subject to recycling or other recovery process. Waste Planning Authorities should provide landfill capacity for the following apportionment of London's exported waste:

	Recommended Apportionment % ²	2006-2015 million tonnes	2016-2025 million tonnes	Total million tonnes
Berkshire unitaries	8.5	1.4	0.9	2.2
Buckinghamshire	16.8	2.7	1.7	4.4
East Sussex	8.4	1.4	0.8	2.2
Hampshire	8.4	1.4	0.8	2.2
Kent and Medway	12.2	2.0	1.2	3.2
Milton Keynes	10.1	1.6	1.0	2.7
Oxfordshire	17.0	2.7	1.7	4.4
Surrey	8.4	1.4	0.8	2.2
West Sussex	10.1	1.6	1.0	2.6
SE Total	100.0	16.2	10.0	26.2

¹ Estimated imports of MSW and C&I in 2005 is 1.76 million tonnes, as set out in RPG9 as amended.

² From 'Towards a Methodology for Apportionment of London's Exported Waste', Jacob, Babbie report, July 2005. p.20.

Provision for recovery and processing capacity for London's waste should only be made where there is a proven need, with demonstrable benefits to the region, including improving the viability of recovery and reprocessing activity within the region, and where this is consistent with the proximity principle. A net balance in movements of materials for recovery and reprocessing between the region and London should be in place by 2016.

The Regional Assembly should continue to work closely with all neighbouring regions to monitor and review waste movements and management requirements.

7. Sub-regional Self-sufficiency

7.1 Sub-regional self-sufficiency (generally based on waste planning authority areas but with co-operation particularly encouraged between county councils and unitary authorities) will also be sought on a similar pragmatic basis, accepting that movement of waste between sub-regions will occur and is necessary to reduce long distance transport.

7.2 There are at present extensive and significant movements of waste between waste planning authority areas. The patterns of movement are particularly complex for commercial and industrial waste.

7.3 The county level will often provide an appropriate level for sub-regional planning for all waste streams and management methods, particularly as waste local plans and frameworks will form the basis of more local planning for the provision of waste management and processing facilities.

7.4 Cooperation between waste disposal authorities should also occur where management is more effective on a cross-boundary basis. A degree of flexibility is required in applying the concept of sub-regional self-sufficiency, with the level of self-sufficiency capable of being achieved depending on:

- The characteristics of the sub-region eg the extent to which there are major settlements close to its boundaries, and opportunities for use of sustainable transport modes
- The nature of the waste stream, with greater control being capable of being influenced over Municipal Solid Waste than Commercial & Industrial and Construction & Demolition
- The type of facility, with wider catchment areas necessary to justify more specialised reprocessing facilities than locally based facilities such as Material Recovery Facilities (MRFs).

7.5 In many areas it will be necessary for unitary authorities to work jointly with each other or with the county authorities in preparing and implementing waste local plans and waste management strategies and in the provision of larger facilities serving cross-border catchments or hinterlands, including reprocessing facilities and industries. This may be particularly the case between Kent and Medway; Hampshire, Portsmouth and Southampton; West Sussex, East Sussex and Brighton and Hove; the unitary authorities of Berkshire; and between Buckinghamshire and Milton Keynes.

7.6 In addition, new waste management requirements will arise where substantial new housing and economic development is planned, including the region's strategic Growth Areas of the Thames Gateway, Ashford (Kent) and Milton Keynes. Over time, different patterns of planned provision may become necessary. Joint working will also be necessary to identify and make provision for potential flows across the regional boundary, and to identify opportunities for using sustainable transport modes.

POLICY W4: SUB-REGIONAL SELF-SUFFICIENCY

Waste planning authorities should plan for net self-sufficiency through provision for management capacity equivalent to the amount of waste arising and requiring management within their boundaries. A degree of flexibility should be used in applying the sub-regional self-sufficiency concept. Where appropriate and consistent with Policy W3, capacity should also be provided for:

- **Waste from London**
- **Waste from adjoining sub-regions (waste planning authority area within or adjoining the region).**

Waste planning authorities should collaborate in preparation of plans including

identifying and making provision for potential flows across the regional and sub-regional boundaries, and identifying possible sites that could be served by sustainable transport modes. Co-operation will be encouraged between county councils and unitary authorities at the sub-regional level, particularly in respect of meeting the needs of the region's strategic growth areas.

8. Diversion from Landfill

- 8.1** The targets in Policy W5 incorporate the assumed scale of recycling and composting set out in Policy W6. Compared with the national targets in Waste Strategy 2000, the municipal solid waste (MSW) recovery element of policy W5 is 35% in 2005 (compared with the national target of 40%) 52% in 2010 (compared with 45% nationally) and 74% in 2015 (compared with 67% nationally).
- 8.2** The targets have taken into account the following:
- Landfill Directive targets for diversion of biodegradable municipal waste from landfill
 - Waste Strategy 2000 targets for recovery of municipal solid waste, and for recycling /composting (treated as one component) of household waste
 - Best Value targets for recycling and composting of household waste
 - Analysis of waste composition and assessment of practicable levels of recycling and composting.
- 8.3** The targets for recovery and diversion from landfill for 2005 in the South East Plan reflect what is judged to be feasible by that date. Beyond 2005, the Plan recommends that the targets in Waste Strategy 2000 and the Landfill Directive are met and exceeded as follows:
- Municipal Solid Waste (MSW)** – through meeting the targets for diversion of biodegradable municipal

waste (BMW). It is assumed that BMW makes up around 60% of the municipal solid waste stream. In reality, it will not be possible to remove biodegradable waste only from the waste stream until systems are widely established for the separate collection of organic materials and also their extraction from mixed waste streams. Thus the Landfill Directive target is initially applied to the whole of the municipal waste stream as a means of ensuring that the required amounts of biodegradable waste are diverted from landfill (hence the targets appear higher than those strictly required by the Directive) but anticipate that systems for separation of biodegradable waste will develop early in the Plan period

- Commercial and Industrial Waste (C&I)** – through an assumption that diversion required by the target in Waste Strategy 2000 (85% of waste landfilled in 1998 to be landfilled in 2005) will continue over the lifetime of the Plan
- Construction and Demolition Waste (C&D)** – through applying the target for reducing landfilling of commercial and industrial waste to 2005 and continuing to divert construction and demolition material from landfill disposal beyond that date.

8.4 The targets are particularly challenging as waste is currently increasing annually and has increased since the Landfill Directive and Waste Strategy 2000 targets were set. They refer to overall diversion from landfill, which includes recovery but also treatments that may be excluded from this definition. Recovery includes recycling, composting and other methods of recovering materials and, in certain circumstances, energy from waste.

8.5 The targets and tonnages relate to the quantity of materials that will be collected and pass through processes and facilities. All processes will produce residues that will require further treatment or disposal and so will not completely remove the given

tonnages from the waste stream. However, this has not been quantified given the range of potential processes that may be used and variation in residue amounts.

POLICY W5: TARGETS FOR DIVERSION FROM LANDFILL

A substantial increase in recovery of waste and a commensurate reduction in landfill is required in the region. Accordingly, the following targets for diversion from landfill of all waste need to be achieved in the region (Policy W6 targets are a component of these):

Year	MSW Mt/Yr	C&I Mt/Yr	C&D Mt/Yr	All Waste Mt/Yr	%
2005	1.7	4.3	9.8	16	64
2010	2.8	5.9	10.1	18.9	71
2015	4.4	7.5	10.4	22.2	79
2020	5.4	8.7	10.7	24.7	84
2025	5.8	9.5	10.9	26.2	86

Source: Update of the 'Model for Future Waste Management Capacity Needs in the South East', ERM Report, 2005, Annex B, p.1/72.

Waste Planning Authorities should ensure that policies and proposals are in place to contribute to the delivery of these targets, and waste management companies should take them into account in their commercial decisions. The optimal management solution will vary according to the individual material resource streams and local circumstances and will usually involve one or more of the following processes:

- Re-use
- Recycling
- Mechanical and/or biological processing (to recover materials and produce compost, soil conditioner or inert residue)
- Thermal treatment (to recover energy).

Priority will be given to processes higher up this waste hierarchy.

Waste Planning Authorities should continue to provide sufficient landfill capacity to process residues and waste that cannot practicably be recovered.

9. Targets for Recycling and Composting

- 9.1** The regional targets in Policy W6 aim to dramatically increase the amount of all waste recycled and composted from around nine million tonnes at present (35% of all waste) to 17 million tonnes by 2015 (55%) and 21 million tonnes by 2025 (65% of all waste).
- 9.2** In order to ensure that sufficient facilities are developed, Local Development Documents should identify specific sites to allow for recycling, composting, reprocessing and transfer facilities. These should generally be located in or near to urban areas, close to the main sources of waste, although a range of facilities will also be needed to serve rural areas.
- 9.3** Given the urgent need to increase capacity when identifying sites, consideration should be given to upgrading or expanding existing sites, on the presumption that these sites are suited to community needs, have an established waste management use, may have necessary infrastructure, and may be more likely to gain planning permission. Co-location of different facilities and activities, for example in integrated waste management developments or resource recovery parks, may also enable a more integrated approach to be developed. This will provide additional capacity to enable co-management of both municipal and commercial and industrial waste, thus assisting reprocessing of materials and development of markets for recycled materials within the region.
- 9.4** Inert waste recycling facilities will also be required. Most existing facilities in the region are situated at landfill sites and thus have temporary consents linked to the operational life of the site. Inert waste recycling facilities can be acceptable on some employment sites (appropriate lower grade industrial locations),

particularly if the site is in close proximity to sources of waste. In these cases, they will need to operate to higher environmental standards if in proximity to homes and business. Sites should therefore be identified in appropriate locations and safeguarded to protect them from other development since high land prices can hinder the development of waste recycling facilities. A sub-regional apportionment of supply of recycled and secondary aggregates is proposed in Policy M2.

- 9.5** The targets in Policy W6 indicate what is considered to be achievable in the short, medium and longer terms. For household and municipal waste, the targets have been derived from a combination of regional Best Value recycling targets⁶ (short term), recommendations by the Cabinet Office Strategy Unit (medium term), with higher rates proposed reflecting the fact that the South East is currently the top performing region in England, and an analysis of practicable maximum limits based on composition, recyclability and participation.⁷ The current rate of recycling of different specific materials differs

dramatically and achievement of the overall regional targets will require a significant increase in the recycling of all materials and composting of organic materials.

