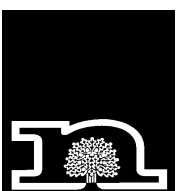


Nottinghamshire & Nottingham Waste Core Strategy & Development Control Policies

**Issues & Options
What do you think?**

Background Paper 2: Waste Management in Nottinghamshire



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 the amount of waste produced in Nottinghamshire, how it is managed and possible future trends. Other papers look at the different methods of waste management from recycling to landfill and the possible use of new technologies. 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.

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. What is waste and who deals with it?

Main types of waste

- 2.1 Waste comes from many sources including homes, shops, offices, factories, farms and hospitals. Panel 1 below gives a detailed definition of the types of waste arising in Nottinghamshire. Some of these wastes are more significant than others and the focus of this background paper is on the three main waste streams made up of municipal, commercial and industrial, and construction and demolition wastes. These wastes raise the most significant issues in terms of planning policies and future provision. More specialist wastes such as hazardous, clinical, power station and agricultural waste are considered separately in Background Paper 10.

Panel 1: Definitions of waste types

Municipal waste is collected by local councils from households, or taken by householders to recycling centres. It also includes civic waste from parks, gardens, road sweepings, and small amounts of trade waste co-collected with the household waste service. Municipal waste usually consists of paper, card, plastic, tins, glass, garden waste, kitchen waste and textiles.

Commercial & industrial waste is collected privately from shops, offices and factories. Commercial waste may include packaging materials such as paper, card and polystyrene, plastics, glass, food waste, non-toxic chemicals, timber, scrap metal and unwanted office equipment. Industrial waste includes food and drink waste, textiles, wood, paper, plastic, rubber, glass, metals, oils, paints and other chemical wastes. Nottinghamshire also produces relatively large quantities of mining waste/colliery spoil and pulverised fuel ash from power stations (which is considered separately).

Construction and demolition waste typically comes from building and demolition projects and road schemes. It normally includes inert materials such as stone, concrete, brick and soil but may also include small amounts of timber, glass and metal. The contractor is responsible for recycling or disposing of the waste.

Agricultural waste is mostly animal slurry and vegetable matter but many farms also produce 'non-natural' wastes such as scrap metals, batteries, oils, tyres, rubber, glass, plastic and veterinary waste.

Hazardous waste has traditionally been used to describe materials such as asbestos, oils, solvents and healthcare wastes. The EU Landfill Directive has recently broadened this definition to include everyday items such as fluorescent tubes, televisions, monitors and scrap cars.

Clinical waste comes from hospitals, nursing homes, health centres veterinary surgeries and similar premises. It requires special treatment to prevent any risk of infection.

Responsibilities

- 2.2 Waste management also involves a wide variety of public and private bodies who are responsible for the collection and disposal of our waste and for ensuring that this is carried out safely and sustainably. Panel 2 below explains the key roles in waste management.

Panel 2: Who does what?

Collection – local councils (e.g. district and unitary councils) are only responsible for collecting municipal waste. All other waste is collected and managed by private sector companies. This is agreed and paid for by individual businesses, shopkeepers, building contractors etc.

Disposal – whereas district councils are responsible for collecting municipal waste, county councils are responsible for its safe disposal (this includes recycling, composting and energy recovery, in some cases, as well as landfill). Long-term municipal waste management contracts are let to private sector companies to manage the waste that is collected. Contracts are awarded on the basis of detailed cost and environmental criteria as well as specific targets for recycling and reducing the use of landfill for municipal waste. Unitary councils carry out both the collection and disposal role, as they are a single tier authority. All other waste (e.g. commercial and industrial waste) is managed commercially by private sector companies. As such there are no specific controls over how much is recycled or composted and whether it is dealt with locally or taken to another area.

Regulation – most forms of waste management require planning permission. County and unitary councils must therefore prepare planning policies setting out when and where waste development will be acceptable. They are also responsible for deciding all planning applications for waste management facilities. The Environment Agency is separately responsible for ensuring that there is no pollution risk from waste sites. The Agency licenses individual sites and carries out regular monitoring. It also has a wider advisory and research role and is consulted on most waste-related planning applications.

The role of planning policies

- 2.3 Planning policies for waste need to ensure that there are sufficient sites available to manage the waste that is produced. Ideally, this means having good quality information about how much waste is produced, how it is managed and how this may change in future.
- 2.4 Unfortunately, whilst the information for some waste types is relatively good, data for other wastes can be virtually non-existent. Despite these limitations, waste planning authorities have to use whatever information is available to assess, as far as they can, what level of provision is appropriate in future.

Sources of Data

- 2.5 Information on municipal waste is collated annually by the County Council and Nottingham City Council. This provides a detailed breakdown of how much waste is produced and how and where it is managed. Information on other wastes is provided by the Environment Agency who carry out surveys every two years to produce regional Strategic Waste Management Assessments. The most recent published assessment for the East Midlands was for 1998/99 but partial updates are available for 2002/03. This provides data on waste arisings for commercial, industrial and construction wastes but information on how the waste is managed is less detailed. There is also very little information on the movement of waste between different areas. The Agency also collect data on agricultural and hazardous waste arisings but these are less significant for plan policies.

Limitations

- 2.6 The quality and reliability of waste data has always been a problem for waste planning. There is no comprehensive system for data collection and it has not always been collected consistently. Definitions for certain wastes have changed over time and this can make comparisons difficult. The way data is collected also causes problems as operators are not obliged to provide annual returns and all of the data provided by the Environment Agency is therefore based on surveys. In some cases these are only sample surveys and may not be broken down to the local or even regional level. The government hopes to address this in future through the introduction of a national data collection system but this is some way off.
- 2.7 The information in this report is therefore based on the most up to date figures available but this is only likely to provide a general indication of waste trends because of the limited data that exists.

3. How much waste do we have to deal with?

- 3.1 Nottinghamshire currently produces over 6 million tonnes of 'controlled' waste¹ every year. This is about 30% of the waste produced in the East Midlands (see Fig. 1 below).



