



National Audit Office

DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS

Managing the waste PFI programme

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL | HC 66 Session 2008-2009 | 14 January 2009

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DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS
Managing the waste PFI programme

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Tim Burr
Comptroller and Auditor General
National Audit Office

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The National Audit Office
study team consisted of:

Mark Wynniatt and Andy Nichols,
assisted by Jemma Dunne, Jonathan Greenfield
and Joseph Holden under the direction
of David Finlay

This report can be found on the National Audit
Office web site at www.nao.org.uk

**For further information about the
National Audit Office please contact:**

National Audit Office
Press Office
157-197 Buckingham Palace Road
Victoria
London
SW1W 9SP

Tel: 020 7798 7400

Email: enquiries@nao.gsi.gov.uk

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SUMMARY

1 The European Union (EU) introduced a Directive in 1999 (“the EU Directive”) requiring all Member States to reduce the amount of biodegradable municipal waste (BMW) sent to landfill. BMW, which accounts for 70 per cent of municipal waste, is waste, such as food, vegetation and paper, that can be broken down by other living organisms.

2 The EU has set targets for the reduction of BMW sent to landfill because:

- biodegradable material sent to landfill prevents the recycling of waste and the recovery of energy from waste materials; and
- it can also release emissions: to the air, which may be harmful to the environment and contribute to climate change; and to soil and water, which can be harmful to health.

3 EU Member States will be subject to financial penalties if they fail to meet the landfill reduction targets for BMW. The targets for reduction in England are:

- by 2010 to reduce the weight of BMW landfilled to 11.25 million tonnes per annum (75 per cent of BMW landfilled in 1995);
- by 2013 to reduce the weight of BMW landfilled to 7.5 million tonnes per annum (50 per cent of BMW landfilled in 1995); and
- by 2020 to reduce the weight of BMW landfilled to 5.25 million tonnes per annum (35 per cent of BMW landfilled in 1995).

4 The Department for the Environment, Food and Rural Affairs (The Department) has a national strategy for waste disposal, which includes plans for meeting the EU Landfill Directive targets in England. Local authorities have statutory responsibility for municipal waste disposal. The Department decided that, to meet the targets, local authorities needed to invest in new waste infrastructure.

5 Local authorities decide the form of procurement for their waste infrastructure projects. Where authorities procure projects under the Private Finance Initiative (PFI), central government financial support, known as PFI credits, is available for approved projects. The PFI credit is an undertaking that central government will give annual grants to the value of the PFI credit to help local authorities service the cost of the projects.

6 So far, 18 local authorities have signed PFI contracts with a combined capital value of £1.6 billion. The Department has allocated around £750 million of PFI credits and in the Comprehensive Spending Review 2007 it received a further provisional allocation of £2 billion for waste projects.

7 PFI contracts are expected to cover around 80 per cent of the waste processed by new infrastructure coming into operation by 2013. Some local authorities, however, use other types of procurement for these projects. These other procurements account for most of the deals expected to close in 2008-09 and 2009-10. The non-PFI procurements are mainly small capacity projects but PFI continues to be used for the larger projects.

8 A previous National Audit Office report *Reducing the Reliance on Landfill in England (HC1177 2005-06)* examined the Department's initial response to the EU Directive. In this report we have examined the Department's management of its PFI waste infrastructure programme. We focus on three criteria:

- i whether a suitable programme of projects with a thriving, competitive supply market has been established;
- ii whether the projects have been delivered in a timely fashion; and
- iii whether the Department has applied appropriate oversight to the projects for which it is providing financial support.

9 This report focuses on PFI projects for which the Department has responsibility through granting PFI credits to local authorities. Many of the issues set out in the report will also be relevant to local authorities taking forward other forms of waste infrastructure procurement. Local Authorities are subject to inspection by the Audit Commission which published in September 2008 *Well disposed: Responding to the waste challenge*. The Audit Commission's report focussed on the local authorities' approach to the problem of BMW being sent to landfill.