- 9.6** For commercial and industrial and construction and demolition waste, the targets are based on analysis of composition and recyclability, and assumptions about greater incentives (for example landfill and aggregates taxes) coming into play over the next two decades. The targets for construction and demolition waste also reflect those for use of recycled and secondary aggregates included in the minerals policies.
- 9.7** Up to 2015 the targets for recycling and composting of municipal solid waste exceed national targets because of the current high levels of recycling in the region and because its settlement pattern and general levels of prosperity suggest that these higher levels are achievable. The longer-term targets are more aspirational, setting a clear direction for continuing innovation and improvement.



10. Provision of Waste Management Capacity

- 10.1** There is an immediate and acute shortfall in the capacity required to achieve the ambitious targets for recycling, composting and other forms of recovery, including energy recovery, and the overall diversion of waste from landfill. There needs to be a rapid increase in management capacity and the mixture of facilities. The urgency is compounded by the long lead-time for many facilities and difficulties in obtaining planning permission.
- 10.2** It is essential that sites are safeguarded in Local Development Frameworks as well as identified in Waste Development Frameworks. In two tier areas it is essential that county and district authorities work together to achieve site identification and safeguarding.

- 10.3** As the basis for the preparation of Waste Development Documents Policy W7 provides an estimate of the tonnages to be managed in each sub-region. The figures give a broad indication of the scale of development required to achieve the targets and should be considered alongside the overall tonnages requiring management by different methods as set out in Policies W5, W6, W7 & W13.
- 10.4** More detailed information on management needs and capacity requirements is available in analyses produced and updated regularly by the Regional Assembly and SERTAB.
- 10.5** Table I provides an illustration of the additional capacity required needed to meet the management requirements of Policies W5, W6 and W7. Table I presents aggregated information by sub-region of the likely scale of additional capacity required at 2015. This has been chosen as the most relevant date for Waste Development Framework preparation and the policy end date for RPG9.

POLICY W6: RECYCLING AND COMPOSTING TARGETS

The following targets for recycling and composting should be achieved in the region:

Year	MSW		C&I		C&D		All Waste	
	Mt/yr	%	Mt/yr	%	Mt/yr	%	Mt/yr	%
2005	1.4	30	3.2	40	5.5	45	10	40
2010	2.2	40	4.6	50	6.1	50	13.3	50
2015	3	50	5.5	55	6.1	50	15.5	55
2020	3.6	55	6.5	60	7.3	60	17.6	60
2025	4.2	60	7.4	65	7.3	60	19.8	65

Source: Update of the 'Model for Future Waste Management Capacity Needs in the South East', ERM Report, 2005, Annex B, p.1/72.

Waste authorities should adopt policies and proposals to assist delivery of these targets and waste management companies should take them into account in their commercial decisions.

FOOTNOTES

⁶ Regional mean target for 2005/06.

⁷ Jones, B (2003) *Analysis of Practicably Achievable Recycling and Composting Rates. Advice to the South East England Regional Assembly, January 2003.*

TABLE I

2015 Additional Capacity Requirement (million tonnes per annum)

	MSW/C&I Recycling ¹	MSW/C&I Recovery	MSW/C&I Composting	C&D Recycling
Berkshire unitaries	-0.517	0.1	-0.072	-0.742
Buckinghamshire	-0.602	-0.338	-0.11	-0.229
East Sussex	-0.352	-0.056	0.012	-0.105
Hampshire	-0.583	0.201	-0.048	1.897
Isle of Wight	-0.05	-0.017	-0.004	-0.085
Kent and Medway	-0.726	0.285	-0.35	-1.416
Milton Keynes	-0.057	0.193	-0.001	0.076
Oxfordshire	-0.288	-0.253	-0.059	-0.027
Surrey	-0.466	-0.399	-0.23	-0.766
West Sussex	-0.614	-0.364	0.065	-0.266
South East Total	-4.255	-0.651	-0.806	-1.663

¹ Only includes waste recycling capacity defined as 'MRF' in ERM 2005 Model, Annex B p1/72-69/72.

Note: Negative figures represent deficits/shortfall while positive figures represent surplus capacity

Source: Update of the 'Model for Future Waste Management Capacity Needs in the South East', ERM Report, 2005, Annex B, p.7/72-p.69/72

POLICY W7: WASTE MANAGEMENT CAPACITY REQUIREMENTS

Waste Planning Authorities should provide for an appropriate mix of development opportunities to support the waste management facilities required to achieve the targets set out in this strategy. The annual rates of waste to be managed set out in Table 4 provide benchmarks for the preparation of development plan documents and annual monitoring.

Average Tonnages to be Managed by 2005 (Thousand Tonnes)

Sub-regions	Waste Type	2006-2010	2011-2015	2016-2020	2021-2025
Berkshire unitaries *Assumes 125k tonnes p.a intra-regional exports	MSW* C&I	375 824	432 919	480 1000	527 1060
Buckinghamshire *Assumes 102k tonnes p.a imports	MSW* C&I	421 969	458 1080	490 1175	520 1247
East Sussex *Assumes 30k tonnes p.a exports	MSW* C&I	410 435	461 485	504 527	545 559
Hampshire	MSW C&I	1007 1742	1123 1942	1221 2113	1316 2242
Isle of Wight	MSW C&I	94 144	105 160	115 174	123 185
Kent and Medway	MSW C&I	1063 2069	1186 2307	1290 2510	1390 2663
Milton Keynes *Assumes 10k tonnes p.a imports	MSW* C&I	148 26	164 29	177 32	190 34
Oxfordshire	MSW C&I	395 615	441 685	480 745	517 791
Surrey *Assumes 6k tonnes p.a imports	MSW* C&I	704 880	783 981	851 1068	916 1133
West Sussex *Assumes 38k tonnes p.a imports	MSW* C&I	548 920	607 1026	657 1116	706 1184

Source: Update of the 'Model for Future Waste Management Capacity Needs in the South East', ERM Report, 2005, Annex B, p.7/72-p.67/72.

In bringing forward and safeguarding sites for waste management facilities, Waste Planning Authorities should consider the type, size and mix of facilities that will be required, taking into account:

- i Activities requiring largely open sites, such as aggregate recycling and open windrow composting
- ii Activities of an industrial nature dealing with largely segregated materials and requiring enclosed premises, such as materials recovery facilities, dis-assembly and re-manufacturing plants, and reprocessing industries
- iii Activities dealing with mixed materials requiring enclosed industrial premises, such as mechanical-biological treatment, anaerobic digestion and energy from waste facilities
- iv Hybrid activities requiring sites with buildings and open storage areas, including re-use facilities and enclosed composting systems.

In areas of major new developments consideration should be given to identifying sites for integrated resource recovery facilities and new resource parks accommodating a mix of activities where they meet environmental, technical and operational objectives.



11. Improving Recycling Rates

- 11.1 The rates of recycling and composting proposed in the South East Plan will only be delivered if new approaches to collection, separation of materials and increased participation are achieved. This needs to be achieved in conjunction with the development of economically sustainable markets for recycled and composted materials and significant new infrastructure development to enable collection, storage, and transfer of materials.
- 11.2 Reviews of best practice in Europe indicate that high recycling rates for household and municipal waste are being achieved in some regions for different materials and for waste as a whole through the application of a range of measures, including:
 - i Providing incentives or making it easier to participate, for example through kerbside collection and mandates on householders and/or local authorities to separate waste at source eg (parts of Belgium, Germany, Italy, Netherlands)
 - ii Differential charging schemes or quotas to encourage source separation, for example in Italy and parts of Austria, Belgium, France, Denmark, Germany, Ireland, Luxembourg, Netherlands, Sweden
 - iii Education and awareness raising to encourage participation and separation
- 11.3 In the UK, the highest recycling rates of municipal waste appear to be achieved where regular kerbside collections of separated recyclable and compostable material (paper, card, green garden waste, metals, plastics, glass bottles) are provided, together with provision of bins to encourage materials separation at well run civic amenity sites. It has been estimated that the extension of current best practice in the UK could achieve recycling and composting rates of household waste between 27% and 36% and that this could be increased to around 60% within five years if separate kerbside collection of green and kitchen waste and bulky materials was introduced.⁸ However, this is heavily dependent on education and on householder participation that will be difficult to achieve.
- 11.4 There is scope for better integration of collections of recyclables from municipal and commercial and industrial waste, particularly given the relative size of the commercial and industrial waste stream

of materials at source, for example through 'eco teams' and local ambassadors in Belgium and Netherlands

- iv Producer responsibility measures that channel financial support to local authorities to collect the materials covered by legislation
- v Development of facilities to process recycled materials or recover materials from mixed waste, including mechanical and biological treatment.

FOOTNOTES

⁸ Community Recycling Network (2002) Maximising Recycling Rates: Tackling Residuals.

and the ability to separate materials at source. The significant increase in landfill tax will provide further encouragement to businesses and industry, including construction, to minimise waste and improve recycling.

POLICY W8: WASTE SEPARATION

Waste collection authorities and waste management companies should provide separate collections of recyclable and compostable materials as widely and as soon as practicably possible. Householders and small and medium-sized businesses should be encouraged to separate waste for collection by such schemes through information and promotional campaigns. Civic amenity sites should be organised to encourage separation of materials for re-use and recycling.

12. Markets for Recycled Materials

- 12.1** The development of markets for recycled materials is essential to ensure that materials collected for recycling are used effectively.
- 12.2** At present, much of the recycled material collected in the region is transported to major reprocessing facilities outside of the region and overseas. There may be an opportunity to exploit and develop new markets in the South East and encourage the location of reprocessing facilities within the region.
- 12.3** Encouraging investment in the region would help reduce the transport of materials over long distances (as is currently the case), provide economic opportunities and also encourage greater self-sufficiency in management. The potential for business development and job creation in recycling should be fully exploited.

FOOTNOTES

⁹ Viridis (2003) SEEDA Arisings Report v1. Report for SEEDA.

