



SCOTTISH EXECUTIVE  
Development Department

**Planning Advice Note**

**PAN 63**

# **WASTE MANAGEMENT PLANNING**

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# Planning Series:

- **National Planning Policy Guidelines (NPPGs)** provide statements of Scottish Executive policy on nationally important land use and other planning matters, supported where appropriate by a locational framework.
- **Circulars** which also provide statements of Scottish Executive policy, contain guidance on policy implementation through legislative or procedural change.
- **Planning Advice Notes (PANs)** provide advice on good practice and other relevant information.

Statements of Scottish Executive policy contained in NPPGs and Circulars may, so far as relevant, be material considerations to be taken into account in development plan preparation and development control.

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# Introduction

## Purpose

1. This Planning Advice Note (PAN) complements National Planning Policy Guideline (NPPG) 10: *Planning and Waste Management*. It also builds on the information given on land use planning for waste management in the National Waste Strategy: Scotland (NWS). The purpose of this PAN is to:

- Provide advice on a sustainable approach and change of emphasis from waste disposal to integrated waste management;
- Assist planning authorities in ensuring that development plans reflect the land use requirements for the delivery of an integrated network of waste management facilities;
- Provide a basis for more informed consideration of development proposals for waste management facilities;
- Enable planning authorities to implement the emerging and future Area Waste Plans; and
- Provide developers seeking planning permission for waste management facilities with advice on the issues taken into consideration when determining applications.

## The Waste Management Policy Perspective

The text of EC Directives is available at [http://europa.eu.int/eur-lex/en/search\\_lif\\_si\\_mple.html](http://europa.eu.int/eur-lex/en/search_lif_si_mple.html)

2. The European Community (EC) Framework Directive on Waste and the EC Landfill Directive set out a common framework for action on waste by the Community's member states. The Framework Directive sets out a strategic approach to waste management that protects human health and the environment by establishing an integrated network of waste facilities. The aim is for the EC to be more self-sufficient and to deal with waste as close as possible to its point of origin. The aim is also to promote waste avoidance and to recover as much as possible of the waste produced through recycling, reclamation and energy recovery.

3. The Landfill Directive's main objectives are to reduce methane emissions, ensure high standards for the disposal of waste within the EC and stimulate recycling and recovery of waste and energy. To reduce the emissions of methane gas, the Directive contains a target for the UK to reduce the amount of biodegradable municipal waste going to landfill to 35% of the 1995 levels by 2020. Scotland's contribution to this target has yet to be finalised.

4. In that context, the Scottish Executive adopted the NWS

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prepared by the Scottish Environment Protection Agency (SEPA) in 1999. It provides a framework to reduce the amount of waste produced and to deal with waste in more sustainable ways. The NWS, and the EC Directives underlying it, require that councils, in their role as both waste management authorities and planning authorities act in a new way and move from waste disposal to integrated waste management. Responsibility for implementing this new approach applies to all those who produce or manage waste - from private individuals to the business community, the voluntary sector, other public and private sector organisations and local authorities.

Further information on the National Waste Strategy and developing AWP's is available at <http://www.sepa.org.uk/nws/>

5. Following the adoption of the NWS, 11 Area Waste Plans (AWPs) are being developed to provide locally based framework documents for the strategic planning of an integrated network of waste management facilities. AWP's are being prepared by waste strategy area groups including local authorities, the waste industry, enterprise agencies and community and environment interests in a process facilitated by SEPA. *SEPA Supporting Guidance for Area Waste Plans* identifies the need for wide stakeholder consultation and notes that AWP's will seek to:

- Detail the types of facilities required for the sustainable management of controlled wastes in Waste Strategy Areas;
- Demonstrate that these facilities are the Best Practicable Environmental Option (BPEO) for the area, in terms of the economic, social, environmental and human health issues;
- Serve as a material consideration for the planning system;
- Provide guidance for Local Authority Integrated Waste Plans;
- Provide a framework for identifying the needs of industrial waste producers;
- Establish a context for investment confidence;
- Promote better integration and understanding between all the key stakeholders in the Waste Strategy Area;
- Improve transparency and public confidence in decision making;
- Provide a Framework for 'Target Trading'; and
- Provide a focus for Priority Waste Stream Projects and the national research and development programme.

### **Other Forces for Change**

6. Although not directly connected to land use planning and waste issues, there are several other forces for change in waste management including:

- Landfill Tax;

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- Aggregates Levy;
- Pollution Prevention and Control (PPC) (Scotland) Regulations 2000;
- Local Agenda 21;
- Community Planning;
- Future EC and UK legislation, for example on farm waste;
- Renewables Obligation (Scotland);
- Potential adaptation strategies for climate change in Scotland (Scottish Executive 2001); and
- Best Value.

7. Owing to the changing nature of these issues, this PAN does not set them out in detail. However, planning authorities and developers should keep abreast of developments as they are likely to influence the planning and waste functions of local authorities.

# The National Waste Strategy and the Planning System

## Background

Paragraph 37 of NPPG 10 states that the “national waste strategy will be a material consideration for planning authorities in drawing up their development plans and in assessing individual planning applications.”

8. The policy framework in NPPG 10 is still current and the NPPG anticipated the introduction of the NWS. However, this PAN is now necessary following the adoption of the NWS and the requirements for AWP. While AWP and the NWS are not land use planning documents, they are material considerations carrying significant weight that planning authorities should take into account when preparing their development plans and determining applications. Planning authorities should seek to provide for waste management facilities in accordance with the AWP, or in the short term the draft AWP, through development plans or where appropriate, interim guidance.

9. AWP, at least in the first round, will not cover all waste streams, only municipal solid waste (MSW) owing to the Landfill Directive’s diversion targets and the lack of information on other wastes. Although this PAN is written with the development of AWP in mind, the advice will be relevant to proposals for facilities to deal with all waste streams not covered by the AWP. The emphasis in future will be on integrated waste management and this will entail a range of sizes and types of facilities – not necessarily the traditional image of large, industrial plant.

## SEPA’s Functions in Relation to the Planning System

10. As noted in paragraph 54 of NPPG 1: *The Planning System*, the planning system should not be used to secure objectives that are more properly achieved under other legislation. There is a distinction between matters which are the responsibility of the planning authority and that of SEPA as licensing authority. Further guidance on SEPA’s role in the planning system and the relevance of the Waste Management Licensing Regulations 1994 can be found in paragraphs 11-18 of NPPG 10. As a statutory consultee, SEPA is an active partner in development planning and development control. In broad terms SEPA, in assessing a proposal for a waste management facility, takes account of the:

- Types and quantities of waste;
- Technical requirements;
- Security precautions to be taken;
- Nature of the disposal site; and
- Treatment methods.

11. In addition, SEPA will have regard to wider environmental factors that may be relevant to the facility, including drainage, pollution control, flooding, control of surface waters and impact upon biodiversity. SEPA's objective is to ensure that waste is disposed of or treated without endangering human health or causing harm to the environment. As a consequence, the dividing line between planning and pollution control can sometimes be unclear. The Pollution Prevention and Control (PPC) (Scotland) Regulations 2000 cover a wider range of environmental impacts than the Environmental Protection Act 1990 and therefore minimising duplication between planning and licensing is an even more important consideration.

12. Developers are not obliged to submit licence applications at the same time as their planning applications. Although licences are only granted once planning permission, where required, has been granted, it is essential that there is close liaison between the planning authority and SEPA to ensure a compatible approach to any proposal. Developers may wish to consider involving SEPA at the pre-application discussion stage of their planning application. Matters relevant to a licence may also be material planning considerations (see paragraphs 89-91 of this document). The weight to be attached to those matters will depend on the circumstances of each case.