Findings

Managing the programme

10 *The risks faced by waste infrastructure projects are different from those found in other PFI infrastructure projects.* They include: uncertainty over the volume of future waste throughput; planning permission difficulties due to concern by residents about the nature of the facilities being proposed; the risks of different types of waste treatment technology; and finding markets to sell products from waste treatment. PFI projects require interfaces between central and local government and sometimes between neighbouring local authorities. The supply side of the market was relatively undeveloped until recently and mainly focussed on waste collection and landfill.

11 The Department initially responded too slowly to these challenges. The EU Directive in 1999 created a need for a strategy for significantly increasing diversion of waste away from landfill. Before 2003 the Department's strategies lacked practical plans for reducing reliance on landfill. Only then did the Department start to address the complex issues involved in building new waste treatment infrastructure. As a result, the market for waste infrastructure projects developed slowly. Only two of the new waste infrastructure projects developed since the EU Directive (1999) have completed construction of all planned assets.

12 The Department has improved its approach to building a market for new waste infrastructure projects. In July 2006, the Department established a delivery unit, the Waste Infrastructure Delivery Programme (WIDP), to accelerate the delivery of waste infrastructure and to provide greater support to local authorities undertaking the projects. WIDP comprises staff from Defra, Partnerships UK and 4ps, who are managed as a single unified team led by the Defra Programme Director. WIDP currently has around 30 staff. The WIDP team has made considerable progress since 2006 in developing the market, including an increasing focus on energy from waste solutions. It has also sought to achieve value for money through agreeing with the market PFI contract terms relevant to waste projects and by improving oversight of the projects.

13 The actions implemented by WIDP have accelerated the rollout of new, larger projects with more contractors interested in bidding for these projects. Nine new contracts were signed in the two years to March 2008. At the time of our audit, June 2008, the Department had a pipeline of 19 other projects to be advertised in the next three years. The Department has been focusing on larger projects. Projects currently in procurement will, on average, process over twice as much waste as past contracts. The Department has also encouraged local authorities to secure economies of scale by promoting joint projects between neighbouring authorities. There was initially a small number of bidders but the Department's actions have helped stimulate bids from companies not previously involved, including overseas companies.

14 The cost of finance reflects the risks of waste projects and, in recent times, uncertainties in the financing markets. The risk margin for debt finance is higher for waste PFI projects than other PFI projects such as hospitals or schools. This margin reflects the complex risks of the waste projects. Also, lenders are not yet able to draw confidence from a flow of successful operational projects. In addition, all PFI projects have been facing higher financing costs in 2008 because of the uncertainties in the financial markets. In the longer term, there may be opportunities for the private sector to secure refinancing gains if these risks reduce. The Treasury has introduced a sliding scale whereby the public sector is now entitled to up to 70 per cent of refinancing gains on all PFI contracts signed during the current disruption to the credit markets compared with the previous normal arrangement of 50 per cent.

Delivering projects

15 There are long lead times for developing projects and bringing the assets into operation. It takes five to nine years to develop projects and bring assets into operation. Delays can occur prior to contract award and in bringing the new facilities into operation. Prior to contract award, PFI projects have been delayed by an average of 19 months compared to the original timetables. Some delays occur because projects need to improve their business cases to gain central government approval. The current difficulties in the financing markets are also delaying large deals. Some projects have, however, been funded by contractors out of existing financial resources giving the prospect of faster deal closure. After contract award, delays have occurred because some projects have encountered difficulty in obtaining planning permission.

Oversight of projects to ensure value for money

16 The Department has improved the oversight and support available to local authorities. The Department, through WIDP, has strengthened its oversight of projects. This action is aimed at reducing delays and achieving better deals. The Department has developed a range of guidance. WIDP is providing practical support by placing experienced commercial staff (known as Transactors) in procurement teams. The Department has also strengthened its quality assurance processes for scrutinising and challenging authorities' projects.