- 12.4** An important means of developing markets will be public sector procurement practices and standards to favour purchase of recycled materials, for example for use in construction, where these are technically suitable. In addition, infrastructure will be needed to support increased use of waste in manufacture and construction, including specialist handling and reprocessing facilities.

POLICY W9: NEW MARKETS

The Regional Assembly, SEEDA, Waste Resources Action Programme (WRAP) and other partners will work together to establish regional and local programmes to develop markets for recycled and recovered materials and products.

Specific Material Streams

- 12.5** In addition to market development activity greater resource recovery may necessitate a small number of large scale specialist facilities, including reprocessing industries, serving larger catchments than waste planning areas or even the region as a whole.
- 12.6** Waste planning and disposal authorities should set criteria for the determination of large scale specialist facilities in recognition of the contribution that such facilities can make to achieving a step change in recycling. The criteria in Policy W17 provide some locational guidance for this exercise. An initial analysis suggests that it may be appropriate to anticipate and plan for specialist facilities of pan-regional and sub-regional significance for the following materials:
- i Waste Paper and Card**
It is estimated that recyclable paper and card generation in the region is approximately 4.4 million tonnes per year.⁹ This will rise as overall waste grows. The region already has major waste paper (newsprint) and cardboard recycling capacity in Kent



that draws material from outside of the region, particularly London. National reprocessing capacity will need to increase if collected paper is to be used in paper production in the UK, and there is potential for expansion in the South East. Paper/cardboard production requires large amounts of fresh water and plant is very capital-intensive so expansion of the existing facilities may present the greatest opportunity.

ii Plastic

Recycled plastic material may be sorted by type, granulated or pelletised and added to virgin plastic. It also may be extruded into a variety of lower grade products in single or mixed form. Regional generation of recyclable plastics is estimated at approximately 1.6 million tonnes per year.¹⁰ The plastics recycling sector is very fragmented – there are many small scale operators, a wide range of products, and a third of collected materials are exported.¹¹ Processing plastic waste materials back to basic feedstock petrochemicals through pyrolysis may become viable in the future and demand for feedstock chemicals may support development of new facilities in the region.

iii Glass Recycling

Glass recycling is well-established through bring and collect systems. Much glass is processed beyond the region, for example in Essex, Hertfordshire and

Yorkshire. It is estimated that current recyclable glass generation in the region is approximately 0.5 million tonnes per year.¹² Manufacture of high value products may present opportunities for reprocessing investment in the region. In addition, other lower value uses for glass are being developed including production of concrete, road surfacing material, construction aggregates, bricks, tiles and pipes. A variety of facilities may be needed for these purposes at local and regional scales.

iv Tyres

Approximately 50,000 tonnes of tyres are produced in the region each year, with the amount forecast to rise to 67,000 tonnes in 2012.¹³ There is an existing processing capacity shortfall in the region that is forecast to worsen. The current alternatives to landfill include re-treading, use of crumb obtained from shredding and grinding of tyres, incineration or pyrolysis of tyres, use as a fuel in cement kilns, and use as construction materials or in coastal defences. Pyrolysis of tyres produces an oil, char and gas product all of which have potential for use. This could be a technology that should be planned for at the regional level. It is also hoped that much of the region's waste tyre production could be used as a fuel in cement kilns, particularly the new cement plant under construction in Medway.

FOOTNOTES

¹⁰ See footnote 9

¹¹ Parfitt J/WRAP (2003) *Current status and future prospects for the UK recycling sector. Paper presented at Cambridge Econometrics Annual Conference Reducing Waste and Increasing Efficiency. 3-4 July 2003.*

¹² See footnote 9

¹³ Viridis (2002) *Tyre waste and resource management: A mass balance approach. Viridis Report VR2.*

v Electrical Equipment

Regional generation of waste electrical and electronic equipment (WEEE) is estimated as 140,000 tonnes per year¹⁴ consisting of a wide range of articles. There will be a need for several dismantling, disassembly and remanufacturing facilities at the sub-regional level. An estimated 2,700 tonnes of waste household batteries and 18,000 tonnes of waste lead acid batteries are generated in the region per year.¹⁵

vi End of Life Vehicles

Estimated regional generation is 330,000 vehicles and 310,000 tonnes per year.¹⁶ The directive relating to end of life vehicles requires dismantlers to be authorised and sets out environmental treatment standards. Facilities that operate outside the standards (and are exempt under the requirements of the Environmental Protection Act) or find the cost of meeting new regulatory requirements too high are likely to close. A small number (up to ten facilities with 30,000 unit capacity) of new facilities may therefore be required throughout the region.

12.7 Treating waste as a commodity means that it is traded on the open market. Currently a large proportion of some materials are transported to other parts of the UK for reprocessing or are exported overseas where there is demand, and the price and logistics make it economically attractive. This is likely to continue, at least in the medium term, and there is a need to provide the necessary infrastructure to facilitate access to markets for recycled and recovered materials.

POLICY W10: REGIONALLY SIGNIFICANT FACILITIES

The Regional Assembly will work with waste authorities, the Environment Agency, SEEDA, industry and WRAP to encourage provision of appropriate new or expanded regional and pan-regional scale recovery and processing facilities, supported by a sub-regional network of bulking and sorting facilities. This should include two strategic resource recovery parks located at or with good access to ports.

Those material streams requiring regional or pan-regional facilities are:

- Paper and card
- Plastics.

Those requiring sub-regional facilities are:

- Glass
- Wood
- Tyres
- Electrical and electronic equipment
- End of life vehicles.

13. Other Recovery and Diversion from Landfill

13.1 Even where best practice in collection, participation and management are implemented; there will be practical limits to recycling and composting. Other methods for recovery and diversion of waste from landfill will need to be applied to help achieve the regional targets.

13.2 Approximately 45% of material currently collected at civic amenity sites is garden waste. Green waste (particularly woody waste) and other bulky wood waste

collected through kerbside collections and civic amenity sites, combined with parks and arboricultural wood waste has the potential for use as a biomass fuel to generate heat and electricity, in addition to conversion to compost. Green and wood waste, together with biodegradable materials including paper and card, qualifies as biomass under the Renewables Obligation.¹⁷ This could play an important role in underpinning development of energy from biomass (which would also include energy crops, agricultural and forestry residues) in the region, including through anaerobic digestion of wet materials and combustion of dry materials.

13.3 Ensuring that the material is uncontaminated with plastics (to the degree required to meet the Renewables Obligation requirements) will depend on separate collection of these materials or adequate separation at a materials recovery facility. Use of these materials to generate electricity and heat will also help in changing the perception of it away from a waste to a fuel resource with a value. The definition of these materials, as a waste or a fuel resource, needs to be clarified in order to reduce confusion and association with incineration of mixed waste and to clarify the respective roles of waste collection, disposal and planning authorities.

13.4 The Alterations to Regional Planning Guidance South East - Energy Efficiency and Renewable Energy¹⁸ contains indicative regional and sub-regional targets for renewable energy generation. These include energy from biomass waste (including co-firing of conventional fossil fuel power stations). However, the South East Plan makes it clear that renewable energy targets should not drive waste management decisions, which should be made in the context of the waste hierarchy and assessment of the optimal

management solution. The targets also assume that as much as practicably possible of the biomass waste in the major waste streams will be recycled and composted rather than used for energy generation.

POLICY W11: BIOMASS

Waste collection, planning and disposal authorities should encourage the separation of biomass waste, as defined in the Renewables Obligation, and consider its use as a fuel in biomass energy plants where this does not discourage recycling and composting.

13.5 Anaerobic digestion of biodegradable waste converts up to 60% of the organic matter into biogas (methane and carbon dioxide) which, following treatment, can be burned to generate electricity and/or heat. The residue is inert and may be used as a soil improver or landfill cover, or further treated to improve its qualities as compost. In enabling recovery of energy and a useful residual organic product, this method presents a number of advantages over other recovery methods and should perhaps be considered higher up the hierarchy being more akin to composting. There are a number of small plants in the region, including some for the treatment of sewage, and there is scope for greater use of such facilities for waste management.

13.6 Mechanical-biological treatment (MBT) where recyclables recovered from sorted or mixed waste, refuse-derived fuel (RDF) (from which energy can be recovered) or inert residue, is also a technology that can reduce inputs to landfill.

13.7 However, markets for the residues from biological treatment processes are currently limited. For example suitable

FOOTNOTES

¹⁴ See footnote 9

¹⁵ See footnote 9

¹⁶ See footnote 9

FOOTNOTES

¹⁷ SI 2002, Number 914. The Renewables Obligation Order.

¹⁸ South East England Regional Assembly (May 2003) Proposed Alterations to Regional Planning Guidance South East – Energy Efficiency and Renewable Energy - Harnessing the Elements, and Supporting Statement.

rural land for spreading improved digestate is difficult to find due to issues such as water quality, drainage and landscape character. In parallel with further research, improvement and promotion of the technologies there is also need for further work to provide market outlets for residues. This challenge should not be underestimated.

- 13.8** Energy generated from incineration of mixed waste is not eligible under the Renewables Obligation Order. However the biomass fraction of mixed waste that has been processed by an advanced technology (where gas or liquid fuel is produced using gasification or pyrolysis) qualifies under the Order and this may provide a stimulus to the development of these technologies.
- 13.9** Incineration of mixed waste with energy recovery represents a proven technology and there are a number of existing and planned plants in the region. However, it is often opposed locally due to fears about environmental, amenity and health impacts. Incinerators are increasingly strictly regulated and emissions of pollutants have declined dramatically in recent years.¹⁹ Like all waste management processes, it has the potential to cause pollution and traffic impacts.
- 13.10** In addition, there are concerns that incineration plants, which are capital intensive, are inflexible and demand a constant throughput of waste, stifling other forms of recycling and recovery. Energy recovery, recycling and composting should not be mutually exclusive. Contracts can, and should, be formulated to ensure that incineration will not compromise recycling and composting. The aim is for recovery, including recycling, composting and other recovery and diversion methods, to 'crowd out' landfill. Energy recovery should not simply operate on a 'burn it all' principle but should always be part of an integrated

approach that allows for the highest levels of recycling and recovery of materials practicable, for example through materials recovery and/or mechanical-biological treatment. This is a further advantage of the co-location and development of a mix of waste treatment facilities.