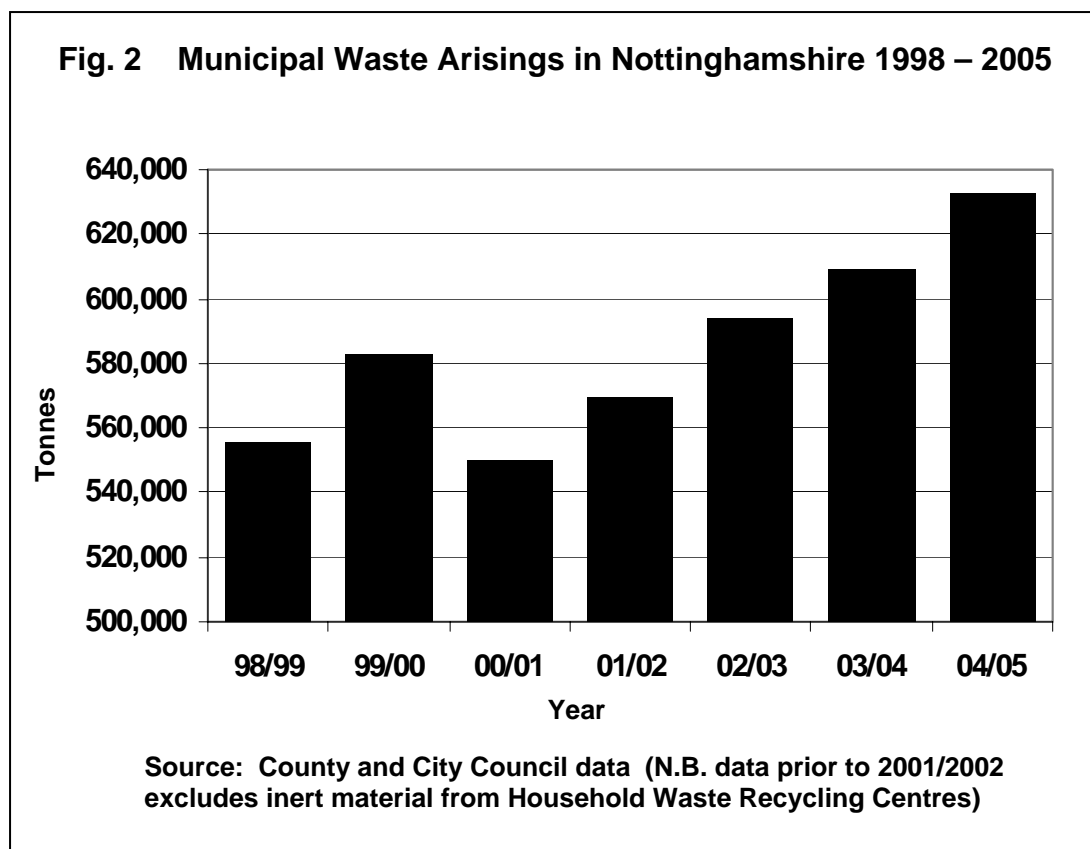
- 3.2 Municipal, commercial and industrial, construction and demolition wastes account for around 4 million tonnes per annum. These three waste streams present the greatest planning issues for the County and are the focus of this background paper. Other wastes such as that from power stations, agriculture, hospitals and clinics tend to raise fewer planning issues and/or are lower in volume (see Background Paper 10).
- 3.3 Nottinghamshire's minerals industry also produces large quantities of mineral waste that is 'non-controlled'. Major sources include colliery spoil, overburden, silt and other waste from sand and gravel and other mineral processing plants. The planning issues raised by these waste are covered by the current Minerals Local Plan (adopted in December 2005) and will be included in the future review of that plan under the new planning system. These wastes are therefore outside the scope of the Waste Core Strategy.

¹ Defined under the Controlled Waste Regulations 1992

3.4 The remainder of this background paper looks at each of the three waste streams in turn. For each sector, it looks at how much waste is produced, how it is managed and estimates of future growth.

Municipal waste

3.5 Local authorities have collected information on municipal waste arisings and management over many years and their figures are audited annually by DEFRA². Municipal waste data is therefore considered to be the most comprehensive, reliable and up to date. Having comparable data over successive years means that it is possible to identify trends in how much waste is produced and how it is treated. Details of municipal waste arisings and management are set out in Figures 2 and 3 below.



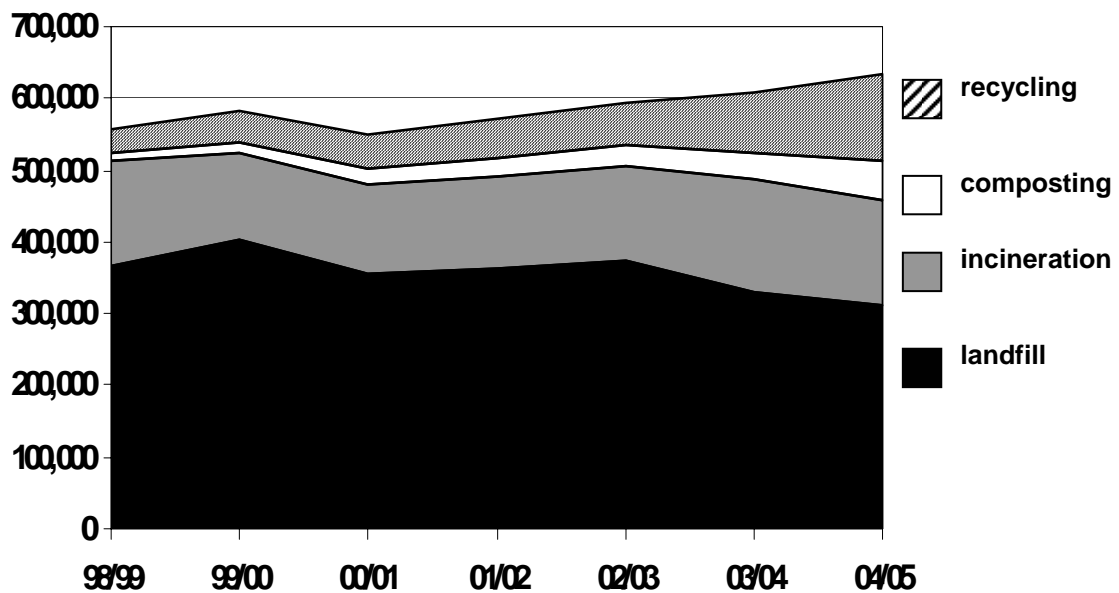
3.6 Municipal waste arisings in Nottinghamshire are now over 630,000 tonnes a year. Over the last five years this has grown at more than 3% a year compared to a national average of 1.5%³. Municipal waste currently makes up about 15% of Nottinghamshire's major waste streams⁴.