Achieving landfill targets

17 There is now pressure on the fulfilment of the EU landfill targets. The Department's slow start to programme management and the long timescales needed for bringing these complex projects into operation has created pressure on the EU landfill diversion targets. Based on current data:

- a** it is likely that the 2010 target for landfill reduction will be met.
- b** the 2013 target is challenging. It will not be met if there continue to be programme delays or the infrastructure built does not work as efficiently as expected. If the 2013 target is missed the EU is expected to levy fines on the UK, although the EU has yet to announce the rate of such fines. Central government has said that it will levy a fine of £150 per tonne if local authorities fail to meet their 2013 landfill targets.
- c** It is harder to assess whether the 2020 target will be met. The likelihood of meeting the target will depend on two factors: success of the PFI investment programme; and efforts by local authorities and consumers to produce less waste and recycle more.
- d** Achievement of the landfill targets is also dependent on bringing into operation the increasing proportion of projects which local authorities are carrying out under non-PFI procurements. As central government

funding support is not given to these projects there is at present no requirement for local authorities to submit information about these to the Department. Without this information the Department's ability to monitor progress is limited.

Value for money conclusion

18 The Department has allocated around £750 million worth of PFI credits to local authorities undertaking PFI waste infrastructure projects and in the Comprehensive Spending Review 2007 it received a further provisional allocation of £2 billion. Achieving value for money from this commitment depends on whether: enough PFI facilities are delivered to meet EU landfill targets; the deals give the prospect of value for money; and the projects are subsequently managed well in operation. The Department was initially slow to address these issues and prior to 2006 few new PFI facilities were delivered. Since 2006, the Department has adopted a programme management approach which has developed the market and achieved a more rapid flow of new and larger PFI contracts. It has strengthened its arrangements for oversight of, and support to, local authorities who enter into waste PFI contracts. England is likely to meet its 2010 landfill reduction targets but to meet the 2013 target the Department will need to reduce substantially the time taken to procure projects and bring them into operation.

1 Projected performance against EU landfill targets and potential fines if 2013 landfill target exceeded

		A	B	C = (A-B)	D	E = (C x D)
		Projected Biodegradable Municipal Waste to Landfill 000's of tonnes	Total allowance 000's of tonnes	Total excess over allowance 000's of tonnes	Fine per tonne of excess £	Total estimated fine for 2013 £m
Scenario 1	High Delivery	7,512	7,460	52	150	8
The Department's Base case						
Scenario 2	Medium Delivery	8,853	7,460	1,393	150	209
Scenario 3	Low Delivery	9,898	7,460	2,438	150	366

Source: Defra

NOTE

The fines are based on £150 per tonne sent to landfill in 2013 in excess of the 2013 EU landfill target. This is the rate that central government will fine local authorities for missing the 2013 targets.

Recommendations

We make the following recommendations to help the Department accelerate the successful delivery of waste management PFI projects.

I The Department is engaged in taking forward a challenging programme of procurements of projects which have complex risks. To help evaluation of the programme and the identification of areas for improvement, the Department should build on its existing management information and develop Key Performance Indicators. The Department should then publish annual performance statistics for the projects which it approves. These statistics should include:

- a** project delivery timescales, including separate monitoring of project approval, procurement and construction periods;
- b** the number and range of bidders for local authority waste PFI projects;
- c** the extent of price changes after selection of preferred bidder;
- d** authority satisfaction with support received from WIDP; and
- e** whether the services in operational projects are being delivered in line with the contract.

II Local authorities would value greater access to benchmarking information and data that could help them plan procurements effectively. The Department should complete its current work in compiling benchmarked costs of infrastructure for different types of waste project. This information will help local authorities to plan projects and to evaluate bids. The Department should also supplement its existing guidance by collating the following information and making it available to authorities to assist in the development of projects:

- a** Internal and external resource requirements for different types and size of project including appropriate budgets for the use of external advisers.
- b** A standard set of assumptions for authorities to use in project plans on key variables such as waste growth. Local authorities may still wish to carry out sensitivity analysis based on alternative assumptions.
- c** Information on how to handle the interfaces within the waste management system where waste collection is excluded from the PFI contract.

