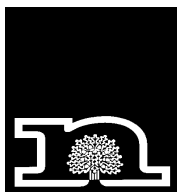


Nottinghamshire & Nottingham Waste Core Strategy & Development Control Policies

Issues & Options
What do you think?

Background Paper 7: Waste Transfer



Nottinghamshire
County Council



Nottingham
City Council

1. Introduction

- 1.1 Nottinghamshire County Council and Nottingham City Council are preparing a new set of waste planning policies for Nottinghamshire. These will replace the existing waste local plan and will be part of both councils' new local development frameworks. The new waste policies will be set out in three separate documents. The first of these, the waste core strategy and the development control policies are being prepared together and will set out future requirements, suitable location criteria and appropriate environmental controls. A site-specific document will follow.
- 1.2 As part of preparing these new planning policies for waste, the County Council and City Council have produced a series of background papers to provide more detail on the 'Issues and Options' consultation exercise (see below).

Purpose of this Background Paper

- 1.3 This background paper looks at waste transfer. Other papers look at waste management options such as recycling, composting, incineration and other forms of energy recovery. Each paper sets out the number, location and capacity of current facilities, likely future needs, and the main planning issues in terms of site location and environmental controls. The general policies and principles of waste management are set out in Background Paper 1 and Background Paper 2 provides a basic assessment of how much waste is produced in Nottinghamshire, how it is managed and possible future trends.

Further information

- 1.4 For further information, copies of other background papers or to join in the Issues and Options consultation please contact the Minerals and Waste Policy Team at the County Council or the City Development Team at Nottingham City Council. Details are shown on the back cover.

Please note that, unless stated otherwise, all references to Nottinghamshire within this paper include the City of Nottingham.

2. The Process, Site Requirements, and Environmental Impacts

Why do we transfer waste?

- 2.1 Many different types of waste are collected from shops, offices, factories and homes. To help reduce the cost and the environmental impact of transporting this waste separately, it often makes sense to take it to a local depot (waste transfer station) where it can be bulked up. Larger vehicles can then take the waste to where it will be processed or disposed of. This reduces the number of vehicles on the road and is more economic. At very large-scale sites it may be possible to transfer some of the waste by rail or barge.

How do we transfer waste?

- 2.2 Most waste transfer stations take a range of different wastes, although some have a very specialist role. They can also vary considerably in terms of size (see Panel 1 below).

Panel 1: Types of Waste Transfer Station

Smaller sites may be nothing more than several skips in a yard - often run alongside an existing skip hire business. These are usually open air but care must be taken over noise, dust, odour and litter. Most will take construction and demolition waste, timber, metals and general garden waste.

Larger sites are more likely to be purpose built and take a wider range of wastes. This can include unsorted municipal waste that is bulked up for transfer to landfill or for incineration but increasingly sites are used to collect and transfer pre-sorted waste such as paper, card, plastic and green waste from kerbside recycling schemes. Most also take commercial and industrial waste and inert construction/demolition waste. Some sites carry out additional sorting, crushing and screening of the waste - usually carried out within a building to prevent noise, odour, dust or litter problems.

specialist transfer stations are specifically licensed to take clinical waste, asbestos, oils, solvents and other hazardous wastes. Other specialist wastes can include fridges and electronic equipment.

- 2.3 Waste is normally collected by skip or dustbin lorries and delivered to the waste transfer station where it is tipped onto the floor, into bays or into compaction units. The waste is sorted roughly into types and then loaded onto bulk container vehicles. It may then be taken for recycling or composting or to a landfill site if it cannot be recycled.

- 2.4 Typically transfer stations will receive loads in collection vehicles with a capacity of 10 -12 tonnes which are then bulked up or compacted onto larger vehicles with a capacity up to 22 tonnes. Whilst there may be a local market for most materials, more specialist wastes may be sent nationally or even abroad if there is a demand for that material or there is no suitable treatment facility within the UK. Fridges, for example, have been sent to Germany for treatment and China takes large quantities of recyclable plastic waste. Very large sites can take over 100,000 tonnes of waste a year but many sites are much smaller than this, handling only a few thousand tonnes a year. Waste transfer stations are often located with other facilities such as Materials Recovery Facilities (MRFs) and Household Waste Recycling Centres (see Background Paper 3 Recycling). Locating these facilities together can help to increase the amount of waste material that is recycled or recovered for re-use.