² Department of Environment Food and Rural Affairs

³ Review of England's Waste Strategy – A Consultation Document, DEFRA, February 2006

⁴ Calculation based on 2003 total for municipal, commercial and industrial, and construction and demolition waste

Fig. 3 Municipal Waste Management Trends in Nottinghamshire 1998 – 2005 (tonnes per annum)



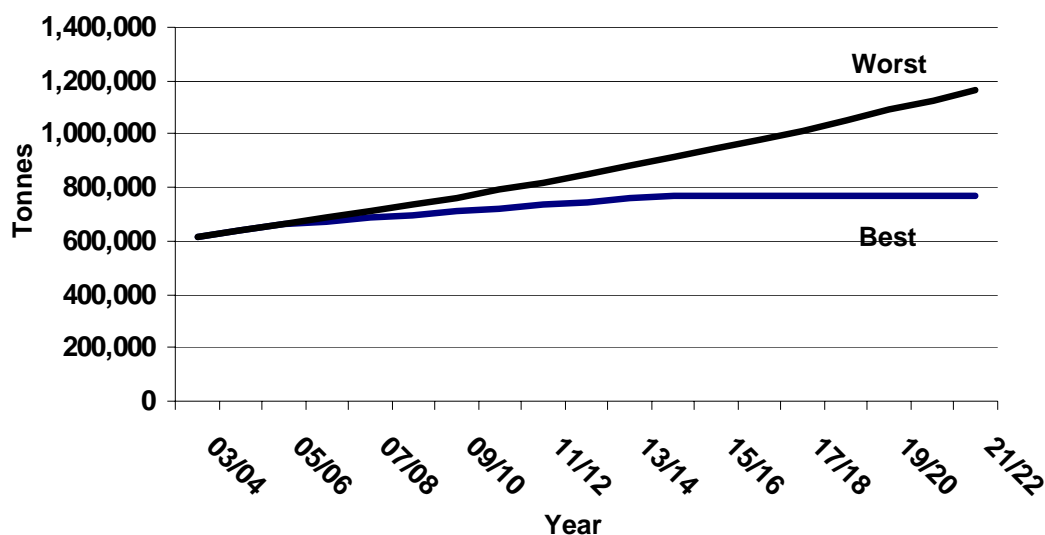
Source: County and City Council data (N.B. data prior to 2001/2002 excludes inert material from Household Waste Recycling Centres)

3.7 In common with most parts of the UK, recycling and composting rates have increased significantly in response to statutory targets. In 2004/05 more than 150,000 tonnes⁵ of municipal waste was recycled or composted compared to just 43,000 tonnes in 1998/99. Incineration of municipal waste has remained relatively constant at around 150,000 tonnes per annum. This reflects the long-term contract at the Eastcroft incinerator in Nottingham. Landfill rates for municipal waste have fluctuated but are now showing a reduction due to the improvement in recycling and composting. The figure for 2004/05 was the lowest for 5 years (313,000 tonnes) but this needs to be set against the fact that municipal waste arisings are still growing.

3.8 The Regional Waste Strategy has assessed possible 'best' and 'worst' case scenarios for future waste growth for each waste stream. These are set out in more detail in Appendix 1. Applying the regional forecasts for future municipal waste growth to Nottinghamshire suggests a future level of between 0.8 million tonnes and 1.2 million tonnes a year by 2021 (see Figure 4 below).

⁵ Excludes 22,000 tonnes of inert waste e.g. rubble that cannot be counted towards Government targets

Fig. 4 Projected Municipal Waste Growth in Nottinghamshire 2003 - 2021



Source: based on Regional Waste Strategy forecasts (see Appendix 1)

- 3.9 On this basis the strategy estimates that that Nottinghamshire will need to recycle or compost at least 386,000 tonnes of municipal waste by 2021 (see Table 1). This is more than double the current rate. The maximum amount of waste that could be landfilled is 172,000 tonnes⁶ which leaves an additional 214,000 tonnes per annum that must be recovered⁷ in some way. These figures are a minimum and much higher levels of recycling, composting and recovery may be needed if municipal waste continues to grow at current rates.

Table 1 Indicative Municipal Waste Management Needs for Nottinghamshire (tonnes / year)

	Current*	2010	2015	2020 +
Recycling/ composting	155,000	213,000	386,000	386,000
Recovery	150,000	128,000	162,000	214,000
Re-use	-	-	-	-
Landfill	313,000	369,000	224,000	172,000
Total	618,000 ⁸	710,000	772,00	772,000