# Good practice in Waste Management Planning

## Development Planning

13. Paragraphs 23–30 and 98–102 of NPPG 10 set out the approach to covering waste management in development planning. Two keys to successful development plans are that they address the issues in their area and link to other plans such as a community plan or other local authority functions. This section deals with development planning with reference to appropriate considerations for the location and siting of waste management facilities. It also considers how waste may be managed in planning other new developments.

## Review of Strategic Planning

14. In June 2001, the Executive issued a consultation paper - *A Review of Strategic Planning* - which proposed changes in development plan preparation. Although this PAN is based on the current development plan system, it also aims to be consistent with any possible changes arising from that consultation.

## Need

**Priority Waste Stream Projects –**  
These include construction and demolition waste, tyres, packaging waste, End of Life Vehicles, batteries, Waste Electrical and Electronic Equipment, CFCs and other ozone depleters, newsprint, special waste, waste oils, clinical waste, agricultural waste and household hazardous waste.

15. Where AWP's are finalised, they will have assessed the need for relevant waste management facilities. Planning authorities do not need to undertake a further needs analysis for such facilities. However, as most AWP's will deal only with MSW, at least in the first round, a further needs assessment may be necessary for other waste streams. NPPG 10 paragraphs 94-97 gives guidance on identifying potential sites through surveys for development planning. SEPA's Priority Waste Stream Projects will provide further information on needs in due course. SEPA will be launching the projects as part of a rolling programme with the initial priority being projects on tyres, construction and demolition waste and paper.

16. It will be for planning authorities to tackle the next assessment level, i.e. where the facilities should go in order to meet waste management requirements and be compatible with other land uses. The planning considerations that apply to identifying potential locations will vary according to the type of facilities needed to meet the AWP's preferred options. A BPEO assessment should already have been part of the AWP's preparation. However for waste other than MSW, which the first AWP's are unlikely to have dealt with, the appraisal by planning authorities or operators, of land use planning options, based

broadly on the national decision criteria referred to in the Annex may be helpful. Policies to secure appropriate locations for waste management facilities will be an integral part of the development plan.

**Waste Strategy Areas (WSAs)** - A map of the 11 current WSAs can be found on p.37 of the NWS or at [www.sepa.org.uk/nws/areas/index.htm](http://www.sepa.org.uk/nws/areas/index.htm).

17. In most cases, the 11 AWP's cover grouped local authority areas. It is up to the local authorities within each Waste Strategy Area to deal with the land use planning aspects of the need for waste management facilities. In existing development plan arrangements, some planning authorities have experience of agreeing a direction at the level of a group of local authorities and taking forward responsibility for implementation individually. In principle, implementation of the AWP is no different. It will be for planning authorities to decide, in the light of the AWP, where they have a common need which crosses authority boundaries (see Annex paragraph 5) and where their requirements can be met within their own area. It is essential that authorities accept joint responsibility for implementation. Where land needed for the management of waste arising in one local authority area is to be provided in another local authority area, the planning authorities concerned must prepare a joint statement indicating their agreement. In that light, planning authorities must consider whether and how urgently development plans should be altered in order to take account of new requirements identified by the AWP.

### **Areas of Search and Sites**

18. Development plans (whether under the present system of structure and local plans or a revised system following the review of strategic planning) will need to provide the context for appropriate land use decisions for waste management facilities. The *Review* pointed out that general, and at times vague, criteria-based policies offer no certainty about the outcome of a planning application. Identifying potential waste management sites is complex and it will often not be possible to do so conclusively until, for example, environmental impact assessment has been carried out. Planning authorities should nevertheless aim to identify sites in plans to provide a degree of certainty for the community and for the waste management industry.

19. The approach to identifying areas of search (the strategic areas considered suitable for waste management facilities) should use the AWP and the outcome of a needs assessment or survey to target individual technologies (see NPPG10 paragraphs 94-98). Areas may not need to provide for all types of waste management facilities. Considerations relevant to the siting of the various types of technologies are set out in paragraphs 22-50.

20. Efforts are being made to keep structure plans brief which means that they will not cover every issue in detail. However, areas of search should provide local plans with the framework necessary to allocate sites or to develop in a more specific way the general policies set out in the structure plan, even if there are several suitable locations. In addition to the considerations noted in paragraph 99 of NPPG 10, local plans are expected to consider compatibility with neighbouring land use.

21. It is the planning authority's responsibility to decide whether an area of search or site represents the best planning option for such need. The development plan should express site location in the following terms.

- If a range of possible areas or sites is available, a planning authority may want to keep development options open by identifying them – whether by name, geographical description or by criteria.
- If there is only one possibility, it should be identified clearly and safeguarded against inappropriate development that could compromise its potential. For example, if it is known that a particular facility is required to service a specified town; that such facilities are best sited in industrial estates; and there is only one industrial estate in the town; this leads to the conclusion that there is only one possible location.
- There may be a need to safeguard sites for the future development of waste management facilities. Such sites may have other potential uses which meet a local priority. It is for planning authorities to assess safeguarding priorities amongst competing uses, for example developments such as 'park and ride' or freight transfer facilities. Where it is concluded that land should be safeguarded for waste purposes, the development plan should indicate this.

### **Site Assessment**

22. The following sections provide advice on selected waste management developments in addition to the policy context contained in NPPG 10 (paragraphs 52-92). In general, the most appropriate locations will be those with the least adverse impacts on the local population and the environment. While there are clear advantages in combining facilities, the planning authority should consider the cumulative impact of co-location on the local community. All locations need to be considered against the principles of sustainable waste management. There are numerous factors which may influence the location of new waste management facilities. Taking account of the advice in paragraph

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21 above, potential locations for larger facilities may include the following examples.

- Industrial areas, especially those containing other heavy or specialised industrial uses;
- Degraded, contaminated or derelict land. Well-located, planned, designed and operated waste management facilities may provide good opportunities for remediating and enhancing sites which are damaged or otherwise of poor quality, or bringing derelict or degraded land back into productive uses;
- Working and worked out quarries. Landfill is commonly used in quarry restoration but there may be opportunities for other types of waste management facilities;
- Existing landfill sites where, for instance, Energy from Waste (EfW), materials reclamation or composting facilities may be conveniently located;
- Existing or redundant sites or buildings which could be used, or adapted for incineration or materials reclamation facilities, or composting operations;
- Sites previously occupied by other types of waste management facilities; and
- Other suitable sites located close to railways or water transport wharves, or major junctions in the road network.

23. Sites protected by national and regional policies on development restraint will not generally prove acceptable for waste management facilities. Attractive and open rural areas should normally be avoided for most types of facility. While former mineral workings may provide good opportunities for landfill, some may be in areas that are subject to natural heritage, landscape or amenity constraints. Some operators may have agreed after uses which provide environmental enhancement in the form of habitat creation that could be lost if overturned by waste management proposals. PAN 60: *Planning for Natural Heritage* gives advice on restoring mineral workings. In such cases, particular attention should be given to the design of final landforms, the mitigation of adverse impacts during the operational period and the long-term effects of landfill gas and leachate. The implications for air safety will also need to be addressed as waste sites may attract flocks of birds. The procedures in SDD Circular 16/1982, which ensure proper consideration is given to birdstrike hazards, were under review in late 2001. Revised guidance will be issued.

24. Waste management facilities can be developed acceptably close to developed areas. Accessible locations have the advantages of reducing traffic between areas of waste generation

and disposal and providing employment opportunities in or close to existing centres of population. As with all sites, full and continuous consultation with the local community is essential during consideration of proposals and, if approved, during the operational period. A liaison committee involving the planning authority, SEPA, the operator and the community may provide a useful channel of communication.

25. The following sections outline some of the issues about the facilities, processes and technologies that will be suggested for delivery through AWP's. It provides background information on the matters which planning authorities should consider in preparing development plan policies and in considering planning applications.