- 13.11** Advanced thermal technologies, including pyrolysis and gasification, are often regarded as a more acceptable and efficient means of recovering energy. These are currently not proven on a large scale in the UK. The development and piloting of new and advanced thermal technologies in the region will be supported if these prove to have demonstrated benefits over other technologies. However, it is not prudent to wait for technologies to develop before taking action to increase recovery and diversion of waste from landfill, and these technologies are considered unlikely to make a major contribution to the management of the region's waste management and recovery and diversion targets in the short-term.

POLICY W12: OTHER RECOVERY AND DIVERSION TECHNOLOGIES

The Regional Assembly, SEEDA, the Environment Agency and the regional partners will promote and encourage the development and demonstration of anaerobic digestion and advanced recovery technologies that will be expected to make a growing contribution towards the delivery of the regional targets for recovery, diversion from landfill, and renewable energy generation over the period of the Plan.

Waste Development Documents and municipal waste management strategies should only include energy from waste as part of an integrated approach to management.

All proposed waste facilities should:

- **Operate to the highest pollution control standards**
- **Include measures to ensure that appropriate materials are recycled, composted and recovered where this has not been carried out elsewhere.**

Proposed thermal facilities should, wherever possible, aim to incorporate combined generation and distribution of heat and power.

14. Landfill

- 14.1** The South East Plan anticipates that if the proposed increases in recovery are achieved and waste is diverted from landfill, at regional level there is, in overall terms, sufficient landfill capacity to manage the region's waste, plus a declining amount of waste exported from London, to around 2013-14.
- 14.2** However this reflects the relatively large void spaces in Buckinghamshire and Oxfordshire and does not consider the need to manage waste close to where it is generated and thus minimise associated transport impacts. In addition it does not discriminate between facilities licensed to accept non-inert or inert waste or the potential implications of classification of sites as suitable for accepting hazardous or non-hazardous waste.
- 14.3** Therefore there will be a continuing need for some additional landfill capacity for waste, including residues of recovery processes at sub-regional level, especially if the principles of sub-regional self-sufficiency and proximity are to be achieved. Non-inert landfill capacity should be managed as a limited resource and increasingly become the means of disposal of residues of other recovery and materials that would not benefit from, or cannot practicably be subject to, recovery processes.
- 14.4** London is not capable of being entirely self-sufficient in terms of the disposal of residues of non-inert waste and the region will play a continuing role in disposal of its residues waste.
- 14.5** Much of London's waste imported into the region currently goes to the large landfills in Buckinghamshire and Oxfordshire. These are considered to be of regional and inter-regional significance by virtue of their scale and also the local geology and transport connections. The South East Plan proposes that the region continues to accept for disposal a declining amount London's waste to landfill, given London's acknowledged difficulty of achieving self-sufficiency. However, in order to encourage London to improve its recovery performance and to manage the regionally important landfill resource, it will be necessary for the amount of London's waste disposed of at these sites to be reduced throughout the period of the Plan and increasingly be limited to residues waste. Policy W3 sets out an apportionment of London's exported waste by Waste Planning Authority area.
- 14.6** Although the Landfill Directive will cause an increasing amount of biodegradable waste to be diverted from landfill, some biodegradable waste will continue to be disposed of and degrade to release methane-rich landfill gas, and biodegradable waste currently in landfill will also continue to release methane. This powerful greenhouse gas can be captured and burned to generate power and/or heat through proven and economically feasible technology.
- 14.7** An indication of the shortfall in landfill capacity in each waste planning authority area is set out in Table 2 (overleaf). Ongoing monitoring and analyses of capacity by the Assembly and SERTAB will update this information.

FOOTNOTES

¹⁹ Environment Agency (July 2002) Position Statement – Waste Incineration in Waste Management Strategies.

TABLE 2

Landfill Requirements

	MSW Landfill mt/yr	C&I Landfill mt/yr	C&D Landfill mt/yr	SE Sub- Total	London Imports ¹	SE Total including London imports
2005	3.1	3.7	2.3	9.1	1.76	10.9
2010	2.6	3.2	2.1	7.9	1.54	9.4
2015	1.6	2.5	1.7	5.8	1.11	6.9
2020	1.1	2	1.5	4.6	0.88	5.5
2025	1.1	1.9	1.3	4.3	0.78	5.1

¹ London Imports include only MSW and C&I waste. See Policy W3

Source: Update of the 'Model for Future Waste Management Capacity Needs in the South East', ERM Report, 2005, Annex B, p.1/72

POLICY W13: LANDFILL REQUIREMENTS

Waste Development Documents should provide for continuing but declining landfill capacity. Non-inert landfill capacity should be husbanded to provide for disposal of residual non-inert waste. At regional level there should be provision for at least the following landfill capacity (million tonnes per year):

Surplus or Shortfall in Landfill Void Capacity (million tonnes) at 2015

Sub-regions	Non-Hazardous Landfill ¹	Inert Landfill	2006-2015 London Imports ²	Total Capacity Surplus incl. London imports 2006-2015 ³
Berkshire unitaries	0.446	4.213	1.4	-0.9
Buckinghamshire	12.153	3.139	2.7	9.4
East Sussex	-2.999	0.279	1.4	-4.4
Hampshire	-16.011	1.833	1.4	-17.4
Isle of Wight	-0.514	0.216	0.0	-0.5
Kent and Medway	-12.995	7.155	2.0	-15.0
Milton Keynes	15.378	0.137	1.6	13.7
Oxfordshire	4.323	4.170	2.7	1.6
Surrey	0.542	13.653	1.4	-0.8
West Sussex	-5.633	-1.798	1.6	-7.2
South East Total	-5.310	32.997	16.2	-21.5

¹ Non-hazardous landfill includes residues from recovery/diversion assumed to be 30% by weight.

² Estimated imports of MSW and C&I in 2005 is 1.76 million tonnes, as set out in RPG9 as amended.

³ Figures represent non-hazardous landfill capacity with assumed London imports. [See Policy W3]

Source: Update of the 'Model for Future Waste Management Capacity Needs in the South East', ERM Report, 2005, Annex B, p.9/72-p.69/72

Landfill gas collection and energy recovery should be standard practice at all non-inert landfill sites.

15. Restoration

15.1 Waste management facilities, particularly but not exclusively landfills, may be temporary in nature. Restoration and,

where necessary, aftercare and management of sites following the end of their active life will be required. This should be undertaken in a timely manner so as to protect and, wherever possible, enhance the environment.



15.2 Landfilling has historically been used to restore worked out minerals sites. This has often been to agricultural use. In future, opportunities for more imaginative restoration should be explored and delivered. In particular, restoration can assist in delivering other regional and national environmental objectives, such as habitat re-establishment and biodiversity targets, new woodland and also the provision of public amenity and recreational space. The South East England Biodiversity Forum is identifying opportunities and priorities for habitat re-establishment and the potential for restoration of minerals and waste sites to help achieve regional biodiversity targets.

POLICY W14: RESTORATION

Local Development Documents should secure high quality restoration and, where appropriate, aftercare of waste management sites so as to help deliver the wider objectives of the regional spatial strategy.

16. Hazardous Waste

16.1 Provision in the region also needs to be made to provide for a smaller number of large-scale specialist facilities to deal with specific waste streams, including hazardous waste and also large volumes of source-separated materials. This may be through site identification if requirements are known, or through setting criteria against which proposals may be considered. There is also a potential need for additional

facilities for merchant recycling, complex phase separation, plasma/vitrification, and solidification. WDFs should identify a range of waste management sites and/or identify criteria for the determination of large scale specialist facilities.

16.2 Larger regional or strategic facilities present opportunities and should, where practicable, be located and designed to make use of rail or water transport. This will reduce the environmental impact of waste movement over larger distances and from a larger catchment or hinterland. This will also require a network of bulking facilities that should be located, where possible, to enable inter-modal transfer.

16.3 The management of hazardous waste will change significantly over the next few years. European directives direct hazardous waste away from landfill, impose greater requirements for waste treatment and require stricter pollution control of incinerators. Co-disposal is not acceptable under the Landfill Directive and should have ceased by July 2004.

16.4 In addition, the revised European Hazardous Waste List will define many more types of waste as hazardous for the first time. However, it has been estimated that 5-10% of hazardous waste could be prevented through waste minimisation action and restrictions on the use of hazardous materials in products.²⁰ In addition, energy from waste will result in the generation of residues (for example fly ash) that will require disposal in hazardous landfill.

FOOTNOTES

²⁰ Environment Agency press release 46/03, 1 April 2003. Action needed now to deal with hazardous waste.

16.5 Landfill legislation now requires operators to choose if they want to deal with hazardous waste. It is anticipated that many will not for economic reasons. Some landfill sites, which have until now accepted hazardous waste, have been classified as 'non-hazardous' since July 2002. However, since July 2004 sites that have elected to operate as 'interim hazardous' sites are no longer able to accept both hazardous and non-hazardous waste, resulting in a significant fall in the number of hazardous waste landfill sites (to zero, temporarily).

16.6 A wide range of materials with different characteristics and management requirements are now defined as hazardous waste. The implications of various pieces of legislation and regulations on management needs and availability of management capacity are currently uncertain. These factors make an accurate and comprehensive assessment of management capacity and facility requirements at regional and local levels impossible at present.

16.7 Hazardous waste deposits in the South East are dominated by oil and oil/water mixtures – 160,000 tonnes, approximately 33% of hazardous waste – and construction and demolition waste (including contaminated soils) and asbestos - 170,000 tonnes, 35% of hazardous waste.²¹ Much of this waste is currently landfilled and so new specialist treatment capacity will be required. The most effective way of tackling construction and demolition waste will be to avoid contamination of otherwise inert and recyclable materials with asbestos and contaminated soils in the first place, and to remediate contaminated soils on-site. One new potential route for the disposal of liquid hazardous waste is cement kilns.

16.8 The Assembly and SERTAB have

established a regional Hazardous Waste Task Group to formulate specific recommendations and an action programme. The Assembly and SERTAB will continue to keep under review the amount of and management requirements for hazardous waste, taking into account the impacts of legislation. A recent review²² has identified current priorities, reflected in Policy W15.