Source: East Midlands Regional Waste Strategy, EMRA, January 2006

* based on 2005 figures

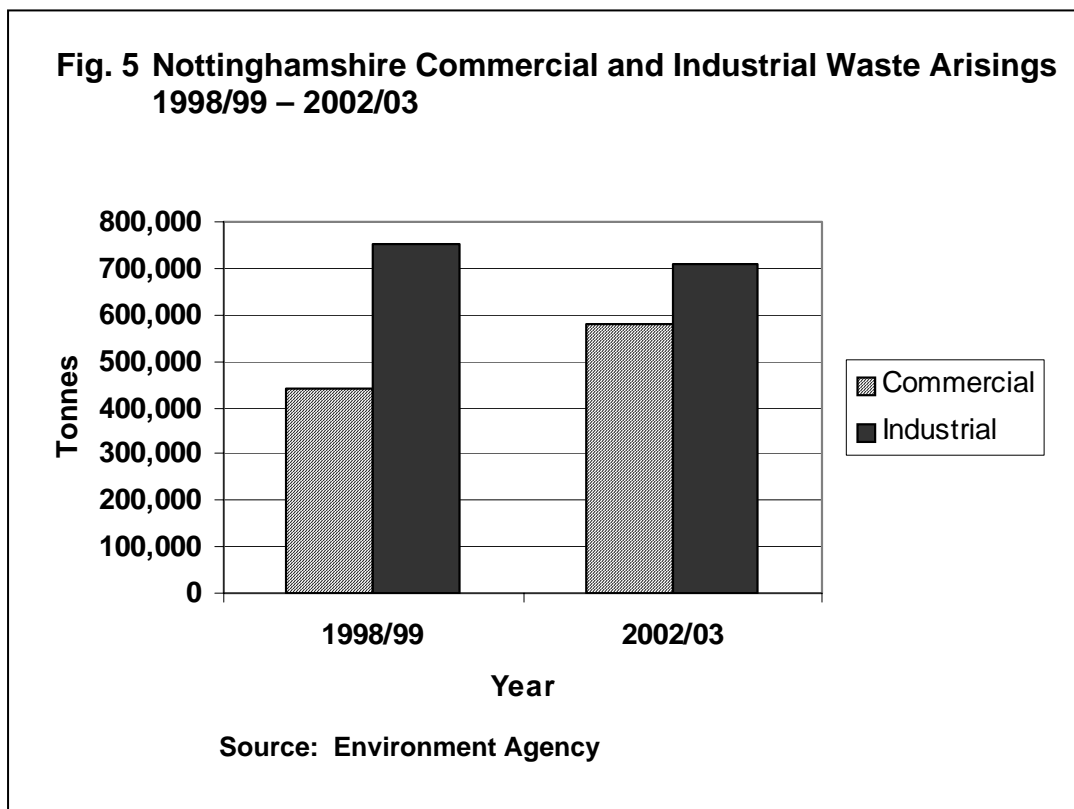
⁶ This is the County and City Councils' combined allowance for landfill disposal under the Landfill Allowance Trading Scheme

⁷ Recovering value e.g. through methods such as incineration with energy recovery or mechanical biological treatment to produce a stable residue which can be burnt as fuel

⁸ excludes 22,000 tonnes of inert material that cannot be counted towards recycling target

Commercial and industrial waste

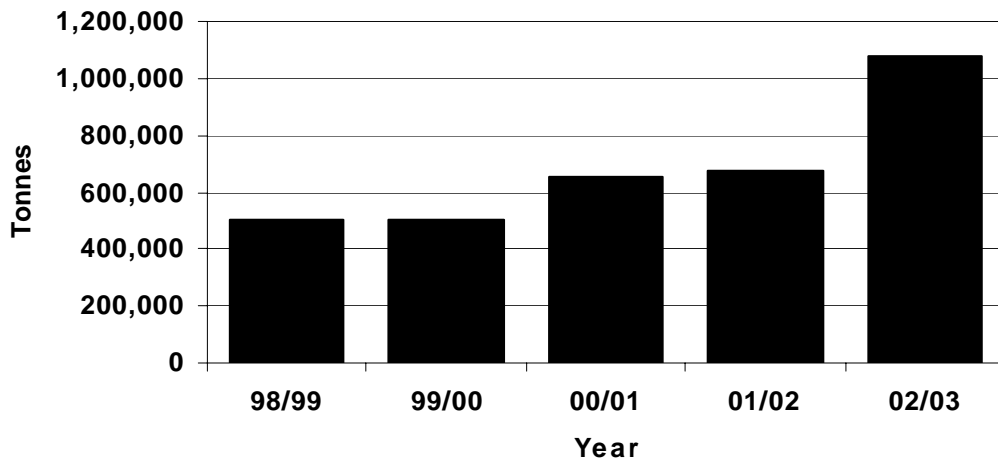
3.10 The Environment Agency collects information on commercial and industrial waste at two-year intervals. This is based on a national sample of sites. The most recent data is for 2002/03. This provides relatively up to date information on waste arisings but is less detailed in terms of how the wastes are managed. Although the arisings figures are broken down by waste planning authority, data on recycling and disposal is difficult to interpret at the local level. Changes in the definition of some wastes also make comparisons with earlier data difficult. Figure 5 below shows commercial and industrial waste arisings for 1998/99 and 2002/03 but these figures should be treated with caution.



3.11 On the evidence available, industrial waste in Nottinghamshire shows a slight reduction but commercial waste appears to have increased significantly. This gives an overall figure of more than 1.3 million tonnes per annum. It is not clear whether this is all due to actual growth or the fact that additional types of waste are now included that were not previously part of the survey. Commercial and industrial waste currently accounts for approximately 30% of Nottinghamshire's waste⁹.

⁹ Calculated on the basis of municipal; commercial & industrial; and construction and demolition wastes – hazardous, clinical, agricultural and mining/energy wastes are not included here

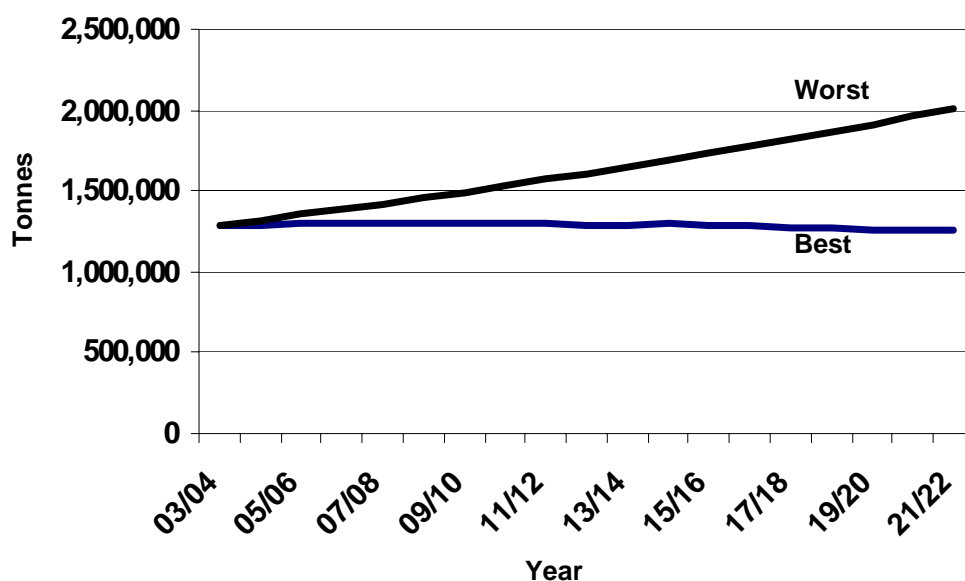
**Fig. 6 Nottinghamshire Commercial and Industrial Waste Disposal
1998 – 2003**