#### Waste Collection, Separation and Recycling Facilities

26. Accessible waste collection, separation and recycling facilities play an important part in establishing sustainable waste management. The planning system can assist in establishing an appropriate network, particularly for facilities in residential and retail areas and centres of industry. These facilities may range from small community schemes to traditional metal recycling, scrapyards and large multi-stream separation and materials reclamation facilities (MRFs).

27. Such sites often give rise to householder complaints about traffic, noise, dust and amenity. These impacts can be mitigated by careful location and site management and controlled by appropriate conditions, e.g. on operating hours and noise limits. Opportunities may also exist to recycle construction and demolition waste either close to where it arises with mobile crushing plant on site or at a permanent processing site.

28. Materials reclamation is an industrial process that involves the steady import and export of materials. For a MRF dealing with segregated materials, mixed or part sorted dry recyclables are sorted for onward transport to re-processing. The choice of technology and size of MRF will depend on the collection and segregation methods employed for the waste management option. Technology choice will vary according to numbers of material types being handled and levels of prior sorting and separation.

29. Plant can vary in size and technical sophistication from hand sorting to full mechanical separation. This could include the use of several small facilities handling only a few materials to large plants where a wide range of materials may be accepted and sorted. High separation levels can be achieved using the latest

technologies.

30. In contrast to MRFs, Mixed Waste Processing Facilities (MWPFs) deal with non-segregated wastes delivered for reclamation of recyclables by sorting. Residue can be landfilled or if it contains a high organic content, composted. Plants usually involve magnetic separation and mechanical sorting. MWPFs tend to be less efficient and produce lower quality recyclate than MRFs because feedstock is more contaminated. Technologies for MWPFs are likely to be more complex than for MRFs owing to the need for cleaning and greater sorting of mixed waste materials.

31. Existing waste management sites, other suitable previously developed land including degraded, contaminated or derelict land are likely to provide locations for MRFs and MWPFs. General industrial areas, subject to the nature of existing uses, will also be suitable and it will rarely be necessary to select locations with any degree of precision. It is possible that facilities will generate the potential for downstream manufacturing using the materials produced, so development plans may need to take account of this additional economic activity. Co-location with a landfill facility for residual disposal may prove acceptable provided that this does not unreasonably extend transporting distances for materials resource use, energy and travel. Building on these priorities, development plan policy should either indicate that such facilities are appropriate in all such areas or specify named sites.

#### Waste Transfer Stations

32. Waste transfer stations are necessary elements in waste stream handling. They may be distinct facilities, be located with other facilities such as MRFs and MWPFs, or be a part of an integrated facility. They require sites of sufficient size and accessibility to receive collected waste to transfer it to bulk transport for delivery by road, rail, or water. Industrial areas or existing waste management sites may offer suitable locations.

#### Civic Amenity Sites

33. Civic amenity (CA) sites are provided to householders free of charge for the collection of household waste and usually provide additional facilities for recyclables.

34. The opening hours at new sites should seek a compromise between easy access and the standard of local amenity, particularly in the evening and at weekends or during the summer

when the volume of garden and DIY waste increases. The standard of CA sites across authorities varies – from the provision of car park skips to fully serviced and staffed sites. The number which is adequate will be determined both by size of population and by geographical spread. The number of sites appropriate to a densely populated area might not be enough for an area where the settlements are more widespread. For example, Edinburgh has three, Glasgow has four, Renfrewshire has six and North Lanarkshire seven, whereas Aberdeenshire has eighteen sites. Partly, but not solely, as a consequence of the scarcity and opening hours of CA sites, fly tipping has become common in some places. Development plans should ensure that appropriate provision is made for sites to meet community needs.

### Composting Facilities

35. Composting may form a large part of the AWP's proposals for dealing with waste and may involve a significant amount of development. Some AWP's may include options to establish small scale, open air composting with others defining a need for a number of larger specialised plants to be brought forward through the development plan system. In 1998 approximately 22,500 tonnes of waste was composted in Scotland. This is set to increase with support by initiatives such as Remade [www.remade.org.uk/](http://www.remade.org.uk/). For example, Aberdeenshire Council alone currently composts in the region of 20,000 tonnes annually. There are numerous benefits of composting including:

- the application of matured organic material to fields;
- landscaping;
- landfill cover;
- peat replacement;
- soil improvement;
- reduced methane and leachate production in landfills; and
- removal of large quantities of materials from the waste stream.

36. Home composting of organic waste does not require planning permission. For commercial operations, developers will need to consult planning authorities for advice on whether planning permission is needed.

37. Commercial composting methods include open windrows where material is periodically turned to break it down, containment within short-life "pods" where high temperatures and moisture combine to mature the material and fully enclosed (so called in-vessel) systems with computer controlled processing. More advice and information can be sought from the Scottish Agricultural College [www.sac.ac.uk/](http://www.sac.ac.uk/) or the Composting

A number of composting best practice examples are available. The Scottish Compost Development Group (SCDG) helps co-ordinate this in association with the Composting Association. Further information on these schemes is available from [scdg@au.sac.ac.uk](mailto:scdg@au.sac.ac.uk).

SEPA is currently promoting indoor in-vessel or indoor windrow composting owing to the need to control carefully the process and climate effects.

Association [www.compost.org.uk/](http://www.compost.org.uk/). A small facility requiring only a suitably drained area for composting, a covered area for screening and storing materials and an area for loading can be relatively inconspicuous, especially where existing buildings are used. Where composting is to be undertaken primarily for agricultural purposes it may be appropriate to locate facilities on suitable farmland. Advice on siting and design in PAN 39: *Farm and Forestry Buildings* is relevant. Large scale facilities, however, require open areas and buildings which may be more visually intrusive, and will increase traffic in the vicinity. The use of compost made from food waste that contains meat or fish, or has come into contact with meat or fish, is currently prohibited from being spread on land. However, the relevant legislation, the Animal By-Products Order 1999, is expected to be amended in the latter part of 2002. The local authority department responsible for such matters will be able to advise when composting of such waste is permitted.

38. Composted material should be fit for the purpose for which it is to be used. The Composting Association's Standards for Composts include production criteria, compost quality requirements and product labelling. High quality composts are suitable for use in soil-forming applications, as soil improvers (mulching and conditioning) and as a constituent of growing media. If the composted waste is not fit for purpose or if it is being disposed of, then it is likely to be controlled waste and therefore will still be subject to control under waste legislation. If it is not controlled waste, then this legislation does not apply. It is suggested that the local SEPA office be contacted prior to the deposition of compost derived from waste and it may be necessary to undertake site specific risk assessments prior to its use.

39. Product quality and marketability will depend on both the input material (mixed household waste produces a lower grade product than green waste), the nature of the plant and degree of composting achieved. Developers may also be attracted to the possibility of reducing landfill tax liability by diverting material such as vegetable and food processing waste from landfill into composting. Where composting makes business sense it is likely to benefit not only the waste producer, carriers and users of the end products, but also local authorities.

#### Incinerators, with or without Energy Recovery

40. Incinerators range from small plants to large installations with energy recovery or combined heat and power plants. Not all proposals for incinerators are determined under the Town and

Country Planning (Scotland) Act 1997. Consents for incinerators, irrespective of the process technology, generating more than 50MW are determined by the Scottish Executive under section 36 of the Electricity Act 1989. Electricity Act consents are then deemed to have planning consent.