POLICY W15: HAZARDOUS WASTE

The Regional Assembly's Hazardous Waste Task Group will maintain guidance on regional hazardous waste management requirements. Current priority needs include:

- i Hazardous waste landfill capacity, particularly in the South or South East of the region to serve Kent, East Sussex, West Sussex and Surrey**
- ii Two treatment facilities for air pollution control residues (from combustion facilities)**
- iii At least one treatment/de-manufacturing plant for waste electronic and electrical equipment, supported by a network of transfer facilities**
- iv A sub-regional network of soil treatment facilities**
- v A sub-regional network of landfill cells for stabilised non-reactive hazardous wastes.**

Waste Development Documents should:

- i Identify and safeguard sites for storage, treatment and remediation of contaminated soils and demolition waste**
- ii Identify criteria for the determination of large scale specialist hazardous waste facilities**
- iii Assess available landfill provision and, where necessary, encourage the creation of a protective cell for stable hazardous waste.**

17. Waste Transfer

17.1 Waste transport is the essential link between local collection and sub-regional or regional facilities for treatment, recycling, recovery and disposal.

17.2 Most materials will have a low value until bulked up – when the economic viability of recycle is enhanced and longer distance movement to a suitable facility becomes possible. Newspapers and glass already follow this process and in future this may include tyres.

17.3 There is a need for facilities, such as bulking and transfer stations, to minimise travel by smaller waste collection vehicles, serve larger, more cost-effective waste treatment facilities and make use of more sustainable transport modes including rail. All waste management has transport implications. Appropriate location of such facilities, such as at inter-modal terminals where materials can be transferred from road to rail or water, can reduce transport impacts arising from the movement of waste where distances are great.

17.4 The majority of local waste collection, and deliveries to treatment and recycling facilities, will be made by road. Maximising the efficient transport of waste, for example through Freight Quality Partnerships or links with freight initiatives in local transport plans, will help to reduce adverse environmental impacts.

POLICY W16: WASTE TRANSPORT INFRASTRUCTURE

Waste Development Documents should identify infrastructure facilities, including sites for waste transfer and bulking facilities, essential for the sustainable transport of waste materials. These sites and facilities should be safeguarded in Local Development Documents. Policies should aim to reduce the transport and associated impacts of waste movement. Use of rail and water borne transport with appropriate depot and wharf provision should be

encouraged wherever possible, particularly for large facilities.

18. Location of Facilities

18.1 There is an urgent need for a wide range of new waste management facilities, particularly recovery, across the region. There may also be a need for a smaller number of specialist treatment, reprocessing or disposal facilities for specific materials.

18.2 Historically, most landfilling operations have taken place following mineral extraction and it was therefore relatively easy to be site-specific. However, alternative waste management facilities will increasingly need to be situated in other permanent locations. Development documents will establish precisely where the management capacity and facilities proposed in the Plan should be located. If new facilities are to be developed in time for meeting the challenging national and regional waste diversion targets, it will be essential for plans to be site-specific wherever possible.

18.3 Many facilities will need to be developed close to the source of waste and generally be close to urban areas. However, there are likely to be competing demands for urban and previously developed land, and opposition to the development of waste facilities. Development in the countryside, particularly the urban fringe and where there are rural waste management needs, will also be required and may represent the most appropriate location for certain activities, such as composting.

18.4 Development documents in the region will generally adopt a site-specific approach for the provision of identified waste management facilities. There will still be a need to identify appropriate criteria for the consideration of proposals that will come forward for other locations.

FOOTNOTES

²¹ Environment Agency (2000) *Strategic Waste Management Assessment 2000. South East*

²² *Beyond Waste for the Regional Assembly (May 2005) Overview of Hazardous Waste in South East England.*
http://www.southeast-ra.gov.uk/publications/strategies/waste_research.html

- 18.5** In some cases, it will be difficult to fulfil the criteria, for example the landfilling and restoration of a remote minerals extraction site, without good transport connections. Such operations may be temporary in nature and thus the policy should be applied flexibly so as not to preclude such environmentally beneficial development.
- 18.6** In future, policy constraints including Green Belt, and in exceptional circumstances Areas of Outstanding Natural Beauty and National Parks, should not be considered a barrier to development of waste management facilities if the objectives of more environmentally sustainable forms of waste management are to be met, particularly with regard to the proximity principle. Development documents should provide specific justification for identifying suitable sites in such locations. These could include:
- i Construction & demolition recycling/crushing which use equipment in the open air and are often associated with existing landfills or mineral working sites
 - ii Civic amenity and recycling sites
 - iii In vessel composting eg polytunnels which could be associated with landfill sites and open windrow composting
 - iv Anaerobic digestion on farms or sewage treatment works
 - v Transfer stations and recovery/other diversion facilities.
- 18.7** This list is not comprehensive and it is essential that waste facilities proposed in Areas of Outstanding Natural Beauty, National Parks or the Green Belt are assessed in the light of local circumstances and national/regional policy, and are subject to good design and landscape character appraisal.
- 18.8** The co-location of waste management facilities on one site can provide significant environmental benefits by reducing the overall volume of traffic and allowing flexible integrated facilities to be developed.

- 18.9** The co-location of waste management facilities can enable economies of scale through reducing operational and transport costs and their environmental impact. Sites offering good transport links, especially direct access to rail and waterway, can be particularly appropriate. Co-location and development of integrated facilities can also assist the separation of waste for different types of recovery on the one site.
- 18.10** Given the need to rapidly increase capacity for recovery in the region, development frameworks should identify sites that would be suitable for co-location and integrated facilities. Existing facilities with established waste management use, which are capable of expansion and accommodating a range of management methods, should be safeguarded. However new sites will also need to be identified if the scale of capacity required is to be realised. These larger integrated waste management facilities should be seen as part of a mosaic of facilities, complementing smaller single purpose operations.

POLICY W17: LOCATION OF WASTE MANAGEMENT FACILITIES

Waste Development Documents should, in identifying locations for waste management facilities, give priority to safeguarding and expanding suitable sites with an existing waste management use and good transport connections.

The suitability of existing sites and potential new sites should be assessed on the basis of the following characteristics:

- i Good accessibility from existing urban areas or major new or planned development**
- ii Good transport connections including, where possible, rail or water**
- iii Compatible land uses, namely**
 - Active mineral working sites; and
 - Previous or existing industrial land use

- Contaminated or derelict land
 - Land adjoining sewage treatment works
 - Redundant farm buildings and their cartilages.
- iv Be capable of meeting a range of locally based environmental and amenity criteria.**

Waste management facilities should not be precluded from the Green Belt where this is the nearest appropriate location, where there are no alternative sites, and provided that the development would not cause harm to the objectives of the designation. In exceptional circumstances, small-scale waste management facilities for local needs should not be precluded from Areas of Outstanding Natural Beauty and National Parks where this is the nearest appropriate location and where the development would not compromise the objectives of the designation.

19. Minerals

- 19.1** The South East is the most populous English region and subject to significant growth pressures. The maintenance of a healthy regional economy will require an adequate supply of minerals and minerals-related products to support a major housing programme, deliver key infrastructure projects and provide the everyday products that we all use. However, planning policy also has to balance the essential requirements of the regional economy for minerals and manufactured products with the environmental impact arising from their extraction, processing and transport.
- 19.2** The South East Plan provides a set of policies and proposals to strike that balance. It is intended to replace chapter 11 of existing Regional Planning Guidance for the South East (RPG9). It has been produced with the assistance of SEERAWP (South East England Regional Aggregates Working Party) and a Mineral Planning Authority Task Group.

20. Policy Framework

- 20.1** The principles of sustainable development form the basis of national planning policy and are set out in the UK Strategy for Sustainable Development. The Regional Assembly has published, with others, an Integrated Regional Framework, A Better Quality of Life in the South East, which sets out a number of objectives intended to promote sustainable development throughout the region and to achieve consistency between regional policies.
- 20.2** Regional minerals policies are guided by sustainable development as a key principle. This means that while delivering the minerals that the region and the nation needs, extraction and processing should:
- i Safeguard the region's naturally occurring minerals and encourage the use of suitable alternative construction materials where appropriate
 - ii Protect the environment and local amenity
 - iii Minimise the adverse impacts of the transport of minerals and construction materials.
- 20.3** Minerals and planning policy guidance provide the context within which regional minerals policy should be prepared. MPG6: Guidelines for Aggregates Provision in England, published in 1994 and revised in 2003 as National and Regional Guidelines for Aggregates Provision in England 2001-2016, establishes national supply policy and requires mineral planning authorities to maintain a landbank of at least seven years of planning permissions for the supply of primary aggregates and a specific supply figure to be apportioned to each authority on the basis of regional requirements. MPG10: Provision of Raw Material for the Cement Industry and MPG15: Provision of Silica Sand in England, provide national guidance for chalk and silica sand, while more general advice in other MPGs has to be taken into account in the development of regional strategies.

20.4 Development proposed in the South East Plan will impose considerable demands on the provision of minerals and construction materials across the region. This applies particularly to construction aggregates which also have to make a contribution to the needs of London, as the capital has only limited primary resources and, in recent years, a generally static supply of traditional sea-borne materials. Extraction of aggregates at a high rate over the decades has now exhausted some reserves. Consideration of more difficult and sensitive sites in the region is now required along with a degree of reliance on other sources such as marine aggregates.

20.5 The waste policies seek to increase the use of recycled materials as substitutes for natural minerals. It sets challenging targets for the recycling of construction and demolition waste aiming to achieve a 60% recycling rate for this waste stream by 2025.

20.6 The management of transport demand is an important issue for the South East where much of the primary road network operates at, or above, capacity and because there is a shortage of freight paths on the rail network. As local production concentrates on fewer, larger sites, it is likely that distances to markets will increase and, with the region largely dependent on hard rock imported over long distances, pressures on the transport network could intensify. We should encourage a modal shift to increase the proportion of minerals and manufactured products transported into and within the region by rail and sea. To achieve this capacity, constraints will need to be overcome, and existing and new depot and wharf sites to handle materials in bulk will need to be safeguarded.