Source: Nottinghamshire County Council and Environment Agency

- 3.12 There are no reliable statistics on how Nottinghamshire's commercial and industrial waste is managed. At a regional level, recycling rates are assumed to be around 44%, which equates to roughly 590,000 tonnes in Nottinghamshire. Approximately 1 million tonnes of commercial and industrial waste was sent to landfill in Nottinghamshire in 2002/03. This is much higher than previous years (see Figure 6) but the reasons for this are unknown. It could be due to errors in the data, a change in the pattern of imports and exports of commercial and industrial waste or a sudden drop in recycling markets that led to more disposal. The huge rise in landfill rates (almost equal to the previous year's arisings) is therefore difficult to explain but could have significant implications for any estimate of future needs if this trend continues.
- 3.13 The Regional Waste Strategy anticipates that future rates of commercial and industrial waste could fall due to an expected decline in heavy industry. The regional 'best case' assumption is that Nottinghamshire will produce 1.2 million tonnes of commercial and industrial waste by 2021 but if current growth rates continue then the projected 'worst case' of 2 million tonnes may be more realistic (see Figure 7).

Fig. 7 Projected Commercial and Industrial Waste Growth in Nottinghamshire 2003 – 2021



Source: based on Regional Waste Strategy forecasts (see Appendix 1)

3.14 Assuming that the best case is achieved, Nottinghamshire would need to recycle at least 530,000 tonnes of commercial and industrial waste by 2021 (see Table 2 below). As there are less stringent targets for this waste stream, landfill estimates remain quite high at around 735,000 tonnes per annum. If a significant reduction in waste volumes is not achieved, or the Government introduces formal recycling targets, then the overall capacity needed would be much higher.

Table 2 Indicative Commercial and Industrial Waste Management Needs for Nottinghamshire (tonnes / year)

	Current*	2010	2015	2020 +
Recycling/ composting	590,000 ¹⁰	550,000	546,000	532,000
Recovery	-	-	-	-
Re-use	-	-	-	-
Landfill	697,000 ¹¹	759,000	754,000	735,000
Total	1,287,000	1,261,000	1,253,000	1,221,000

Source: East Midlands Regional Waste Strategy, EMRA, January 2006

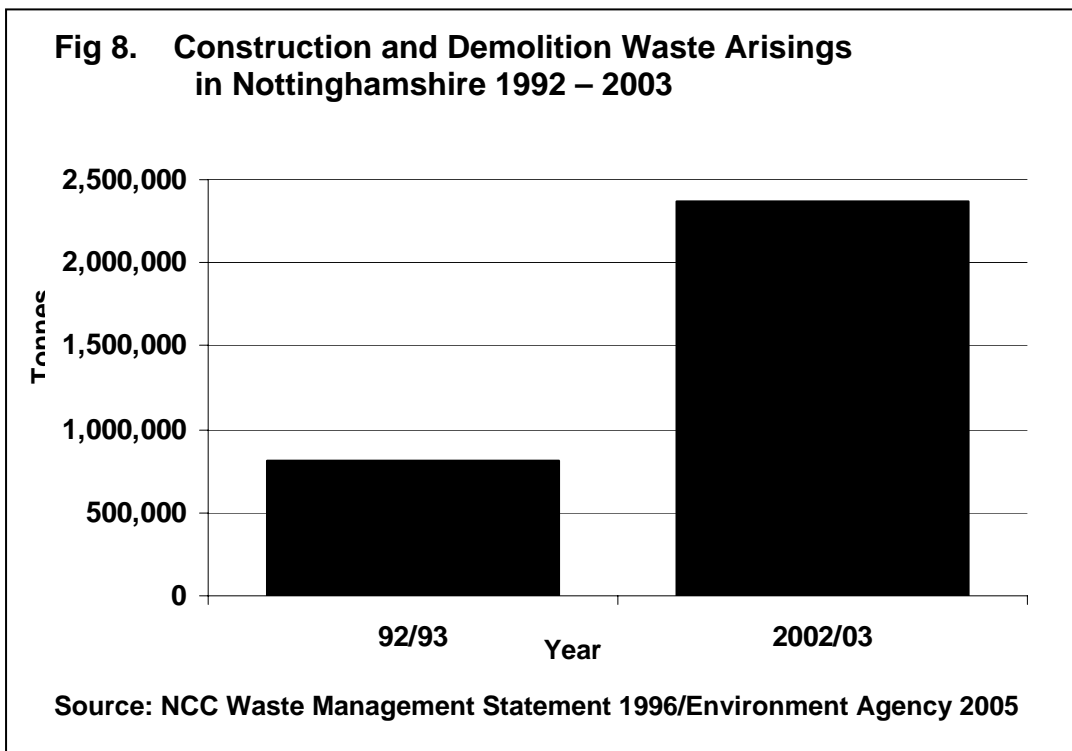
* based on 2003 figures

¹⁰ Estimate based on regional recycling rate

¹¹ Actual landfill inputs exceed 1 million tonnes but figure has been adjusted to show an approximation based on Nottinghamshire's arisings minus the estimated recycling figure.

Construction and demolition waste

- 3.15 Information on construction and demolition waste is very limited. The most recent national survey was carried out by the Office of the Deputy Prime Minister (ODPM) in 2003¹². Earlier surveys carried out for 1998/99 and 2001 are now thought to have seriously under-estimated the quantities of construction and demolition waste. The national position is therefore uncertain and regional figures are only estimates based on the national ODPM survey and may only be accurate to within $\pm 22\%$. The available data is therefore considered to be unreliable at the local level and can only be used to give a very broad indication of the situation in Nottinghamshire (see Figure 8 below).