III The financing costs for waste PFI projects are higher than many other types of PFI projects and, like other PFI projects, are affected by the current uncertainties in the financing markets. The Department should:

- a** check that the cost of finance for waste PFI projects can be shown to be reasonable for the risks borne either through a funding competition or benchmarking;
- b** analyse trends in the differential between the cost of finance for PFI waste projects and other types of PFI project to establish the scale of, and reasons for, the difference; and
- c** set out the assessment local authorities should undertake where a contractor proposes to finance construction through its own resources. This form of financing may avoid delays or price uncertainties in raising project finance in the current financing markets. Authorities should, however, not see faster deal closure as the main reason for choosing a contractor but should weigh this alongside other value for money considerations.

IV To date the Department's support to local authorities has mainly focused on project development and procurement. It is now beginning to consider contract management. The Department should increase its oversight of projects after contract award and particularly during the construction phase by:

- a** building on its existing model of providing experienced individuals to assist with project development and procurement and making sure input is available after contract award if required;
- b** establishing minimum standards for resourcing contract management and encouraging local authorities to plan for the handover from procurement to operational contract management; and
- c** increasing the frequency of monitoring returns from local authorities during the construction phase to at least quarterly, rather than six monthly, from contract award until asset construction is complete and all facilities are operational.

V Gaining planning permission for new waste treatment facilities is a challenge for local authorities. There is often concern by residents about the nature of the facilities being proposed, resulting in objections which can cause substantial delays to the Department's programme. The Department should encourage local authorities to consult early with residents to identify issues which residents are likely to raise about different types of technical solution. The Department should complete its planned communications toolkit to assist authorities.

VI The achievement of the EU landfill targets will be dependent on local authority projects using forms of procurement other than PFI. The Department should obtain sufficient information from local authorities in the form of business cases and progress reports to enable the Department to assess the deliverability of these projects within the forecast timetables. The Department's oversight disciplines for PFI projects, for example its review of business cases and the involvement of Transactors as a support to project teams, may also be helpful to local authorities using other forms of procurement.

PART ONE

The role of PFI in reducing municipal waste sent to landfill

1.1 The European Union introduced a Directive in 1999 requiring all Member States to reduce the amount of BMW disposed of in landfill sites. England, in common with the UK as a whole, has historically relied heavily on landfill. The EU landfill targets for England are set out in **Figure 2**. Many other European countries have already met their EU landfill targets. England is having to increase waste recycling and invest in substantial new waste treatment infrastructure to achieve its targets.

1.2 England has 121 waste disposal authorities, comprising 34 county councils, 81 unitary authorities and 6 statutory waste disposal authorities. The waste disposal authorities have responsibility for the treatment and disposal of municipal waste.

The Government has created the following financial incentives for these authorities to divert waste from landfill in line with the European Union targets.

- **The Landfill Allowance Trading Scheme (LATS):** introduced in 2005. Local authorities are each assigned a landfill allowance, which is reduced each year to reflect the national landfill reduction targets. If local authorities exceed their allowance, they must purchase additional allowances from authorities with a surplus of LATS, at a market rate.
- **Landfill Tax:** this tax, introduced in 1996, applies to all users of landfill. The 2007 Budget Statement announced that the landfill tax would increase more quickly and to a higher level than previously planned. Increases of £8 per tonne per year for active waste were announced from 2008-09 to at least 2010-11, rising to a rate of £48 per tonne. Landfill tax receipts have risen from £333 million in 1998-99 to £877 million in 2007-08.