41. Planning authorities should note that the NWS does not consider incineration without pre-treatment and segregation prior to energy recovery as a viable waste management option. There is however a place for energy-from-waste (EfW) facilities when they represent the BPEO as part of an integrated waste management solution. In March 2002, SEPA expects to publish its guidelines on the use of Energy from Waste which will aim to set out a clear position on SEPA's view of the future role of energy from waste technologies in Scotland and describes the limitation of mixed waste incineration. Development plans should make clear that there will be a presumption against applications for energy from waste facilities treating unsorted wastes or incineration without energy recovery. Large facilities may be conspicuous because of the necessary size of the chimney stack and associated buildings. They will usually generate substantial heavy goods vehicle movements.

42. Incinerators close to existing built-up areas can provide energy for heating community and business premises. Combined heat and power schemes enable the total energy efficiency of the process to be higher than that of an incinerator which is generating only power. Such schemes are particularly suitable in locations where there are premises nearby with a long-term demand for heat.

43. All incineration and energy from waste options are waste reduction rather than disposal processes and will require disposal of residues – either to landfill (incinerator fly ash will have to go to a hazardous waste landfill) or for other purposes such as road construction.

44. Sites for energy from waste facilities should be sought only on land that is located within permitted or allocated waste management sites or on other suitable previously developed land including degraded, contaminated or derelict land. Subject to the nature of existing uses, general industrial sites may also be suitable. In addition to complying with other development plan policies for transport, amenity and environmental impact, policies should encourage proposals that;

- include the maximum efficient capture of energy including heat and, where feasible, provide heating for local use;

“Permitted” sites are those which have the benefit of planning permission, whilst “allocated” sites means sites identified or allocated on the development plan for a particular purpose.

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- are part of an integrated network of waste management facilities for the area that do not undermine the ability of higher levels of the waste hierarchy to be achieved; and
- have regard to SEPA guidelines on Energy from Waste when published.

### Other Waste to Energy Facilities

45. Other options include:

- pyrolysis;
- enriched oxygen incineration;
- gasification,
- plasma based systems; and
- anaerobic waste digestion.

46. Further information on these technologies, which are still under development, can be found in the Glossary. If proposals come forward based on these methods, careful attention should be paid to the likely environmental implications. Planning authorities may look to SEPA for such information.

### Landfill and Landraising

*Under the Directive, landfills for hazardous waste can only take hazardous waste landfills for non-hazardous waste can only take municipal waste, non-hazardous waste plus, only in separate cells, certain stable non-reactive hazardous wastes landfills for inert waste can only take inert waste.*

47. Landfill has been the traditional disposal option for waste and used large areas of land. Although landfill will continue to be needed, the EU Landfill Directive diversion targets will minimise the use of landfill. Landfill has commonly dealt with a wide range of wastes. From July 2002, all landfill sites require to be classified by SEPA as hazardous, non hazardous or inert. Where appropriate, landfill sites can provide a relatively clean fuel source (methane) for heat and power generation. Landfill in former mineral sites may be a useful way to restore such sites economically.

48. NPPG 10 (paragraphs 79-80) provides guidance on land raising. It takes place in two main ways: either on sites not previously used for waste management; or as additional material topping a landfill's previously agreed levels. Land raising operations may be conspicuous from surrounding areas if not carefully designed.

49. Land raising proposals are likely to be brought forward to manage only significant levels of waste in a well-engineered way. Land raising takes no special place in the waste management regime and proposals can be decided on their merits. Early consultation with SEPA is encouraged.

The terms 'active' and 'inactive' are used by Customs and Excise. They are definitions for landfill tax purposes and are occasionally used though they have no standing in environmental (waste management) legislation.

50. Organic materials can give rise to leachates and landfill gas which have in the past, respectively, escaped into ground and surface water, or into the air or buildings. Inert waste materials can also give rise to dust and water pollution. However, waste management licence conditions guard against adverse environmental effects. SEPA's environmental licences are drafted so that "relevant objectives" (see Glossary) are taken into account. Some inert waste can usefully be recycled as aggregate. Beneficial uses of inert materials range from site reclamation; use as cover material for waste; in site engineering and their potential to replace primary aggregates.

### **Waste Management Aspects of Planning Other Developments**

51. Attention needs to be given to the design and layout of developments to provide space for the management of waste generated by use of the new development. This is primarily relevant in the housing, retail, leisure, business and industrial sectors. Further information can be found in paragraphs 80–83.

52. Efficient use of resources in construction is important. Development plan policies should encourage developers to avoid waste and to re-use and recycle waste generated during the demolition and construction phases. SEPA's Priority Waste Stream Project on construction and demolition waste will provide improved data collection, advice on best practice and the availability of end markets. Through the planning system, there may be the opportunity for local authorities to provide data to SEPA on construction and demolition waste arisings through demolition and disposal to sites exempt from a waste management licence.

## **Development Control**

### **Policy Framework for the Provision of Waste Management Facilities**

53. Sections 25 and 37(2) of the Town and Country Planning (Scotland) Act 1997 require that planning authorities determine planning applications in accordance with the development plan unless material considerations indicate otherwise. Consequently, there should be a presumption in favour of proposals for waste management development that are consistent with the development plan. Further procedural information can be found in paragraphs 42-65 of NPPG 1.

54. SEPA, as a statutory consultee, plays a particularly important

part in providing the necessary advice prior to determination. The following sections give further details on considerations to be applied by planning authorities to planning applications for waste management facilities.

### **Determining Planning Applications**

55. In site selection, the development plan should either have identified specific sites, or made clear the preferred categories of sites or criteria based policies to give clear guidance on where potential waste management sites are likely to be acceptable. The same considerations used in forming development plan policies on site selection should be applied to development control decisions.

56. Good practice in determining planning applications and good practice for councillors can be found in PAN 40: *Development Control*. It may be appropriate to arrange planning committee members' site visits in order to acquaint them with waste management proposals. Where a new technology or a more rigorous approach to the environmental management of a waste facility is proposed, a visit to a site which is already in operation is advisable. Councillors should be alert to probity issues regarding site visits e.g. any dual role of the local authority as developer and planning authority, aware of their council's policy on site visits and of the current advice to councillors on conduct in planning. Training for councillors is referred to in paragraph 98.

### **Compliance with the National Waste Strategy and Area Waste Plan**

57. If an AWP is not yet available for the area, or if the proposal relates to a waste stream not covered by the AWP, the NWS is a material consideration. The planning authority will need to consider whether the development is of a scale or nature that meets longer term development plan objectives as well as those set out in emerging AWPs. Until the AWP is completed the planning authority should have regard to the AWP's draft recommendations.

58. Where an AWP indicates a requirement for a facility not foreseen by the existing development plan or where an AWP post-dates the development plan the planning authority should have regard to the AWP's final policies.

59. In any event, the planning authority should consider whether the proposal conforms with the development plan, or would be

an acceptable departure from policy in light of the NWS and AWP, or that the developer has demonstrated that an exception to policy should be made.

**SEPA Waste Data Digest** is available at [http://www.sepa.org.uk/nws/guidance/nws/nws\\_data\\_digest.htm](http://www.sepa.org.uk/nws/guidance/nws/nws_data_digest.htm).

60. As well as referring to the NWS, planning authorities may wish to view the SEPA Waste Data Digest. This provides national data on most waste streams and could also provide an indication of need for facilities. Early discussions with the local SEPA waste strategy co-ordinator may also be beneficial and are encouraged.

61. Compliance with guidance from SEPA on the scale and nature of waste processing facilities required to meet the Landfill Directive or other specified targets, will also be a material consideration in determining planning applications. Wherever possible, consideration should be given to providing a range of waste treatment facilities at a single location, subject to the cumulative effect of the development.