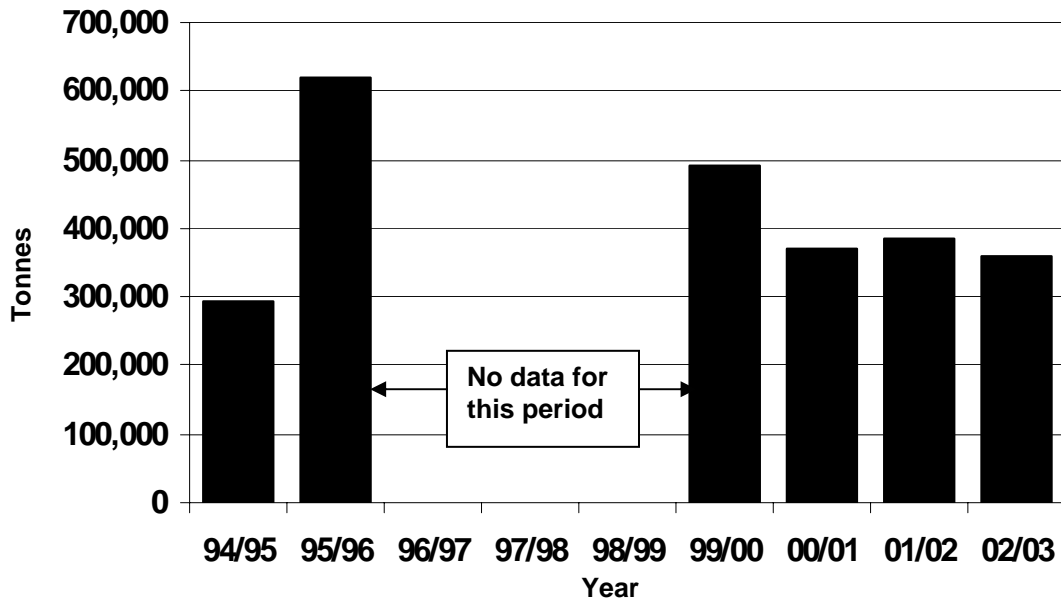


- 3.16 Figure 8 suggests that there has been a massive increase in construction and demolition waste from 700,000 tonnes in 1998/99 to more than 2.4 million tonnes in 2002/03. It is not clear whether this is due to a real increase or the fact that earlier figures may have been artificially low. Therefore, although quantities of construction and demolition waste are high, the actual growth in these wastes may not be as dramatic as shown. At current levels, construction and demolition waste is thought to make up around 56% of Nottinghamshire's waste¹³.

¹² Survey of Arisings and Use of Construction, Demolition and Excavation Waste as Aggregate in England, ODPM, 2003

¹³ Calculation based on 2003 figures for municipal, commercial and industrial, construction and demolition wastes shown in East Midlands Regional Waste Strategy January 2006

Fig. 9 Construction and Demolition Waste Disposal 1994 – 2003 in Nottinghamshire



Source: Environment Agency

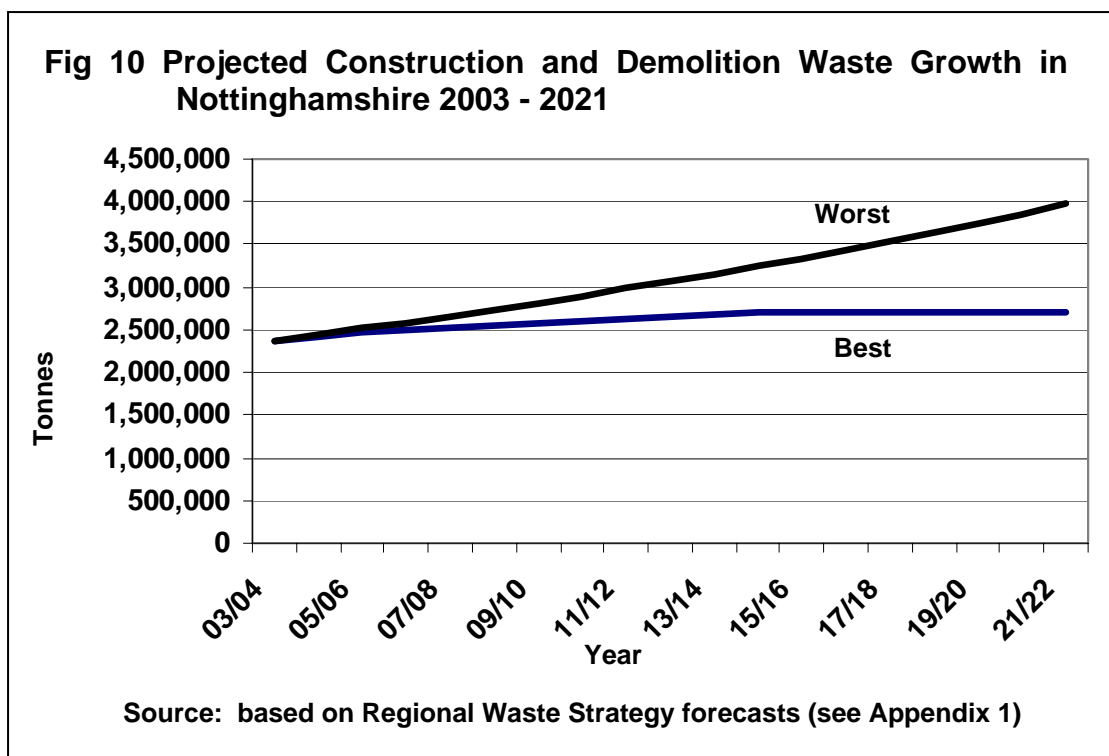
3.17 Data on how construction and demolition waste is managed is even more limited. The only consistent information is for disposal at landfill sites in the county (although this does not account for any imports or exports). This information is collected by the Environment Agency as part of the site licence returns although the figures for individual sites are not always public. Figure 9 shows that landfill of construction and demolition waste has remained fairly constant at around 350,000 to 375,000 tonnes per annum in recent years¹⁴. As with commercial and industrial waste in paragraph 17, this makes no allowance waste exported or imported into Nottinghamshire for disposal.