20.7 Mineral working and processing can have an adverse impact on the environment and local amenity and, as a consequence, extensive mineral resources will remain unavailable for working. Local Development Frameworks (LDFs) should include policies to manage specific impacts

such as noise and dust and encourage good site management and effective restoration.

20.8 Only exceptional circumstances would permit extraction or processing in locations of special landscape importance such as the Areas of Outstanding Natural Beauty (AONB), or internationally or nationally designated areas of nature conservation importance, such as Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Sites of Special Scientific Interest (SSSI). However, the growth in the number of specially designated areas, notably the proposed South Downs and New Forest National Parks, and the extent of environmental constraints generally is likely to cause difficulties in maintaining some minerals reserves across the region. Accordingly, the potential for mineral extraction to take place as carefully considered exceptions to national policy in areas subject to these constraints should be kept under review, especially if provision for land-won aggregates is to be maintained in line with national guidance.

21. Current Regional Minerals Supply

21.1 Supply patterns for the region's significant minerals are essentially national with the exception of sand and gravel and, to a lesser degree, clay. Quantitatively, the most important regional mineral, construction aggregates, is mainly used for the manufacture of concrete, as coated and uncoated roadstone and as a fill material. The main sources of supply in the South East are:

i Primary Aggregates – There are extensive deposits of sharp sand and gravel and to a lesser extent soft sand in the region, which generally enables local sources to supply nearby urban markets over short distances. In 2001 regional sales totalled 12.4 million tonnes (mt). Regional sources of

crushed rock include Kentish Ragstone, limestone and ironstone (for aggregate use) in Oxfordshire, and small quantities of sandstone in West Sussex; sales in 2001 totalled 2.4mt

ii Secondary Aggregates and Recycled Materials – Materials include construction, demolition and mineral waste, and other minerals such as chalk that can be used as a fill material

iii Imports – In 2001 7.2mt of marine-dredged aggregates from licensed extraction sites, mainly in the Channel, were landed at wharves on the Thames, in East and West Sussex and Hampshire. There are very limited indigenous reserves of hard rock in the region. 12.7mt were imported into the region in 2001, 3.8mt by sea from distant sources such as Scotland and mainland Europe and much of the remainder by rail from Somerset, Leicestershire and elsewhere. Inter-regional movements of land-won sand and gravel largely balance, but the lack of primary reserves in London attracted over 1mt of exports from the South East in 2001.

21.2 Other regionally or nationally significant minerals worked in the South East are clay, chalk, silica sand, and gypsum. Fuller's earth, previously of some importance regionally, is now only worked in small quantities in Oxfordshire and, following an examination of existing reserves and the extent to which the mineral has been replaced by other materials, is not considered to warrant further attention, subject to periodic review. There are other mineral resources in the region, which have also been assessed but none of these are considered to be of regional

significance in the period to 2016. For example, with the closure of the Kent coalfield, energy minerals are insignificant although hydrocarbons are exploited in modest quantities in West Sussex, Surrey and Hampshire.

21.3 The structure and distribution of the minerals industry in the South East is changing, reflecting national trends which are likely to affect future patterns of supply. Overall, the number of extraction sites is declining and the manufacture of products such as cement, bricks and plasterboard is becoming concentrated in fewer, bigger plants which supply larger areas, often on a regional or national scale. Some minerals are increasingly being imported for use in the region while manufactured products are also being imported from abroad to supply regional needs. The use of alternatives to natural minerals and the availability of synthetic materials may also influence future regional demand.

Future Supply of Minerals – the Overall Approach

21.4 The approach is to meet identified and justified needs for mineral supply in the region, but to do so by making significantly more efficient use of natural resources, including so-called 'waste' products, with a reduced overall environmental impact. This natural resource management approach mirrors the line taken for waste.

21.5 The core strategy for minerals therefore seeks to:

i Encourage more efficient use of minerals in construction and manufacture, so as to reduce, and



- eventually eliminate, growth in demand
- ii Make significantly more use of recycled materials
- iii Meet the regional guideline for land-won primary aggregates and an appropriate proportion of the demand for other minerals from sites in the region, subject to demanding extraction, transport and restoration standards, wider environmental considerations and any available government guidance
- iv Provided that the necessary licences are forthcoming, make use of an anticipated increase in aggregate resources from the English Channel, provided that this extraction is consistent with sustainable resource use
- v Import into the region sufficient hard rock and other minerals to meet those industrial and construction needs that cannot be supplied from indigenous regional minerals resources
- vi Enable the supply of construction aggregates in the South East to be met from a significant increase in supplies of secondary and recycled materials, a reduced contribution from primary land-won resources and an increase in imports of marine-dredged aggregates.

21.6 The supply of construction aggregates in the South East should be met from a significant increase in supplies of secondary and recycled materials, a reduced contribution from primary land-won resources and an increase in imports of marine-dredged aggregates.

21.7 The identification and approval of mineral sites, their working and their subsequent re-use/restoration cannot be seen in isolation. Minerals make a crucial contribution to wider economic and development activity. Workings and the transport of minerals have health and other social impacts, such as noise and dust, as well as more obvious environmental effects. Local extraction often has special significance for rural

areas, whereas the import of material via wharves and depots impacts more in urban areas. Some parts of the region have particularly significant development needs, notably the regional growth areas, but cannot be adequately supplied from available local mineral resources, necessitating intra or extra-regional imports. Substantial areas of the region were largely excluded from consideration for mineral extraction as a result of their special character and designation.

21.8 Over the Plan period it is expected that there will be a gradual change in the mix of these elements of supply, as construction efficiencies and recycling play an increasing part. It is anticipated that the demand for minerals will be gradually uncoupled from economic growth. In the longer term (beyond 2016) any increase in consumption will be made up through increased use of alternative materials.

21.9 Mineral planning authorities (MPAs) should ensure that provision is made for sufficient supplies of aggregates, clay, chalk, silica sand and gypsum to be extracted and processed to meet regional and, where appropriate, national needs. This extraction process should be consistent with achieving the environmental protection and enhancement, and transport policies of this Plan. Although self-sufficiency of supply is in theory desirable, in practice it is unachievable at either regional or local level in the South East for minerals such as aggregates or gypsum.

22. Sustainable Construction and Environmental Management

22.1 The promotion of environmentally sustainable design can reduce the demands placed on the region's natural resources by encouraging construction practices

which use alternatives to primary minerals and increase energy efficiency. The construction industry is already developing alternative building products using synthetic materials or construction and demolition waste; examples include the manufacture of building blocks from ash, clinker and other waste materials, the use of desulphurgypsum (DSG) in plasterboard manufacture and the development of new techniques in the manufacture of brick panels.

22.2 There is also scope for reducing the demand for primary construction materials by cutting the amount of waste on construction sites, greater use of modern off-site building techniques and by more effective quality control and auditing of building projects, to ensure that wastage and the use of inappropriate materials is avoided. This can best be achieved through the Regional Assembly working with relevant organisations to encourage a sustainable approach to construction, to overcome technical and financial constraints and by promoting best practice.

22.3 The Regional Assembly will disseminate good practice on positive and creative planning needed in considering the use of mineral sites once extraction has ceased. After-use should be considered when determining an application and appropriate conditions should be attached to permissions to facilitate an appropriate after-use. In some cases, restoration to an agricultural or equivalent use would be appropriate; in other cases, another positive alternative use may be appropriate. Whatever the after-use, it will be essential that it is established to a high standard with appropriate aftercare and management. Best practice should also include effective communication with local communities throughout the planning, operation and restoration of mineral sites, including setting out clear timescales for the operation and restoration phases and adhering to these as far as possible. In addition, the Regional Assembly will work

with SEEDA and others to provide better signposting of advice on sustainable construction and disseminate good practice, for example, by making Growth Areas exemplars of best practice.

POLICY MI: SUSTAINABLE CONSTRUCTION

The Regional Assembly, SEEDA, the construction industry, and other stakeholders will work to encourage the development of sustainable construction practices, and to promote good practice, reduce wastage and overcome technical and financial constraints, including identifying sustainable supply routes and seeking to reduce delivery distances. The long-term aspiration is that annual consumption of primary aggregates will not grow from the 2016 level in subsequent years.

Local Development Documents should promote the use of construction materials that reduce the demand for primary minerals, by requiring new projects to include a proportion of recycled and secondary aggregates wherever practicable.

23. Recycling and Re-use

23.1 National policy is to increase the use of secondary and recycled materials as substitutes for natural minerals, placing considerable emphasis on increasing the use of secondary aggregates in the construction industry as an alternative to dwindling reserves of primary aggregates. This is reflected in the waste policies, which set challenging targets for the recycling of construction and demolition waste. It is therefore a prime objective of regional minerals policy to increase supplies of secondary aggregates and encourage a greater use of mineral waste in the construction industry in accordance with the principles of sustainable development.

23.2 Recycled aggregate is principally derived from construction and demolition waste, whilst recycled road planings also play a part. Secondary materials in the region come from spent rail ballast, pulverised fuel ash, waste glass and scrap tyres. The target set out in Policy M3 should be regarded as a minimum and the upper figure of 7.7mpta should have been exceeded by the end of the period.

23.3 Additional minerals recycling facilities will be required in the region to process construction and demolition waste, including provision for 'hub sites' to deal with off-site remediation of contaminated soils.

23.4 To meet national and regional targets, mineral planning authorities should identify sufficient sites for recycling plants, primarily on brownfield sites or within new employment developments, to ensure that there is an increase in the recycling of construction, demolition and other waste for use as secondary aggregates in the region. In identifying sites, minerals planning authorities should take into account:

- i The need for recycling operations to be located within a viable catchment area close to the origins of the waste material and to the subsequent markets. For construction and demolition materials, this will generally mean the main urban areas. Different considerations will apply to highways and railways depots, and more specialist facilities for recycling materials, such as pulverised fuel ash from power stations
- ii The ability for such recycling operations to be enclosed in an industrial building, although acknowledging that at present most are sited in the open
- iii The need to provide an indication of typical site sizes, acknowledging the need for materials storage before and after processing.

MPG I, paragraph 69, provides national guidance on the siting of permanent recycling sites.