1.3 Local authorities and consumers have responded to the challenges of reducing landfill and waste. Over the last three years recycling has increased and waste growth has slowed from a rate of 3 per cent in 2001-02 to 1.4 per cent in 2006-07.¹ Together these factors have led to a significant decrease in the amount of municipal waste sent to landfill compared with 2001 levels (**Figure 3**). Waste is also an increasingly important source of renewable energy: in 2006, 82 per cent of all renewable energy in the UK was derived from bio fuels and waste.² The waste element included both waste combustion (such as incineration) and landfill gas.

2

EU Landfill directive targets for reducing the amount of BMW sent to landfill in England

EU Landfill Directive Target¹

Year	Target as a proportion (by weight) of BMW produced in 1995 (%)	Equivalent in millions of tonnes per annum (compared with 15m tonnes in 1995)
2010	75	11.25
2013	50	7.50
2020	35	5.25

Source: Defra

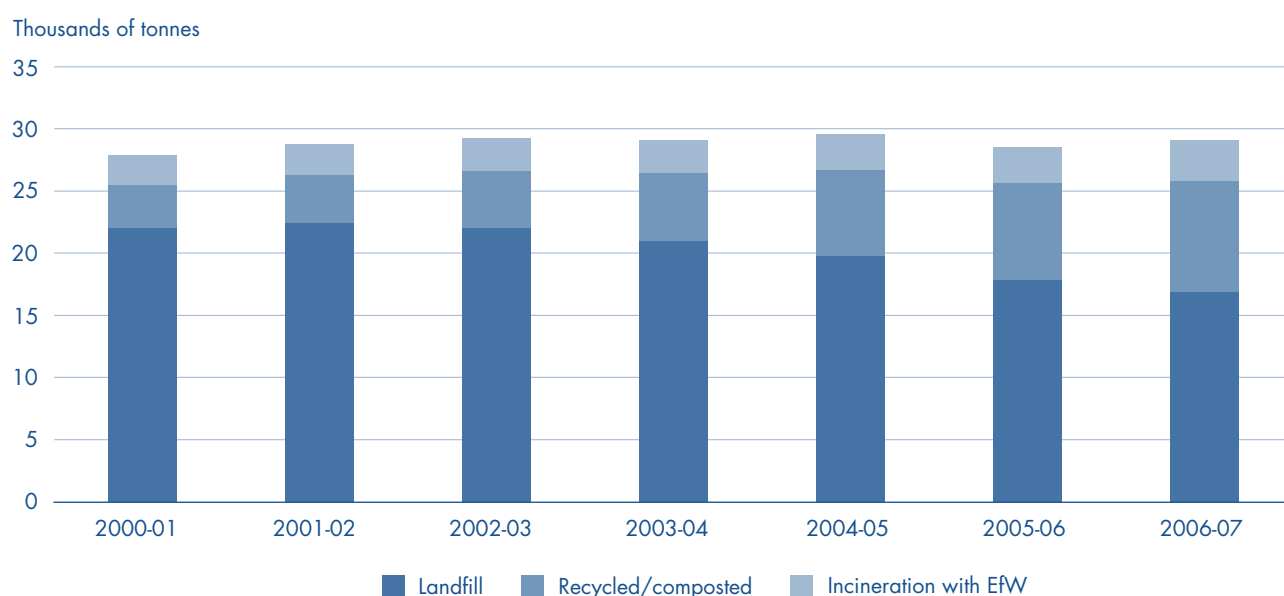
NOTE

¹ The European Union agreed to defer the target dates for the United Kingdom and Spain by four years because they sent more than 80 per cent of their municipal waste to landfill in the baseline year (1995).

¹ Source: Defra.

² Source: BERR (2007) UK Energy in Brief, July 2007.