### **Environmental Protection**

62. Planning applications for waste management facilities may raise a number of sensitive issues, including;

- environmental and residential amenity including the control of odour, dust, noise, vermin, birds and litter;
- visual impact; including the ultimate landform of landfilling or land raising operations;
- operational lifetime of the site and hours of operation;
- site access and traffic movements;
- compatibility with green belt policy;
- the effect on natural heritage or built and cultural heritage;
- the types of waste to be deposited or treated and the proposed method of disposal or treatment;
- the potential for flooding; and
- in the case of landfilling, restoration and aftercare proposals for the site and the timescale of the site being available for the long term future use.

### Airborne Pollution

Further information is available in Planning Advice Note 51: *Planning and Environmental Protection*.

63. In deciding whether to license a proposed development, SEPA will consider whether, for example, emissions comply with industry standards. However, the planning authority, in considering a planning application, may need to apply additional land-use considerations in relation to compatibility with neighbouring land use.

64. Waste management facilities potentially produce unpleasant

odours and other airborne pollution. Good practice requirements are normally included in the terms of waste licences. Air quality can be a material planning consideration as well as a pollution control issue. The nature of any emission, including particulates and gases, will depend on the type of waste management facility and can be minimised through the use of appropriate, well-maintained and managed premises, equipment and vehicles.

65. Dust emissions can be controlled, for instance, by damping down exposed areas, adequately covering deposited waste in landfill sites and by fitting suitable suppression equipment on the air outflows from buildings or incinerators. Control of these detailed operational matters is more appropriate to the site license. However, it may be appropriate to impose a planning condition, requiring waste operators to prepare a scheme, or to indicate what measures will be undertaken, to suppress dust on a site. Care must be taken, however, that any planning condition does not duplicate a condition appropriate to a waste licence. Consideration of proposals for waste management facilities should take account of whether:

- adequate means of controlling dust, litter, odours and other emissions are incorporated into the planning application;
- appropriate planning conditions are used to minimise potential litter problems, where they are not already dealt with by waste licensing.

66. Applicants should demonstrate that:

- the development includes construction practices to minimise the use of raw materials and maximise the use of secondary aggregates and recycled or renewable materials;
- waste material generated by the proposal is reduced and re-used or recycled where appropriate on site (for example in landscaping without excessive earth moulding and mounding).

#### Protection of Water Resources

67. Planning authorities should consult SEPA and Scottish Natural Heritage as required under the Town and Country Planning (General Development Procedure) (Scotland) Order 1992, seeking advice in particular on:

- potential impact on the water environment, including groundwater and coastal waters;
- risk of flooding and the potential for water pollution;
- loss of functional flood plain; and

The Water Framework Directive (2000/42/EC) came into force in December 2000. It aims to promote the sustainable management of the water environment through River Basin Management Planning and balanced controls on all human impacts having a harmful effect on the aquatic environment. The Executive plans to introduce legislation into the Scottish Parliament to transpose the Directive in 2002. Consultation has already started and will continue in 2002.

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- impact on the nature conservation and amenity value of rivers and wetlands.

### Environmental Impact Assessment

Applications for generating stations of over 50MW are determined by the Scottish Ministers under the Electricity Act 1989.

68. Proposals for waste management facilities, depending on their size and nature are determined under either the Town and Country Planning (Scotland) Act 1997, or where the facility is a generating station over 50MW, under section 36 of the Electricity Act 1989. Different Environmental Impact Assessment (EIA) regulations apply.

The Strategic Environmental Assessment Directive (2001/42/EC) must be implemented by July 2004. It requires an environmental assessment and public consultation for certain strategic plans and programmes required by legislative, regulatory or administrative provisions that set the framework for future development consent. Implementation will take some time to develop and there will be consultation during 2002.

69. The provisions covering the planning system are to be found in the Environmental Impact Assessment (Scotland) Regulations 1999. Under the Electricity Act 1989, the relevant EIA Regulations are The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000. Further information is available in *Guidance on the Electricity Works (Assessment of Environmental Effects) (Scotland) Regulations 2000*.

70. There may be circumstances in which development proposals for waste management facilities will fall within at least one of the categories identified in either Schedule 1 or 2 of the 1999 Regulations. Further guidance on EIA is given in SEDD Circular 15/1999 and PAN 58: *Environmental Impact Assessment*. EIA is mandatory for all projects in Schedule 1. A Schedule 2 development (which meets the statutory threshold or criteria) must be screened to establish if it is likely to have significant environmental effects. If this proves to be the case then EIA is required.

71. Many issues covered by waste licensing or integrated pollution control authorisation procedures will also be within the scope of any environmental impact assessments undertaken in support of planning applications. In such cases it should not be assumed that because a licence or an authorisation is required for a particular activity, the activity can be excluded from the scope of an EIA. EIAs must cover the significant environmental effects of a development project, including those related to potential accidents, and an outline of the main alternatives studied and the reasons for the choice.

72. Developers may undertake studies to fulfil both the objectives of the environmental impact assessment and licence or authorisation applications. Developers should be encouraged to use the environmental statement to provide all the technical information required for all the various permissions and licences; not only planning permission.

73. When a planning authority decides that statutory EIA is not required, it is still open to it to use its powers under Article 13 of the General Development Procedure Order to request additional environmental information. In such circumstances, the list of topics included in Schedule 3 to the 1999 EIA Regulations may provide a useful guide.

### **Transport**

74. Transport by road is the most common, though not necessarily the most desirable, means of carrying waste to management facilities. Locations need to be considered against the principles of sustainable waste management (see Annex for further information). There may be significant planning, environmental, operational and economic advantages when:

- waste management facilities can be located close to where the wastes arise;
- different types of waste management facilities can be located close together or co-located on one site;
- rail or water transport can be used instead of road vehicles (see paragraph 43 of NPPG 17: *Transport and Planning*); or
- use is made, as far as possible, of the major road and motorway network rather than local roads, for bulk waste movement.

75. Where the only viable option is road transport, safe access is essential. Traffic can be a major source of local disturbance and is likely to be a significant amenity and environmental issue for consideration by the planning authority. Ideally there should be direct local access to a new plant from roads of an adequate standard. Co-locating waste management facilities can reduce the total volume of traffic but the cumulative transport impacts must be considered.

76. Development proposals should also aim to demonstrate that:

- they are well located within the waste collection network or served by a rail siding or wharf in order to maximise accessibility and use by modes of transport other than by road;
- the level of traffic generated would not exceed the capacity of the local road network or, any adverse impacts that would arise from the proposal can be satisfactorily mitigated by road improvements;
- there is adequate space for on-site vehicle manoeuvring, parking and loading/unloading areas.

77. Opportunities for using other forms of transport should be encouraged by planning authorities. Alternatives include using or adapting existing railheads, making new connections to the rail network, or developing existing ports and, marine, river or canal-side wharves.

78. Planning authorities should be aware of the Freight Facilities Grant scheme – designed to help pay for the capital costs of freight handling facilities used exclusively by rail and waterborne transport. The Executive is planning to extend the existing scheme to include coastal and short sea shipping routes. In the case of rail, the Track Access Grant (TAG) scheme helps to defray the costs to freight operators of access to the rail network. The Scottish Executive administers both grant schemes.

79. It is recommended that early discussion of proposals takes place with:

- local authority roads and transport departments;
- the Scottish Executive's Road Network Management and Maintenance Division where trunk roads are likely to be involved in significant traffic movements;
- the Scottish Executive on Freight Facilities or Track Access Grants.

### **Design**

80. Generally, operators will be looking for a cost-effective and utilitarian design that is fit for purpose. The reuse of existing buildings should be encouraged where possible. In the case of new buildings, innovative design may be possible. In many cases a modestly scaled design that breaks up the bulk of the building or blends in with the background may be more appropriate. The design, siting, layout and external appearance of proposals should:

- be accessible and well lit;
- complement the existing site topography and natural cover;
- use materials and colouring appropriate to the location; and
- incorporate landscaping as an integral part of the development.