23.5 Temporary recycling facilities, including mobile recycling facilities, can make a useful contribution to this overall provision. Recycling facilities may therefore need to be located in sensitive locations such as minerals or waste sites in the Green Belt and, in exceptional cases, Areas of Outstanding Natural Beauty (AONBs) and National Parks, to achieve this objective. In translating this guidance into mineral development frameworks (MDFs), mineral planning authorities will need specific justification for identifying suitable sites in designated areas. There are likely to be few circumstances where a justifiable demand for a minerals recycling facility could be made in AONBs or National Parks because of their geography and settlement pattern. Where sites are to be proposed in AONBs or National Parks, a landscape character assessment approach might usefully be employed.

23.6 There is a need for a sense of urgency and purpose if we are to provide sufficient facilities, permanent or temporary, in the region. Implementation of Policy M2 will be challenging and will require additional efforts by the Assembly, other regional agencies such as SEEDA and the Environment Agency, all local authorities, not only mineral planning authorities, and the industry. It will need investment in sites and facilities and public awareness-raising. There are clear linkages with the changes in construction efficiency advocated in Policy M1. The new Aggregates Levy provides an opportunity to prioritise the channelling of funding.

23.7 There is an urgent need to adopt long-term statutory recycling and recovery targets for construction and demolition waste and the focused use of Aggregates Levy receipts to encourage and support sustainable construction practices and recycling projects.

23.8 All interested parties must work together to improve the quality and availability of data on secondary aggregates and recycled materials to ensure that the contribution from this source can be effectively monitored.

23.9 A methodology has been developed for apportioning provision of recycled and secondary aggregates.²³ The methodology incorporates weighted criteria including:

- i Projected population growth
- ii The amount of construction and demolition waste arisings/managed in each MPA area
- iii The area of each MPA area covered by environmental/landscape designations
- iv The area of each MPA area covered and Green Belt.

23.10 The resulting apportionment is set out in Policy M2.

POLICY M2: RECYCLED AND SECONDARY AGGREGATES

The use of secondary aggregates and recycled materials in the South East should increase from 6.6mpta (29% of the guidelines for primary aggregate production in the region) to at least 7.7mpta (34%) by 2016 so as to reduce the need for primary aggregates extraction.

To enable this target to be met, and where possible be exceeded, mineral planning authorities should ensure that their minerals development frameworks enable provision to be made for the following:

Waste Planning Authority area	Apportionment of recycled and secondary aggregate provision (million tonnes per annum) by 2016
Berkshire unitaries	0.7 mpta
Buckinghamshire	0.6 mpta
East Sussex/Brighton & Hove	0.5 mpta
Hampshire/Portsmouth/Southampton/New Forest	1.7 mpta
Isle of Wight	0.1 mpta
Kent	1.4 mpta
Medway	0.2 mpta
Milton Keynes	0.2 mpta
Oxfordshire	0.9 mpta
Surrey	0.8 mpta
West Sussex	0.8 mpta

Minerals Planning Authorities should identify sites to contribute to such provision in minerals development frameworks. Local planning authorities should safeguard these sites through their local development frameworks.

Minerals recycling facilities should not be precluded from the Green Belt where this is consistent with the proximity principle, where there are no alternative sites, and provided that the development would not cause harm to the objectives of the designation. In very exceptional circumstances, minerals recycling facilities for local materials should not be precluded from Areas of Outstanding Natural Beauty and National Parks where this is consistent with the proximity principle and where development would not compromise the objectives of the designation.

FOOTNOTES

²³ Land Use Consultants (2005) for South East England Regional Assembly and SEERAWP. Methodology for apportionment of recycled and secondary aggregates in the South East Region. LUC November 2005.

24. Primary Aggregates

- 24.1** National and Regional Guidelines for Aggregates Provision in England, 2001-2016, published by ODPM in June 2003, updates MPG6 and sets a total aggregate supply figure for the region of 570mt over the period, a substantial reduction from the 1994 figure. It assumes an increased contribution from secondary and recycled materials (118mt) and includes a guideline requirement for primary aggregates of 247mt. Imports of primary aggregates to the region from all sources (excluding marine sand and gravel) would remain significant at 85mt.
- 24.2** Marine-dredged sand and gravel supplies should increase to 120mt for the period between 2001 and 2016, making a significant contribution to regional requirements. This will largely be dependant on the granting of additional dredging licences under the 'Government View' procedure, in particular to exploit new resources in the East English Channel, which are also likely to supply the near continent. Marine dredging has impacts upon the marine environment, which will need to be taken carefully into account in the licensing procedure.
- 24.3** Local sand and gravel extraction cannot meet all the requirements of the South East. Construction also requires crushed rock but the geology of the region is such that hard rock resources are very limited. National guidance states that the regional supply of land-won sand and gravel (which was set at 16.5mtpa) should reduce to 13.25mtpa over the period. The supply of crushed rock should increase by 10% to a total of 2.2mtpa. An element of regional primary production should be used to supply London where natural resources are limited, but the capital would be expected to significantly increase supplies from recycling and secondary sources. Sand and gravel exports, including to London, are broadly balanced by imports from adjoining regions. In planning to meet the overall national guidelines figure, it is assumed that these constituent elements of that supply will also be met. Thus, for the period 2001-

2016, it is assumed that 118mt will come from alternative materials, 212mt from land-won sand and gravel, 35mt from crushed rock, 120mt from marine sand and gravel, and 35mt from net imports.

- 24.4** The regional supply figure has been apportioned initially to mineral planning authorities or groups of mineral planning authorities on the basis of average sales over the last seven years (1995-2001), discounting years with the highest and lowest sales in each county to avoid exceptional demands (for example, arising from a major development project) distorting the longer term average production figure. The apportionment is considered a more accurate basis for distribution than a simple pro-rata reduction for each area. It has, however, been modified to take into account two exceptional factors: first, a particular peak of production in Buckinghamshire caused by two very large extraction programmes; secondly, the high level of overall production that would result in Oxfordshire and Surrey, relative to their geography and future housing needs.
- 24.5** The establishment of New Forest National Park created a new Minerals Planning Authority, as would designation of the proposed South Downs National Park, with the consequent need for a revised apportionment. No apportionment is proposed for the New Forest on the basis of the boundaries now established, but there is a commitment to working out the existing landbank of permitted reserves of sand and gravel in the one active extraction within the park.
- 24.6** Although the apportionment is based on a logically and reasonably robust analysis, we recognise that it is essentially derived from past rates of production, rather than an appraisal of future needs and the likely availability of materials, taking into account a more detailed analysis of environmental and other constraints. The Regional Assembly should therefore keep the apportionment under review.



- 24.7** Mineral development documents should include policies that reflect the sub-regional apportionment figures for primary aggregates production. They should also set criteria against which planning applications for quarries, processing plants and wharves and depots for imports can be assessed and ensure that adequate facilities are available to meet future demand.
- 24.8** Some non-aggregate minerals worked and processed in the South East have regional or national importance. They are clay for brick and tile production, chalk for cement manufacture, silica sand which has a number of industrial applications and gypsum which is used in plasterboard and cement manufacture. Mineral development documents should direct where and how future provision should be made for regional requirements, while future supplies need to be safeguarded.

POLICY M3: PRIMARY AGGREGATES

The supply of construction aggregates in the South East should be met from a significant increase in supplies of secondary and recycled materials, a reduced contribution from primary land-won resources and an increase in imports of marine-dredged aggregates.

Mineral planning authorities should plan to maintain a landbank of at least seven years of planning permissions for land-won sand and gravel which is sufficient, throughout the Mineral Plan period, to deliver 13.25 million tonnes (mt) of sand and gravel per annum across the region, based on the following sub-regional apportionment:

Berkshire unitaries	1.57mtpa
Buckinghamshire	0.99mtpa

East Sussex/Brighton & Hove	0.01mtpa
Hampshire/Southampton/Portsmouth	2.63mtpa
Isle of Wight	0.05mtpa
Kent/Medway	2.53mtpa
Milton Keynes	0.12mtpa
Oxfordshire	1.82 mtpa
Surrey	2.62mtpa
West Sussex	0.91mtpa
and 2.2 million tonnes of crushed rock per annum across the region, based on the following sub-regional apportionment:	
Kent	1.2mtpa
Oxfordshire	1.0mtpa

25. Other Minerals

- 25.1** It is recognised that there are other minerals worked in the region which contribute to the local economy and character, but which are worked on a smaller scale and have less impacts than those to which the policies apply in this strategy (such as brickearth or energy minerals); or which have no significant workings but provide a geological resource (notably fuller's earth). The contribution of these minerals should be dealt with appropriately in mineral development documents.

Clay

- 25.2** Unlike other non-aggregate minerals, clay occurs widely throughout the South East, its most significant use being in the manufacture of bricks, tiles and related construction materials. Brick is a durable, versatile and sustainable construction material that can be re-used or recycled, and which contributes greatly to local architectural styles.

25.3 The Weald and Wadhurst clays of the High Weald and the Gault of the Low Weald are the principal regional clay resource, with most brick production taking place at works in East and West Sussex and Surrey. In Kent, most brick manufacture has been historically based on local supplies of brickearth and the majority of sites identified as suitable for extraction have now been worked out. The Lower Oxford Clays have been extensively exploited in Buckinghamshire but the Fletton brick plants in the north of the county had closed by 1994. At present there are 26 brickworks in the region producing about 400m bricks annually from some 1.2mt of clay. Regional brick sales were about 700m showing that the South East is a major importer of bricks.

25.4 Nationally, brick production has declined by over 50% since 1974 (to about 3,000m bricks), largely in response to changes in construction methods and the general cut back in house building, although there are indications that this decline may have ended. The position in the South East reflects this trend. The industry is now based on a relatively small number of large production units operated by a small number of companies (in 1998, six companies were responsible for 90% of national production). These are supplemented by small production units which serve specialist markets such as the demand for tiles or hand-made bricks.