Site requirements

- 2.5 The physical size and layout of a site will vary depending on the type and volume of waste it receives. Sites that deal only with inert wastes may be open air but sites that take unsorted municipal, commercial or industrial wastes will normally require a large building to store and move the waste around. This will need to be tall enough to allow the safe operation of any machinery. All sites will require suitable vehicular access and a hard surface.
- 2.6 Sites could therefore require all or some of the following:
- HGV access
 - Hard surfacing
 - Site drainage system
 - Skips/bulk containers
 - Weighbridge
 - Compacter/baler
 - Building(s)
 - Maintenance area
 - Storage area(s)
 - Loading vehicles
 - Mechanical grab
 - Forklift

Environmental Impacts

- 2.7 The potential impacts of waste transfer will vary according to the size of the site, and its location. A site within an existing industrial area is likely to have less impact than one in a more rural area for example. The main impacts considered here are those that are caused by the operation itself e.g. visual impact, traffic and noise. There are other important potential concerns such as wildlife, habitats and heritage but these are issues that relate to the choice of site rather than the impact of the waste transfer operation. These issues will therefore be covered under specific development control policies and are also addressed as part of the ongoing sustainability appraisal of each of the plan documents.

- 2.8 Panel 2 is therefore intended to illustrate the possible impacts that waste transfer may have on those living or working nearby. It summarises the typical issues that need to be considered but this does not mean that they will apply in every case.
- 2.9 The key issue is whether these impacts are acceptable i.e. is there a risk of harm or disturbance? In many cases, environmental impacts can be minimised through careful site design, layout and operation but there may be times where the potential impacts of a development mean that it should not be permitted at a particular location.

Panel 2: Environmental Impacts

Visual Impact – the main visual impact is likely to be from any buildings required on site. These tend to be industrial in appearance. Careful site location, colour treatment and choice of materials may help to reduce the visual impact along with site screening and landscaping where appropriate.

Noise – vehicle deliveries, unloading, manoeuvring, sorting, screening, compacting and re-loading the waste are all potential sources of noise. Enclosing operations within a building, maximum noise limits and controls over the hours of operation can reduce these impacts.

Odour – municipal waste and green waste are potential sources of odour as they decompose but this should not be a problem if waste is only stored for short periods and it is kept within a building.

Litter – can be a problem especially with lightweight paper, card and plastics. This can be overcome by enclosing operations within a building.

Traffic – potentially large numbers of HGVs may impact upon traffic volumes and local amenity but there is an overall reduction in the number of HGVs needed to transport waste. Appropriate site locations with good HGV access, the use of vehicle routing agreements and limiting the operating hours of the site can minimise traffic impacts.

Flies/Vermin/Birds – only likely to be a problem if mixed or green waste is left uncovered. Ensuring that waste is enclosed in a building not stored on site for more than 24 hours should prevent problems.

Water – inert waste should not pose any pollution risk. Other wastes are generally handled undercover which should prevent any run-off issues. However a sealed drainage system will be required to manage any potential spillage and waste water from vehicle washing, site cleaning.

Dust – vehicle movements and waste handling can cause dust but this is usually contained within the site. Dust problems can normally be resolved by carrying out all works within a building or damping down the site and using wheel wash facilities to prevent mud or dust being taken onto public roads.

Air – vehicle emissions are a potential concern but the use of transfer stations should reduce total vehicle numbers, and distances travelled. Local issues may need to be addressed through vehicle routing agreements, but there should be a net reduction in vehicle emissions.

What types of location are suitable?

- 2.10. Good access is essential for waste transfer operations. Almost all will require HGV access but at large sites it may be possible to make use of rail or barge transport. Traffic and noise issues mean that waste transfer should be away from residential areas and other sensitive uses. The industrial appearance of site buildings and vehicles mean that transfer stations are most suited to industrial areas which will also provide good transport infrastructure. Sites close to the main sources of waste, such as urban areas, are an advantage, as this will reduce the overall distance that waste travels.

- 2.11 Greenbelt or greenfield (i.e. open countryside) locations are unlikely to be suitable due to the industrial appearance of the buildings and likely traffic impacts. However, there may be a case for small-scale facilities in some circumstances, where this offers the best environmental solution. This could be where there is a need to bulk up farm wastes for example or where there are no other suitable facilities within a reasonable travelling distance.