81. Attention should be paid to the scale and location of the development to mitigate adverse visual effects on adjoining land uses. Some facilities have features in common with farm buildings. In those cases, PAN 39: *Farm and Forestry Buildings* may provide useful pointers.

82. At supermarkets and car parks, the use of waste collection and mini-recycling facilities can be increased by improved signposting and location in places that do not impede natural surveillance or involve extra effort. Many new residential layout designs have yet to overcome the shortcomings of poor waste management provision. When considering an integrated approach to waste management in line with the NWS, AWP's and council waste collection policy, good design aspects of waste management should be promoted.

#### Design Aspects of Other Developments

83. New building design and layout is crucial to effective waste management. Specific provision should be made for space to allow for the separation and collection of waste, consistent with the type of development in question, whether a housing development, business park, retail and leisure centre or industrial plant. Developers should be encouraged to provide space in their proposed developments to accommodate;

- provision within the premises for facilities to separate and store different types of waste at source;
- kerbside collection (special care will need to be given to development in conservation areas); and
- centralised facilities for the public to deposit waste for recycling or recovery ("bring systems").

#### **Public Attitudes to Perceived Health Effects**

84. A vital objective for any proposed development will be to ensure that it does not pose an unacceptable risk to public health and safety. In the case of waste management facilities, health concerns might relate to possible hazardous materials and to emissions. Safety concerns might include the effects of the proposed development through increased road traffic.

85. In terms of site emissions the principal public concerns normally relate to landfill sites and incinerators, both of which are subject to licensing by SEPA under the Pollution Prevention and Control (PPC) (Scotland) Regulations 2000. SEPA's consideration of whether to grant such a licence will include the possible effects of the proposed development on both public health and the environment. Under those regulations, SEPA's responsibility for consideration of public health concerns is supported by "statutory consultees" including the local authorities, the Health and Safety Executive and the local NHS Board. Planning authorities should therefore accept that PPC licensing, where applicable, is adequate

and suitable for public health protection. However, it is important to recognise that PPC licensing does not address public safety and that this aspect of the proposed development is an issue for consideration by the planning authority.

86. By influencing the location of proposed developments, planning authorities have a role in addressing public concerns. Sensitive siting and design can help to allay public concerns about health. Operators should be asked to provide, with their applications, evidence that consideration has been given to siting and design options.

### **Hours of Use**

87. Small collection centres for recyclables in supermarket or local authority car parks are unlikely to have any restrictions on their opening times apart from those associated with the primary purpose of the site. However for other waste management facilities, the planning authority may wish to specify opening times that protect local amenity but provide sufficient flexibility to meet the anticipated pattern of use. It is important that hours of operation allow for prompt emptying to avoid the public being unable to deposit waste due to lack of storage capacity. This should help to reduce fly tipping around the site by people unable to deposit their waste in the containers provided.

88. The planning authority should aim to offset local amenity issues with the operational needs of facilities and should not unreasonably restrict opening hours. For example, the planning authority may need to recognise that civic amenity sites are only the public end of a disposal chain that may include the transport of waste to a landfill site. The opening hours for landfill and civic amenity sites should recognise that summer evenings and weekends are the times preferred by the public. As with small collection centres, it is important that the hours of operation at civic amenity sites allow for prompt emptying for the same reasons.

### **Planning and Licensing Conditions**

89. The successful control of waste management facilities depends in part upon implementing and monitoring conditions in the planning consent or the waste management licence. Planning authorities should follow the guidance in Circular 4/1998: *The Use of Conditions in Planning Permissions* and its addendum. In particular the reasons for applying conditions should be specific and precise in order that, when necessary, they can be successfully enforced.

90. Planning authorities should not impose planning conditions on issues that are more suitably dealt with by waste management licensing conditions. For example:

- A surety or restoration bond is an indemnity bought by operators from an insurance company. The purpose of a bond is to ensure that there is a guarantee against the failure of an operator or contractor to comply with the conditions of a planning consent or licensing condition. With regard to planning consents, the beneficiary is, in effect, the planning authority, protected against the costs of restoration in the event of the operator's failure. The need for such a bond is likely to be covered by SEPA's licensing. Should the planning authority consider the use of a surety bond then, to avoid duplication, a check should be made with the SEPA PPC team dealing with the licensing application. In all cases where the planning authority considers it is necessary to obtain such a bond, it is advisable that the council's legal services department is involved at an early stage in any negotiations.
- In the interests of local amenity, planning authorities may want to control the cleaning of commercial vehicles leaving the site in order to prevent mud or waste material being deposited on public roads. The waste management licence issued by SEPA will often cover this and the planning authority should check to avoid duplication. A condition requiring that vehicles moving on to the public highway should be clean should normally be sufficient but conditions may also be required for wheel cleansing equipment.

91. A *Good practice guide on planning conditions for waste management facilities* was published by the former County Planning Officers' Society in 1997. This guide provides model conditions that can be tailored to the character of the site in question. Requests for copies, priced £10, should be addressed: For the attention of Planning Officers' Society, c/o Environmental Services Directorate, Dorset County Council, County Hall, Dorchester DT1 1XJ (Tel (01305) 224243).

### **Planning Agreements**

92. NPPG 1 and Circular 12/1996: *The Town and Country Planning (Scotland) Act 1972 Planning Agreements* explain that conditions (including, where appropriate, suspensive conditions) rather than agreements should be relied upon if possible. Nevertheless, planning agreements may have a role to play.

93. Where the planning authority enter into planning agreements

with waste operators to mitigate the impacts of waste and waste development, the authority should not use an applicant's need for planning permission to obtain a benefit which is unrelated in nature, scale or kind to the proposed development. The presence or absence of unrelated inducements or benefits should not influence the planning authority's decision (paragraph 53 of NPPG 1).

### **Landfill Tax**

94. The landfill tax credit scheme is regulated by ENTRUST. Project selection is administered by landfill operators and environmental bodies. The Government has set an indicative target of 65% of landfill tax credits to be allocated to sustainable waste management projects and for at least a third of these to be allocated to recycling projects. Planning authorities should note that occasionally, funds may be directed to projects that require planning consent. They should demonstrate:

- a clear public benefit;
- attain environmental improvements;
- protect public amenities;
- restoration of category A and B listed buildings, or
- habitat improvement.

95. The landfill tax credit scheme is inappropriate for projects involving work required by:

- general duties of a local authority;
- an enforcement notice;
- planning consent;
- any other statutory consent or approval (e.g. a waste management licence);
- a section 75 agreement.

96. Further information is available from:

- Customs and Excise National Advice Service Tel: 0845 010 9000;
- ENTRUST, Mirren Court 3, 123 Renfrew Road, Paisley PA3 4EA (Tel 0141 561 0390), [www.entrust.org.uk](http://www.entrust.org.uk) or
- the Scottish Landfill Tax Credit Forum at [www.sltaf.org.uk](http://www.sltaf.org.uk).

### **Education**

97. The new approach to waste management is a process of change and needs to be supported by information and education

**Information on waste management**  
- City of Edinburgh Council's Catalogue of Education Resources with information on waste management workshops and visits for schools and businesses is available at [www.edinburgh.gov.uk/](http://www.edinburgh.gov.uk/).

**Good Educational Practice**

**East Dumbartonshire Council** has produced a leaflet to support its initiative with SEPA and Strathclyde Police to crack down on fly tipping.

**South Ayrshire Council's** website gives details of recycling centres at: <http://www.south-ayrshire.gov.uk/protction/recycla2.pdf>.