3 The amount and proportion of municipal waste being sent to landfill has reduced in recent years as recycling has increased



Source: National Audit Office analysis of Defra's municipal waste statistics

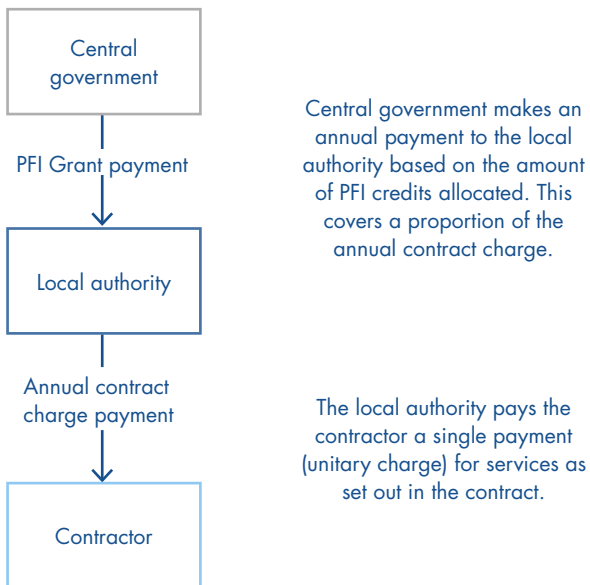
1.4 The Department cannot mandate local action on waste management. Local authorities have statutory responsibility for waste disposal. It is for local authorities to decide how to manage waste, whether to invest in new infrastructure and how to finance and manage this investment.

1.5 The PFI has been an important means for local authorities to finance and build the facilities required. Central government financial support in the form of an annual grant payment, following the allocation of what is known as a PFI Credit (**Figure 4 overleaf**), is available to local authorities for projects approved by central government. Local authorities also use other types of procurement, however, including other public private partnerships. These projects do not receive PFI credits. Although PFI contracts account for most of the new waste treatment capacity being brought into operation by 2013 these other procurements account for most of the deals expected to close in 2008-09 and 2009-10.

1.6 To get PFI credits the authorities must have their plans approved first by the Department and then by the cross-department Project Review Group. The Project Review Group is a panel of experts chaired by the Treasury, with permanent representation from the Department for Communities and Local Government and the Public Private Partnerships Programme (4ps). 4ps work in partnership with all local authorities to secure funding and accelerate the development, procurement and implementation of PFI schemes, public private partnerships and other complex projects and programmes. The approval process is set out in detail in Appendix 4.

1.7 At the time of our audit, 18 local authorities had signed PFI contracts with a combined capital value of £1.6 billion. The Department has allocated £750 million in grant through PFI Credits to support these projects throughout their term. Nine more were in procurement and a further 19 were in development. In the Comprehensive Spending Review 2007 the Department received a further provisional allocation of £2 billion for waste projects.

4 Meeting the cost of local authorities' PFI contracts



PFI Credits

Local authority PFI support is allocated by central government in the form of PFI Credits for projects which gain central government approval. PFI Credits act as a promise that an annual PFI Grant can be claimed once the project is operational.

Requests for additional credits if the cost of the project increases during the procurement are scrutinised by the Department on a case-by-case basis. To date the Department has not provided additional financial support for changes to projects made or proposed after contract signature.