3. Current provision and future needs

What is the current situation?

- 3.1 There are currently around 40 general waste transfer stations in Nottinghamshire, handling approximately 600,000 tonnes of waste a year¹. Although some large sites have capacity up to 100,000 tonnes a year, the average is around 10,000 tonnes. Most sites take commercial, industrial and inert waste. Some deal specifically with municipal waste. A number of smaller specialist sites take clinical waste, solvents and other specialist/hazardous materials.
- 3.2 Most sites are focussed on urban areas, mainly around Nottingham, with fewer sites able to serve more remote parts of the County (see Plan 1).

How much will we need in future?

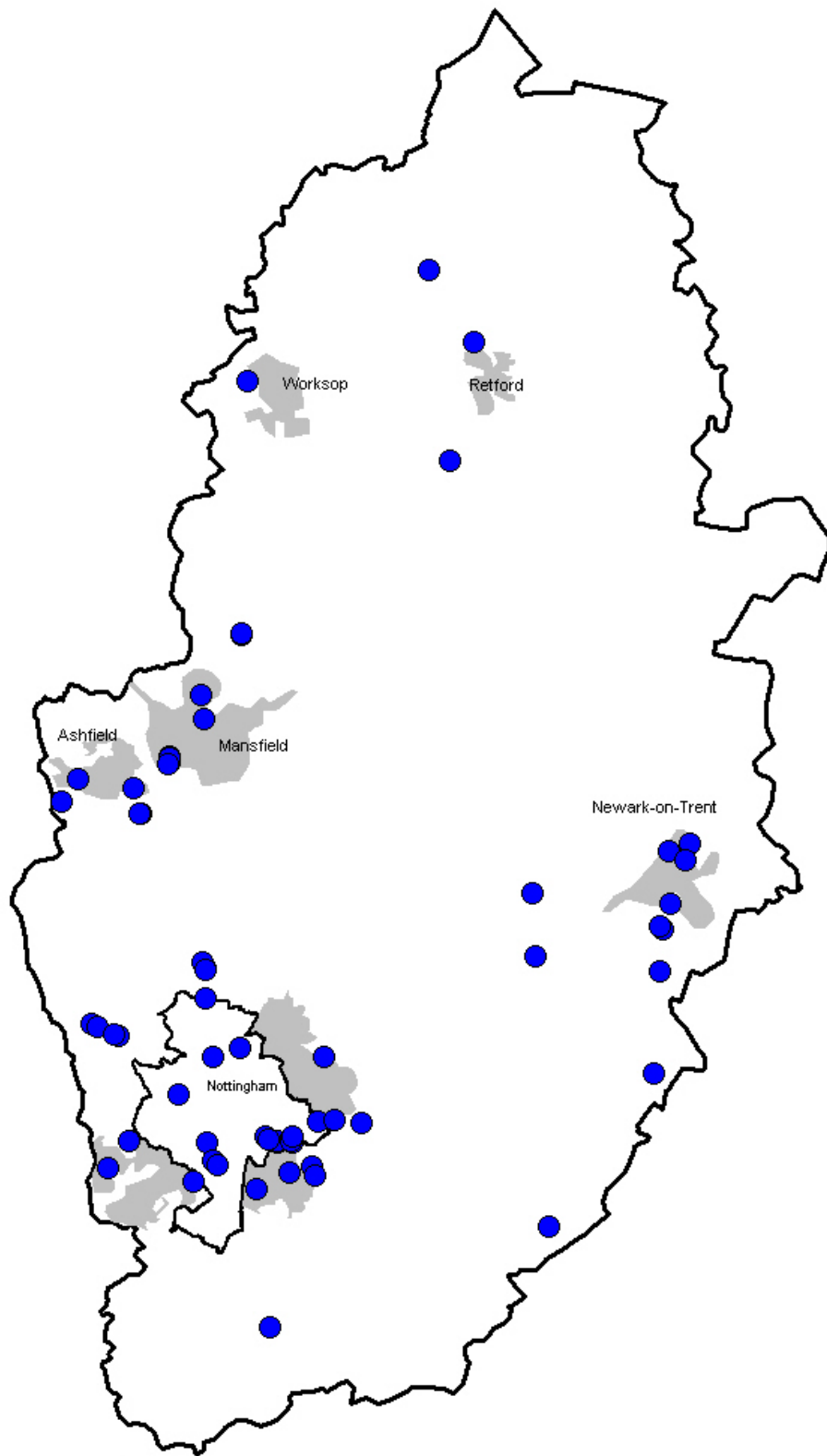
- 3.3 With expected increases in the re-use, recycling and recovery of waste, there is likely to be a need for more transfer facilities. The Regional Waste Strategy estimates that future levels of commercial, industrial, municipal and construction waste could be between almost 5 million and 7 million tonnes a year by 2020. This could be anything up to 3 million tonnes more than current rates (see Background Paper 2). The overall proportion of these wastes that currently passes through a waste transfer station is assumed to be about 15%. On this basis, Nottinghamshire might need up to an additional 500,000 tonnes of waste transfer capacity per year which is the equivalent of at least 5 more large sites. However, if, as expected, more waste is re-used, recycled and recovered in future, the number of additional transfer sites needed could be much greater.