**West Lothian Council** has set up 'Bung it in the Bin', designed to encourage a zero tolerance approach to litter.

from a wide range of sources leading to a change in behaviour. Education embraces the availability of information, debate, research and experience. Behaviour modification is needed to reduce waste and encourage more reuse and collection for recycling – education is a means to that end. Waste management is still an emerging discipline and is frequently misrepresented. Learning is for everybody – from officials and councillors to practitioners and the public including schoolchildren.

98. The Executive, along with COSLA, SSDP and RTPI, has published a guide to training in planning for councillors. The training is designed to be modular. After core training, further topics, including AWP's are mentioned and planning officials could provide further training where waste management is a live issue.

99. SEPA is promoting education priorities on awareness of recycling, resource use, the consumer's role and environmental issues relating to waste. The Sustainable Scotland website at [www.sustainable.scotland.gov.uk/](http://www.sustainable.scotland.gov.uk/) is a useful information source and contains links to waste topics. The Scottish Waste Awareness Group (SWAG) is a Scotland-wide group whose aim is to deliver a national campaign called 'Waste Aware Scotland' [www.wascot.org.uk](http://www.wascot.org.uk) to raise public awareness of household waste issues. It is closely linked to the objectives of the NWS and has cross-sectoral support. SWAG's objectives are to:

- influence what people can do to reduce waste in the home;
- increase public awareness of and encourage positive action for waste generation and management;
- raise the profile of waste as an environmental priority;
- increase the level of personal responsibility for waste;
- promote the three Rs – Reduce, Reuse, Recycle - with an emphasis on Reduce; and
- create better understanding and recognition of the need for waste management facilities of all kinds.

100. Remade [www.remade.org.uk](http://www.remade.org.uk) and Forward Scotland [www.forward-scotland.org.uk/](http://www.forward-scotland.org.uk/) and Keep Scotland Beautiful are examples of other outreach agencies whose staff are keen to inform and educate. Some councils have embarked on hearts and minds initiatives in waste collection, fly tipping and litter "zero tolerance". Information and education will be crucial in allowing all of us to make the decisions necessary to move away from a culture reliant primarily on disposal.

101. The waste industry also needs to be well informed to ensure that a facility is a 'good neighbour'. Existing operations need not

**Douglas Good  
Neighbour Charter**

In May 2000, the UK's first Good Neighbour Charter was signed by a local councillor, community representatives, and the Chair of the Board of Dundee Energy Recycling Ltd who operate the waste incinerator at Baldovie. Further information on these agreements is available from Friends of the Earth.

be viewed with suspicion if they are well run. A well run site is about the experience of people who live nearby as well as how it is planned and operated. A liaison committee between the planning authority, SEPA, the operator and community councils can be a useful way of involving local residents. Friends of the Earth's Good Neighbour Agreements aim to improve relationships between industries and neighbouring communities. Companies agree to meet high environmental standards, and receive the support of their local communities.

102. New development proposals are usually mistrusted and need to be handled carefully. The planned approach advocated in NPPG 10, this PAN, the NWS and its AWP's allows the public to have a say in how waste which is created in communities by industry, commerce and households should be managed. While speculative proposals cannot be ruled out and must be treated on their merits, those that fit with emerging AWP policy are more likely to receive consent. Council officers should take action to promote education in waste management. Councils and industry can provide information about waste management proposals through statutory advertisement, exhibitions, or public meetings. Planning authorities may want to consider informing the public about policy through news items, peoples' forums, citizens' juries, community councils, or other means. The use of council websites may also provide a forum for information and feedback.

## Conclusion

103. Planning authorities can play a key role in supporting the move from a culture of disposal to one of reducing, reusing and recycling waste. However, the challenge to improve our record in waste management rests not only with planning authorities but with everyone. SEPA is the waste regulation authority and its aims are set out in the NWS. As a guide to development, AWP's will set the scene in implementing SEPA's strategy for the foreseeable future. This PAN aims to raise awareness of the issues. It sets out our obligations, ideas on good practice, the justification for planning policies and the links and commitments to other initiatives to provide the sites necessary for new methods of waste management.

## Enquiries

104. Enquiries about the content of this advice note should be addressed to Graham Marchbank (0131 244 7525, [graham.marchbank@scotland.gsi.gov.uk](mailto:graham.marchbank@scotland.gsi.gov.uk)). Copies and a list of current NPPGs and planning circulars can be obtained by telephoning 0131 244 7066. Planning Advice Notes can be obtained by telephoning 0131 244 7543.

## Annex

# Principles of Sustainable Waste Management

1. Taking into account the various drivers for change, the following key principles should inform all decisions on future waste management infrastructure;

- sustainability;
- self sufficiency and the proximity principle;
- the waste hierarchy;
- Best Practicable Environmental Option (BPEO).

The updated descriptions given in the PAN supersede those found in NPPG 10.

2. These key principles should be used to assess the benefits and potential dis-benefits of applications to develop waste management facilities. A brief outline of each of these principles is given below. SEPA Waste Strategy Area Co-ordinators should be contacted for more detailed guidance if necessary.

### **Sustainability**

3. The Scottish Executive is committed to working together for sustainable development. The majority of policy areas impacting on sustainable development are devolved to the Scottish Executive, reserved areas are covered by the UK Government strategy, *Sustainable Development – A Better Quality of Life*. The particular ways that the planning system can encourage sustainable development are outlined in paragraphs 6 - 7 of NPPG 1.

4. The concept of sustainable development can be defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." While this captures the inter-generational nature of "sustainable development" it can be too nebulous to allow policy-makers to focus on the progress they need to make. The Scottish Executive has therefore adopted priority areas in order to focus action on sustainable development. The Executive will publish a clear statement on what the Executive means by sustainable development and how it will work towards greater sustainability.

### **Self Sufficiency and the Proximity Principle**

See paragraph 33 of NPPG 10 for further information.

5. The concept of regional self-sufficiency for waste management purposes is established in NPPG 10 which states that providing a local waste management network, structure plan areas should generally seek to provide sufficient facilities for managing local waste. To serve common needs, the NPPG recognises that provision in a neighbouring area may be closer to the waste source and thus more compliant with the proximity principle.

6. The proximity principle advocates that all waste should be disposed of, or otherwise managed, as close as practicable to the point at which it is generated. The main reasons for this are that:

- it is more likely to accord with the principles of sustainable development by avoiding environmental damage caused by transporting waste over a long distance;
- it encourages all those who create waste to take more responsibility and consider carefully the effects of managing the waste they create;
- it may assist the local economy; and
- overall costs should be lower.

7. Adherence to the proximity principle may be difficult where there is an inadequate range or distribution of facilities close to where the waste is generated. In some circumstances the movement of waste by alternative modes to road e.g. rail, canal or sea, could involve longer journeys but might nevertheless represent the BPEO. Special waste may require facilities outwith the area.

### **The Waste Hierarchy**

8. The waste hierarchy represents a ranking of different waste management options, giving a broad indication of their relative environmental benefits and dis-benefits. The hierarchy is a constantly evolving theoretical framework that acts as a guide to waste management options that should be used when assessing BPEO. Waste avoidance is invariably the best option economically and for the environment. Although this is not specifically a land use planning consideration, proposals which fulfil the higher elements of the hierarchy should be favoured over those focused towards the lower range.

### **Best Practicable Environmental Option**

9. Best Practicable Environmental Option (BPEO) is a key concept

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for the Area Waste Plan. The environmental impacts of different options could vary widely and the application of the BPEO will assist in determining the most sustainable method of waste management in a specific instance.

10. SEPA Life Cycle Assessment (LCA) will aid in determining the BPEO in the context of AWP. This assessment will look at the environmental effects of waste management “from cradle to grave” using WISARD (Waste – Integrated Systems Assessment for Recovery and Disposal) LCA software. WISARD is an important tool in determining the environmental impact of certain waste management systems. Further information on its use is available from SEPA Waste Strategy Area Co-ordinators.