3.18 There is also very little information on how much construction and demolition waste is recycled. At a national level, Government has estimated that 88% of construction waste is recycled or re-used each year¹⁵. This has been translated into a regional figure of 10 million tonnes and just over 2 million tonnes in Nottinghamshire but this is not based on any local or regional survey. However, given the national picture, it is reasonable to conclude that rates of recycling and re-use have increased significantly. The use of recycled aggregate is now more attractive due to the introduction of the landfill tax in 1996 and a specific tax on primary aggregate in 2001. There has also been a visible increase in the number of temporary recycling schemes at construction and demolition sites and planning applications for both temporary and permanent recycling sites.

¹⁴ Excludes material used for cover and site construction at non-hazardous landfill sites

¹⁵ Appendix 5, East Midlands Regional Waste Strategy, EMRA, January 2006

3.19 The Regional Waste Strategy assumes that the rate of growth for construction and demolition will slow down, with no further increase beyond 2016. Applying this forecast to Nottinghamshire suggests a 'best case' of 2.7 million tonnes per year by 2021. Alternatively, if current rates of growth continue this could be closer to 4 million tonnes.



3.20 On this basis it is estimated that Nottinghamshire will need to recycle at least 1.3 million tonnes of construction and demolition waste by 2021. This assumes that over 1 million tonnes is re-used on site or as bulk fill and that landfill disposal remains close to current levels at around 350,000 tonnes per annum. This would mean relatively little change from current practice although this takes no account of possible growth beyond 2016.

Table 3 Indicative Construction and Demolition Waste Management Needs in Nottinghamshire (tonnes / year)

	Current*	2010	2015	2020 +
Recycling/ composting	1,171,000	1,280,000	1,346,000	1,346,000
Recovery	-	-	-	-
Re-use	907,000	992,000	1,042,000	1,042,000
Landfill	293,200 ¹⁶	320,000	337,000	337,000
Total	2,371,200	2,593,000	2,725,000	2,725,000

Source: East Midlands Regional Waste Strategy, EMRA, January 2006

* based on 2003 figures approximated from ODPM survey

¹⁶ Actual landfill rate is 340,000 for 2003 but figure has been adjusted to reflect approximate recycling and re-use estimates as total landfill rate may include imported waste

4. Conclusions

- 4.1 The coverage and quality of data on waste management is very variable. This makes it difficult to forecast future waste growth reliably. Assumptions that the rate of waste growth will reduce over time are also uncertain. Even if the 'best case' scenario of limited waste growth is achieved, future waste arisings will be well above current levels. However, if waste continues to increase in line with economic growth, then waste arisings could go up by more than 50% over the next 15 years. This would have major implications for future waste management requirements within Nottinghamshire.
- 4.2 Whatever the outcome there will be a need to expand current waste management capacity to meet future needs. What is less certain is how much new capacity will be needed and what mix of facilities will best meet future requirements. This is considered in more detail in the other background papers which look at the various waste management technologies and their possible role.

Key Issues:

- the amount of waste produced is increasing annually
- even if 'best case' assumptions are met, there will still need to be a substantial increase in overall waste management capacity and changes in the way waste is managed
- recycling and composting rates are improving but there will still be waste that cannot go to landfill and that will have to be recovered in some way
- future estimates are based on the assumption that waste growth can be slowed but there is no guarantee of this – Nottinghamshire may need more facilities than currently predicted

Appendix 1

Forecast Waste Arisings in Nottinghamshire

Table 1 Forecast Municipal Waste Arisings 2003 – 2021 (tonnes per annum)

Year	County (72%)		City (28%)		Nottinghamshire		Growth Rate %	
	Best	Worst	Best	Worst	Best	Worst	Best	Worst
2003	445,230	445,230	173,145	173,145	618,375	618,375	3.6	3.6
2004	461,258	461,258	179,378	179,378	640,637	640,637	3.6	3.6
2005	477,864	477,864	185,836	185,836	663,699	663,699	3.6	3.6
2006	485,987	495,067	188,995	192,526	674,982	687,593	1.7	3.6
2007	494,249	512,889	192,208	199,457	686,457	712,346	1.7	3.6
2008	502,651	531,353	195,475	206,637	698,127	737,990	1.7	3.6
2009	511,196	550,482	198,799	214,076	709,995	764,558	1.7	3.6
2010	519,887	570,299	202,178	221,783	722,065	792,082	1.7	3.6
2011	528,725	590,830	205,615	229,767	734,340	820,597	1.7	3.6
2012	537,713	612,100	209,111	238,039	746,824	850,139	1.7	3.6
2013	546,854	634,135	212,666	246,608	759,520	880,744	1.7	3.6
2014	556,151	656,964	216,281	255,486	772,432	912,450	1.7	3.6
2015	556,151	680,615	216,281	264,684	772,432	945,299	0	3.6
2016	556,151	705,117	216,281	274,212	772,432	979,329	0	3.6
2017	556,151	730,501	216,281	284,084	772,432	1,014,585	0	3.6
2018	556,151	756,799	216,281	294,311	772,432	1,051,110	0	3.6
2019	556,151	784,044	216,281	304,906	772,432	1,088,950	0	3.6
2020	556,151	812,270	216,281	315,883	772,432	1,128,152	0	3.6
2021	556,151	841,511	216,281	327,254	772,432	1,168,766	0	3.6

Based on forecasts contained in Appendix 5 of East Midland Regional Waste Strategy, East Midlands Regional Assembly, January 2006