a) Municipal waste

- 3.4 Most municipal waste that goes through a waste transfer station is recyclable waste from kerbside collections (see Background Paper 3). The Regional Waste Strategy is promoting a 50% recycling target for municipal waste by 2015. This is more than double the current rate and is likely to require additional waste transfer capacity. Proposals under the County Council's new municipal waste management contract for a new 80,000 tonne per year materials recovery facility near Mansfield and a possible 180,000 tonne per year energy recovery facility are likely to need dedicated waste transfer capacity either at new or extended sites. Nottingham may also need a significant increase in capacity to support increased recycling targets in future.

¹ Based on Environment Agency figures for household, commercial, industrial and construction waste given in the East Midlands Regional Waste Strategy, EMRA, January 2006

Plan 1: Waste Transfer Stations in Nottinghamshire



b) Commercial and industrial waste

- 3.5 Although there are no formal targets for recycling these wastes, it is expected that recycling and recovery will increase in future, particularly as landfill becomes progressively more expensive. The possible introduction of either specific recycling targets or landfill limits through revisions to the national waste strategy would also encourage higher levels of recycling and recovery. This would again need to be supported by additional waste transfer facilities.

c) Construction and demolition waste

- 3.6 Environment Agency figures suggest that just over 300,000 tonnes of construction and demolition waste passes through waste transfer sites in Nottinghamshire each year. This is about 13% of what is produced. If construction and demolition waste increases to between 3 and 4 million tonnes as forecast, Nottinghamshire could need up to an additional 200,000 tonnes capacity a year by 2020. Demand is likely to be in the main urban areas, which are the major sources of construction waste.

d) Other wastes

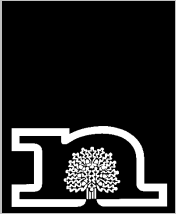
- 3.7 Future volumes of hazardous waste are uncertain but there may be a need for dedicated sites to handle such waste if it cannot be managed at more general sites. The impact of new regulations on waste electronic and electrical equipment may also require more capacity to sort and transfer these wastes. Similarly, new agricultural waste regulations may see a need for sites able to serve rural areas where several farms may want to collect waste for later treatment/processing or disposal.

4. Conclusions

- 4.1 The pressure to reduce landfill and manage waste more sustainably through recycling, composting and recovery will mean a need for additional transfer sites to bulk up and sort the various wastes prior to its final treatment. Although it is hard to estimate exact quantities, predicted future waste growth will also contribute to the need for more overall waste transfer capacity. In broad terms we may need to double our existing capacity by 2021.
- 4.2 In practice most sites are likely to be able to accept waste from any of the major waste streams. Materials such as paper, plastic, card, timber and green waste can come from commercial, industrial and construction waste as well municipal waste. It may therefore be pointless to try and plan for sites to cater for individual waste streams. What will be more relevant is how we should develop future sites and whereabouts in general they are needed.
- 4.3 The priority will therefore be to identify the broad types of site that might be suitable for new sites and to increase provision in areas that do not have an adequate number of sites at present.

Further Information

- Planning for Waste Management Facilities: A Research Study, ODPM 2004



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