11. BPEO assessment will also be necessary for waste streams not covered by AWP. This may be carried out at a development planning stage but is more likely to be undertaken in the context of development proposals. WISARD or other comparable tools should be used to assess the suitability of the proposal. The methodology for any such assessment should be agreed by the developer, the planning authority and SEPA.

### **National Decision Criteria**

12. In addition to the use of a tool such as WISARD LCA and feedback from consultation documents, AWP will apply the following National Decision Criteria to the determination of the BPEO.

### **Environmental**

Air, Land and Aquatic Environment: How much pollution would be released to air, soil and water under each option?

Global Climate Change: What will be the net release of gases such as carbon dioxide and methane which contribute to global climate change under each option?

Non-Renewable Resource Use: How much finite resources such as fossil fuels and mineral reserves will each option consume and will the option improve resource use in the economy?

### **Economic**

Cost: What are the total costs of waste management under each option?

Financeability/Affordability: Can we afford the option? How will

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it be funded e.g. will private industry provide the waste facilities and services envisaged or will the option require public spending? Will it involve up-front capital investment or longer term operating costs?

Impact on Local Economy: What positive or negative effects will each option have on the local economy due to waste management related activities?

### **Social**

Employment: What effect will the option have on the type, numbers, quality and distribution of jobs in waste management including recycling? What will be the effect on local employment levels?

Making Producers Responsible: Does the option encourage waste producers to take responsibility for their own waste? (This of course raises questions about who is the producer? For example is it the householder who discards waste packaging or is it the manufacturer or retailer who packaged the goods in the first place?)

Public Acceptability: Is the option likely to meet with the public's approval?

Skills Base: What effect will the option have on the provision and quality of training and on the quality and diversity of skills in the workforce?

Social Implications (poverty, exclusion and access): What effects will the option have on the welfare of local people, for example, access to goods and services such as refurbished household equipment?

### **Practicality**

Flexibility: Does the option allow for possible new demands on or opportunities for waste management arrangements e.g. the need to collect additional material for recycling due to population growth, the emergence of new waste management technologies?

Making Best Use of Existing Facilities and Expertise: Does the option make effective use of existing waste management sites, facilities and resources?

Practical Deliverability: Is there a risk that the things needed to make the option work will not actually happen?

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Technical Feasibility: What level of risk is associated with the technologies involved e.g. because they are untried?

### **Compliance with Other Policy**

Compliance with Other Policies: Does the option support or conflict with other areas of European, national or local policy e.g. in planning, energy and economic development?

# Glossary

The descriptions given below are for general information only. These are not legal definitions.

**Anaerobic waste digestion** – Involves the natural biodegradation of waste material in the absence of oxygen. The process produces methane gas which can be used for generating heat and energy. It also produces a compost like substance which can in some cases be used as a soil amendment.

**Biodegradable waste** – Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard.

**BPEO** - The Best Practicable Environmental Option. This is arrived at by a 'systematic consultative and decision-making procedure which emphasises the protection and conservation of the environment across land, air and water' (Royal Commission on Environmental Protection 12th report, Best Practicable Environmental Option, HMSO, 1988).

**Bring System** – System where facilities for recyclables such as bottle, paper and textile banks often located at supermarkets are used by the public.

**Civic Amenity Site** – A civic amenity site is a site provided under section 1 of the Refuse Disposal Amenity Act 1978 for the collection of bulky household waste, often with recycling points where householders may dispose of waste free of charge.

**Compost** – organic matter decomposed aerobically or anaerobically and used as a fertiliser or soil conditioner.

**Construction/Demolition Waste** – Waste arising from the demolition or construction of buildings or other civil engineering structure which may include masonry, rubble, wood, plastic and metal offcuts, as well as waste glass and plastic sheeting.

**EC Framework Directive on waste** - (75/442/EEC as amended by 91/156/EC) sets out a number of objectives and principles relating to the provision of waste disposal and treatment facilities.

**EC Landfill Directive** - (99/31/EC), amongst other things, establishes targets for reducing the quantity of biodegradable municipal waste which can be landfilled.

**Enriched oxygen incineration** - This process injects pure oxygen into the reactor vessel of a specially designed incineration plant. This significantly raises the combustion temperature to up to 2000°C thus reducing the risk of releasing potentially harmful emissions.

**Gasification** - Involves heating wastes in a low-oxygen environment to produce a gas with a low energy content. The gas can be burned in a turbine or engine in a way similar to pyrolysis below.

**Groundwater** - water that forms the part of the natural water cycle which is present within underground strata (aquifers) and which may provide a substantial part of the water supply.

**Incineration** – the burning of waste at high temperatures. This results in a reduction in bulk and may involve energy reclamation.

**Inert waste** – Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.

**IPC – Integrated Pollution Control**; a general requirement for authorisations under Part 1 of the Environmental Protection Act 1990 to prevent, or if that is not possible, minimise the release of prescribed substances and to render harmless any substances that might be released from certain processes including waste disposal and recycling, as set out by the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

**Landfill gas** - The end product of degradation of biodegradable wastes in a landfill site. Typically it is a mixture of up to 65% methane and 35% carbon dioxide plus trace concentrations of a range of organic gases and vapours. Methane is flammable at concentrations between 5% and 15% by volume in air.

**Landfill Tax** - A tax that applies to active and inert waste, disposed at a licensed landfill.

**Land raising** - the deposit of waste on and above the existing

contours of the ground.

**Leachate** - Liquid that seeps through a landfill and by so doing extracts substances from the deposited waste.

**MRF** – Materials Reclamation Facility: Similar to a MWPF (see below), however a MRF is a building into which segregated dry recyclable materials are delivered for sorting by type before reprocessing.

**MWPF** – Mixed Waste Processing Facility: A building into which unsorted, mixed household waste is delivered for sorting of dry recyclable products from wet biodegradable materials prior to reprocessing and disposal of the non recyclable materials.

**Plasma based systems** – Whilst very new and still largely experimental, these systems generate plasma fields in excess of 5000°C which denature waste material. This approach could have significant potential for wastes which are difficult to treat through standard processes.

**Priority Waste Stream Projects** – have been identified by SEPA for study at the national level due to their volume, hazardous nature, potential for recycling or their potential to create an economic benefit. Each study will aim to determine the size of the waste stream, current management practices, source of the arisings, barriers to re-use / recovery, ability to sustain markets, and to establish recovery methods and set targets. The results of the first three projects will be reported in 2002.

**Pyrolysis** - Involves heating waste in the absence of oxygen at temperatures of 400-800°C. The heat alone breaks down complex molecules and the resultant gases are then passed into a combustion chamber where they are burned (in the presence of oxygen) at temperatures around 1250°C.

**Recovery** – the reclamation, collection and separation of waste materials from the waste stream.

**Recycling** - defined in Waste Management Paper 28 as the "collection and separation of materials from waste and the subsequent processing to produce marketable products". Recycling does not include the sale of second-hand books or clothes, the use of returnable or refillable bottles or containers or by-products of waste treatment or disposal such as landfill gas.

**Relevant objectives** - These are defined in paragraph 4 of Schedule 4 to the Waste Management Licensing Regulations

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1994 and include, in relation to the disposal or recovery of waste, implementing, so far as material, any plan made under the plan-making provisions.

**Re-use** – the repeated utilisation of an item/material for its original (or other) purpose.

**Waste** – includes any substance which constitutes a scrap material or an effluent or other unwanted surplus substance arising from the application of any process; and any substance or article which requires to be disposed of as being broken, worn out, contaminated or otherwise spoiled (but does not include explosives).

**Waste Management Licence** – a licence granted by SEPA under the Waste Management Licensing Regulations 1994.

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