**Table 2 Forecast Commercial and Industrial Waste Arisings 2003 – 2021
(tonnes per annum)**

Year	Commercial		Growth %		Industrial		Growth %		Total C&I Waste	
	Best	Worst	Best	Worst	Best	Worst	Best	Worst	Best	Worst
2003	580,500	580,500	2	2.5	706,950	706,950	-1	2.5	1,287,450	1,287,450
2004	592,110	595,013	2	2.5	699,881	724,624	-1	2.5	1,291,991	1,319,636
2005	603,952	609,888	2	2.5	692,882	742,739	-1	2.5	1,296,834	1,352,627
2006	609,992	625,135	1	2.5	685,953	761,308	-1	2.5	1,295,945	1,386,443
2007	616,092	640,763	1	2.5	679,093	780,341	-1	2.5	1,295,185	1,421,104
2008	622,253	656,782	1	2.5	672,302	799,849	-1	2.5	1,294,555	1,456,632
2009	628,475	673,202	1	2.5	665,579	819,845	-1	2.5	1,294,054	1,493,047
2010	634,760	690,032	1	2.5	658,924	840,341	-1	2.5	1,293,683	1,530,373
2011	641,107	707,283	1	2.5	652,334	861,350	-1	2.5	1,293,442	1,568,633
2012	647,519	724,965	1	2.5	645,811	882,884	-1	2.5	1,293,330	1,607,849
2013	653,994	743,089	1	2.5	639,353	904,956	-1	2.5	1,293,347	1,648,045
2014	660,534	761,666	1	2.5	632,959	927,580	-1	2.5	1,293,493	1,689,246
2015	660,534	780,708	0	2.5	626,630	950,769	-1	2.5	1,287,163	1,731,477
2016	660,534	800,226	0	2.5	620,363	974,538	-1	2.5	1,280,897	1,774,764
2017	660,534	820,231	0	2.5	614,160	998,902	-1	2.5	1,274,693	1,819,133
2018	660,534	840,737	0	2.5	608,018	1,023,874	-1	2.5	1,268,552	1,864,611
2019	660,534	861,756	0	2.5	601,938	1,049,471	-1	2.5	1,262,472	1,911,227
2020	660,534	883,299	0	2.5	595,919	1,075,708	-1	2.5	1,256,452	1,959,007
2021	660,534	905,382	0	2.5	589,960	1,102,601	-1	2.5	1,250,493	2,007,983

Based on forecasts contained in Appendix 5 of East Midland Regional Waste Strategy, East Midlands Regional Assembly, January 2006

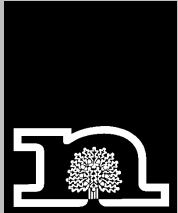
**Table 3 Forecast Construction and Demolition Waste Arisings 2003 – 2021
(tonnes per annum)**

Year	Total C&D Waste		Growth Rate %	
	Best	Worst	Best	Worst
2003	2,371,200	2,371,200	2	2.9
2004	2,418,624	2,439,965	2	2.9
2005	2,466,996	2,510,724	2	2.9
2006	2,491,666	2,583,535	1	2.9
2007	2,516,583	2,658,457	1	2.9
2008	2,541,749	2,735,553	1	2.9
2009	2,567,166	2,814,884	1	2.9
2010	2,592,838	2,896,515	1	2.9
2011	2,618,766	2,980,514	1	2.9
2012	2,644,954	3,066,949	1	2.9
2013	2,671,404	3,155,891	1	2.9
2014	2,698,118	3,247,411	1	2.9
2015	2,698,118	3,341,586	0	2.9
2016	2,698,118	3,438,492	0	2.9
2017	2,698,118	3,538,209	0	2.9
2018	2,698,118	3,640,817	0	2.9
2019	2,698,118	3,746,400	0	2.9
2020	2,698,118	3,855,046	0	2.9
2021	2,698,118	3,966,842	0	2.9

Based on forecasts contained in Appendix 5 of East Midlands Regional Waste Strategy, East Midlands Regional Assembly, January 2006

Table 4 Summary of Total Forecast Waste Arisings 2003 – 2021 (tonnes per annum)

Year	Municipal		Comm/Ind		Const/Dem		Total	
	Best	Worst	Best	Worst	Best	Worst	Best	Worst
2003	618,375	618,375	1,287,450	1,287,450	2,371,200	2,371,200	4,277,025	4,277,025
2004	640,637	640,637	1,291,991	1,319,636	2,418,624	2,439,965	4,351,251	4,400,238
2005	663,699	663,699	1,296,834	1,352,627	2,466,996	2,510,724	4,427,530	4,527,050
2006	674,982	687,593	1,295,945	1,386,443	2,491,666	2,583,535	4,462,593	4,657,570
2007	686,457	712,346	1,295,185	1,421,104	2,516,583	2,658,457	4,498,225	4,791,907
2008	698,127	737,990	1,294,555	1,456,632	2,541,749	2,735,553	4,534,431	4,930,174
2009	709,995	764,558	1,294,054	1,493,047	2,567,166	2,814,884	4,571,216	5,072,489
2010	722,065	792,082	1,293,683	1,530,373	2,592,838	2,896,515	4,608,586	5,218,971
2011	734,340	820,597	1,293,442	1,568,633	2,618,766	2,980,514	4,646,548	5,369,744
2012	746,824	850,139	1,293,330	1,607,849	2,644,954	3,066,949	4,685,107	5,524,936
2013	759,520	880,744	1,293,347	1,648,045	2,671,404	3,155,891	4,724,270	5,684,679
2014	772,432	912,450	1,293,493	1,689,246	2,698,118	3,247,411	4,764,042	5,849,108
2015	772,432	945,299	1,287,163	1,731,477	2,698,118	3,341,586	4,757,713	6,018,362
2016	772,432	979,329	1,280,897	1,774,764	2,698,118	3,438,492	4,751,446	6,192,586
2017	772,432	1,014,585	1,274,693	1,819,133	2,698,118	3,538,209	4,745,243	6,371,927
2018	772,432	1,051,110	1,268,552	1,864,611	2,698,118	3,640,817	4,739,101	6,556,538
2019	772,432	1,088,950	1,262,472	1,911,227	2,698,118	3,746,400	4,733,021	6,746,577
2020	772,432	1,128,152	1,256,452	1,959,007	2,698,118	3,855,046	4,727,002	6,942,206
2021	772,432	1,168,766	1,250,493	2,007,983	2,698,118	3,966,842	4,721,042	7,143,591



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