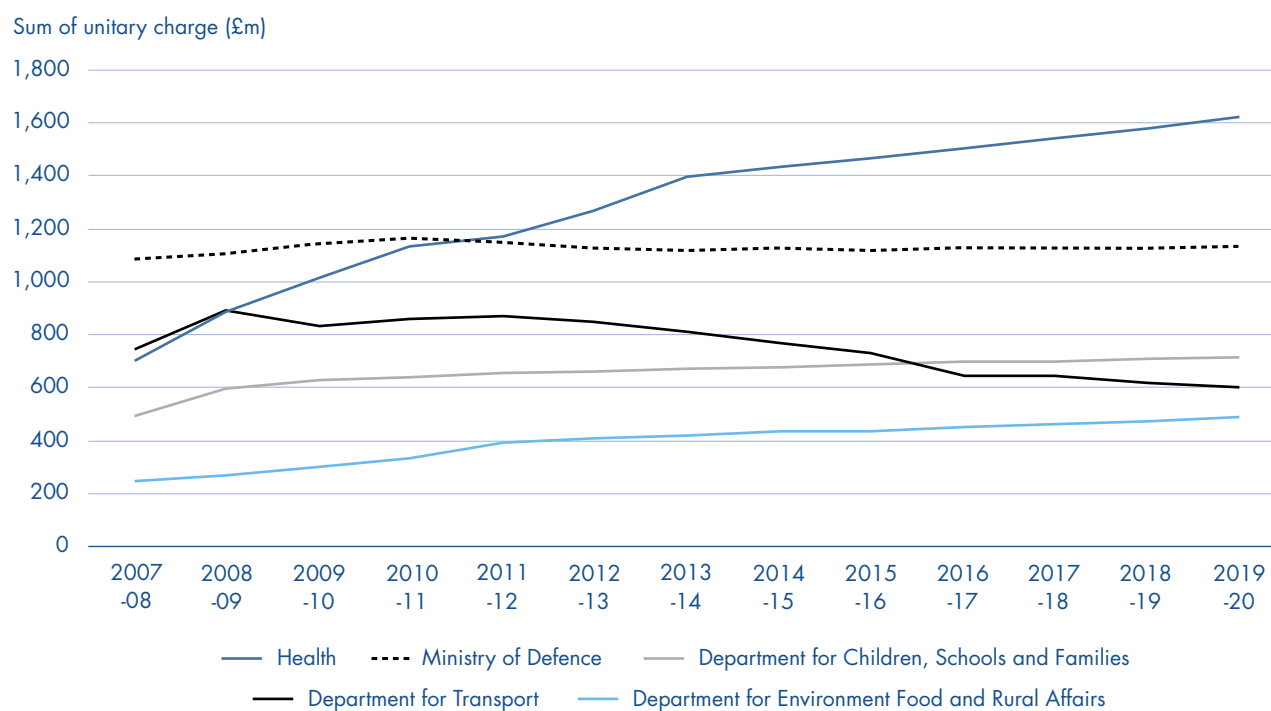
Source: National Audit Office

1.8 As a result of this increased investment, the aggregate annual payments are now around £220 million on all PFI waste contracts. The aggregate payments are expected to rise substantially as more projects are approved and come into operation. **Figure 5** compares the projected spending on the Department's waste PFI projects to the spending of other departments who are major users of PFI.

1.9 Waste PFI projects can be complex and differ from traditional uses of PFI in several important respects.

- **Waste management is an industrial process, with several components** including collection, recycling and composting and finally treatment of waste (**Figure 6 on pages 14 and 15**).
- **More risk is carried into the operational phase than a serviced asset such as a school or hospital** because of the reliance on technology and the different parts of the waste management process working together.
- **Where local authorities seek PFI credits from the Department, the project requires coordination between central and local government.**
- **Some projects serve more than one local authority and therefore require coordination across authority boundaries.**
- **Projects have risks which are different from those found in other PFI infrastructure projects**, including uncertainty over future waste throughput; planning permission difficulties; the risks of different types of technology; and finding markets to sell products from waste treatment.
- **There are other Government objectives to consider**, such as increasing the use of renewable energy and reducing the impact of climate change (Appendix 5).

5 Comparison of projected spending on waste PFI projects with the PFI portfolios of other departments



Source: HM Treasury

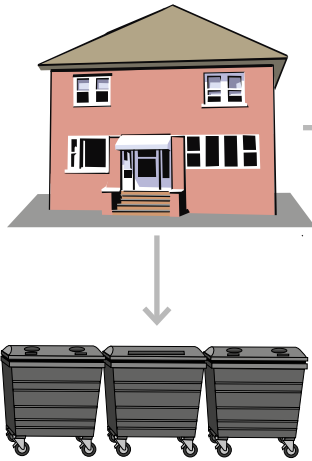
NOTES

The unitary charge figures for Defra comprise:

- 1 Unitary charge payments for waste projects by local authorities (98 per cent of total payments to 2020).
- 2 Three small (non-waste) PFI projects: (2 per cent of the total unitary charge payments to 2020).