25.5 The region has significant deposits of brick clay with substantial permitted reserves which overall are sufficient to maintain local supplies to the brick and tile industry and meet regional requirements over the plan period. Only in Hampshire, and possibly in Kent, is it likely that further reserves need to be identified. It seems possible that there will be further, albeit limited, rationalisation in the industry and a shifting emphasis towards a restricted number of clay resources. Some substitution of pre-fabricated brick panels is also anticipated, although it is uncertain whether this will produce any reduction in the demand for clay. Regional guidance

should establish a policy on reserves to safeguard clay supplies to major works and encourage mineral development documents to identify appropriate locations provision for new plants to meet regional development needs and reduce the level of imports. Mineral planning authorities should also reassess those extensive areas covered by planning permissions for clay extraction which now have little or no commercial value for that purpose and old clay permissions that are now dormant.

25.6 In order to maintain brick and tile manufacture within the region, it is important to maintain the high quality clay reserves for this use rather than for other uses such as for engineering landfill.

Chalk

25.7 Although chalk is worked for a range of end-uses, its regional significance is as the major raw material (together with smaller quantities of clay and gypsum) for the manufacture of cement.

25.8 Cement consumption nationally in 1999 was roughly 13mtpa and demand in the region was about 4mtpa, requiring 6-7mtpa of chalk. At that time, production capacity in the South East was about 3mtpa, with imports providing the balance. Recent changes in the structure of the industry mean that the Northfleet, Kent works is now the only remaining regional production facility, currently producing some 1.2mtpa of clinker from a two kiln operation. Therefore, at present, cement production in the South East meets no more than 30% of regional consumption, with the shortfall being met by imports from other production capacity in the UK or overseas imports through Thames wharves.

25.9 The importance of the cement industry to the UK economy is recognised in MPG10, which supports the maintenance of a home-based industry and recommends that a 25-year reserve should be maintained for new works or those where substantial new capital investment is proposed.

25.10 Nationally, cement production has become concentrated in a few large works with increasing reliance on imports, notably from Eastern Europe. Future production in the South East will be concentrated at a new works in the Medway Valley. This plant has a capacity of about 1.4mtpa and long-term consented mineral reserves in excess of 40 years. This is likely to be supplemented by two distribution sites in the region, which will be supplied from UK core works elsewhere and by imports from other parts of Europe.

25.11 Given the anticipated future supply patterns, there is unlikely to be any need to secure substantial new production capacity or reserves in the South East. However, producers will become increasingly reliant upon importation by sea (from European operations) and by road/rail from their other UK core works. Therefore suitable wharves and rail distribution sites should be protected from inappropriate development, which may constrain their future use.

25.12 The limited number of producing plants in the UK and the growth in imports suggest that maintenance of regional cement manufacturing capacity and the safeguarding of associated mineral supplies is of importance to both the national economy and the delivery of the regional development strategy.

Silica Sand

25.13 Silica sand, or industrial sand, is a sparsely distributed and valuable mineral resource which is an essential raw material in many UK manufacturing industries. The major market for silica sand from the South East is currently high specification glass manufacture in South Wales for television and computer monitors, a reflection of its purity and low alumina content, although some silica sand is still provided for the foundry industry. There are nine silica sand quarries in the Lower Greensand in Kent and Surrey; two are currently non-operational and another is due for closure. Production in the South East was around 700,000 tonnes in 2001.

25.14 Permitted reserves are estimated at 15.4 million tonnes, which at current production rates provides a land bank of 22 years. Future silica sand production in the region is likely to be confined to Kent and Surrey, with the major extraction site located between Bletchingley and Godstone, where it is understood that there are substantial reserves of high quality silica sand providing a landbank of at least 10 years.

25.15 Certain factors need to be considered in assessing the regional importance of silica sand. First, there is evidence of its use as a low-grade aggregate, raising the issue of whether high quality sand should be limited for specialist purposes to ensure plentiful supplies for the longer term. Secondly, the increased use of cullet (broken glass) in glass manufacture requires a greater use of high-grade silica sand in the process to offset the inconsistency of the cullet which may not be a sustainable use for a relatively scarce natural resource, especially if the re-use of glass containers is to be encouraged. Thirdly, lower grade sands can be processed to increase their range of uses, although this can be relatively expensive and has other environmental implications.

25.16 Overall, these uncertainties do not outweigh the need to safeguard high quality resources to meet both regional and national requirements well into the future. Government guidance in MPG15 states that "there are certain high grade materials which, wherever possible, should be reserved for industrial end-uses which require such sand and for which there is no readily available alternative", and requires landbanks of permitted reserves of at least 10 years at existing sites and 15 years for new sites to be identified. The reserves of high quality mineral in Surrey are potentially large enough to satisfy regional needs for high specification requirements. Regional policy should confirm the importance of the mineral and the need to maintain an appropriate landbank of high quality reserves.

Gypsum

25.17 Gypsum and anhydrite are exploited commercially in Cumbria, Leicestershire, Staffordshire, Nottinghamshire and East Sussex, and are important raw materials for the construction industry. They are used in the manufacture of plasterboard and other plaster-based products in the cement industry and in other industrial applications. In East Sussex, gypsum is mined and processed near Robertsbridge, where there is a plasterboard plant with a rail link and a purpose built road access. In 2001, 150,000 tonnes of gypsum were mined at Robertsbridge, supplemented by imported desulphurgypsum (DSG) from Drax and West Burton power stations in South Yorkshire and Nottinghamshire respectively, and an unknown quantity of imports from abroad.

25.18 However, the future of mining for gypsum is less certain, largely because of the increasing availability of DSG, which is a by-product of the flue gas desulphurisation (FGD) programme initiated in a number of coal-fired power stations in England. Its availability as a substitute for mined gypsum nationally, together with increased imports, has reduced the demand for the natural mineral, especially in plasterboard manufacture. Currently processing at Robertsbridge is sustained by DSG and locally mined rock is used solely in cement manufacture elsewhere.

25.19 There is evidence of a steady increase in the demand for gypsum in the UK as plasterboard-based building products become more popular. DSG has reduced the demand for natural gypsum in certain applications. There is also a programme for FGD installation which should increase supplies and is welcomed as a means of conserving a natural mineral. However, the extent to which this could further reduce the demand for mined gypsum in plasterboard manufacture will depend in part on future power supply policy. With a continuing demand from other industries, especially for refined high quality gypsum in cement manufacture, there is likely to be a continuing demand for natural gypsum.

25.20 The manufacture of gypsum-based products is important to the construction industry and is likely to remain concentrated at no more than four locations in the UK. The Robertsbridge works and its associated mine at Brightling have national importance as the only resource in southern England, with access to reserves expected to last for at least 30 years. It is unlikely that an alternative location for mining and processing would be needed in the South East, so regional policy should focus on safeguarding future reserves and supporting the use of alternatives, provided this utilises rail for long distance freight movement.

Others

25.21 Oil is currently being extracted under Hampshire, but there is currently no evidence in the South East of market demand for hydrocarbons. With regard to fuller's earth, the only permitted reserve remaining in the UK, other than that left at Woburn, Bedfordshire, is at Moor Mill (Baulking) Oxfordshire where the dry reserve is estimated at 294,000 tonnes. National planning guidance in MPG I recognises the scarcity and importance of fuller's earth and past inquiry decisions considered there was insufficient justification for its extraction in sensitive areas.

25.22 While there is no specific regional policy regarding hydrocarbons or fuller's earth, it is important that mineral planning authorities with such resources within their area consider these as part of their preparation of mineral development documents.

POLICY M4: OTHER MINERALS

Future provision should be made in local development documents for clay, chalk, silica sand and gypsum as regionally significant minerals of national importance. Where practicable, substitute and recycled waste materials should be used to conserve natural resources, high quality reserves should be safeguarded for appropriate end uses, and new handling facilities developed where this would increase the quantity of

minerals and manufactured products being transported by rail or water.

Mineral planning authorities should plan for:

- i A permitted reserve of clay for brick and tile product manufacture, sufficient to last for at least 25 years at current production rates, should be maintained to supply individual works throughout the plan period, and new manufacturing capacity developed if this would replace older plants or reduce net imports to the region; for small-scale manufacture, a long-term landbank of a lesser period than 25 years may be appropriate**
- ii A permitted reserve of chalk for cement manufacture, sufficient to last for at least 25 years at current production rates, should be maintained throughout the Plan period in Kent and Medway**
- iii A permitted reserve of silica sand should be maintained throughout the plan period in Surrey and Kent, equivalent at current production rates, to at least 10 years at existing sites and at least 15 years at new sites**
- iii A permitted reserve of gypsum, sufficient to last at least 20 years at current production rates, should be maintained throughout the plan period in East Sussex to support the building product and cement industries, and the use of desulphurgypsum imported by rail over the shortest practicable distance should be encouraged.**

Safeguarding of Mineral Reserves, Wharves and Depots

25.23 Mineral resources have to be worked where they occur naturally, and environmental and other constraints can make it difficult to secure an adequate number of sites for the extraction and processing of minerals to meet the region's economic needs. Accordingly sites or 'areas of search' identified in mineral development documents either for mineral extraction and related processing, or for wharves and depots to handle imports of minerals or the distribution of raw materials and processed products, should be safeguarded from other

inappropriate development. Mineral planning authorities should undertake assessments of the need for wharves and depots and, to assist the identification of those sites to be safeguarded, the following strategic criteria should be used:

- i Capacity to supply imported material to the region**
- ii Proximity to markets**
- iii Value of the specialist infrastructure**
- iv Adequacy of existing or potential environmental safeguards.**

25.24 Existing mineral workings and processing plants which have regional significance should also be protected from other development and further consideration given to extending safeguarding arrangements to larger known resources which are not specifically allocated in mineral development documents. All partners must work towards the aim of achieving a modal shift in the transport of minerals.

25.25 Mineral development documents should include a requirement that any applicants for the development of alternative uses on wharf or depot sites must demonstrate that there is no realistic prospect of a transport use continuing or being reintroduced on the site.

POLICY M5: SAFEGUARDING OF MINERAL RESERVES, WHARVES AND RAIL DEPOTS

Mineral planning authorities should assess the need for wharf and rail facilities for the handling and distribution of imported minerals and processed materials, and identify strategic sites for safeguarding in their minerals development frameworks. These strategic facilities should be safeguarded from other inappropriate development in local development documents.

Existing mineral sites, and proposed sites and 'areas of search', should be identified in mineral development documents for the extraction and processing of aggregates, clay, chalk, silica sand and gypsum. These should then be safeguarded in Local Development Documents.