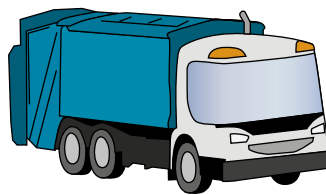
6 An overview of the facilities that may be procured and operated as part of a waste management PFI contract

Integrated waste management contracts may include all these services under one contract, although only a minority include collection.



Residents often take materials directly to recycling centres

A facility provided by the Waste Disposal Authority which is available to the public to deposit waste which cannot be collected by the normal household waste collection round. Also referred to as Civic Amenity Site or Household Waste Disposal Compound.



Waste Collection Services

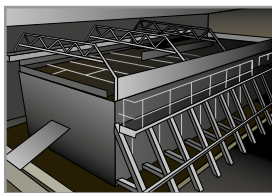
Waste from our homes is generally collected under contract with the local waste collection authority, which is typically a district council (in areas with a two-tier system) or a unitary authority.

Since May 2006 PFI contracts will mainly be for treatment facilities only. Local authorities will need to procure separate contracts for other facilities and manage the interfaces between them.

Waste Treatment Facilities

Non-thermal treatment processes

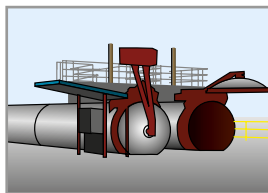
Segregated organic waste



Composting

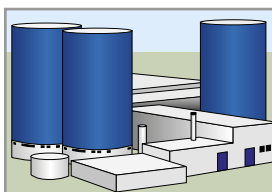
methods such as in-vessel composting and windrow composting (where waste is piled in long rows called windrows) involve breaking down biodegradable material to form compost.

Mixed materials



Autoclaving systems

where waste is treated by steam to enable the recovery of mixed organic waste.



Anaerobic Digestion

involves breaking down biodegradable material in the absence of oxygen.

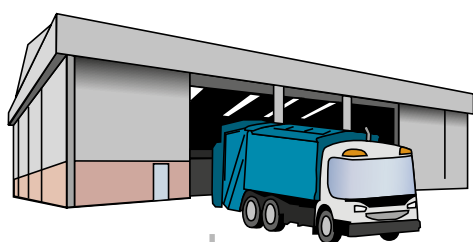


Mechanical Biological Treatment (MBT)

involves a series of treatment steps to convert the residual waste into a stabilised product that can either be applied to land, used as a fuel or sent to landfill, depending on the process and what other facilities are in place. Sometimes these facilities are procured alongside a thermal treatment to burn the fuel.

Source: National Audit Office

Recycling and Processing facilities



Waste Transfer Station

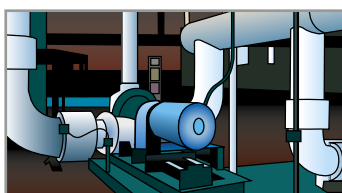
Transfer Stations are used as a base for the operation of refuse collection vehicles in addition to waste disposal. Once collected the waste is often brought to a transfer station. After being checked for dangerous or hazardous materials that may be present waste may then be sent to recycling or disposal facilities. Transfer Stations are also used as a base for refuse collection vehicles.

Material Reclamation Facility

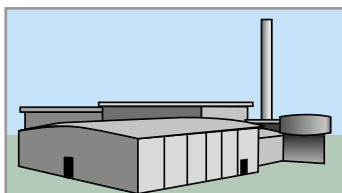
Accepts recyclable commingled materials that have been collected at kerbside and separated at source, or from a recycling centre.



Thermal treatments



Gasification and Pyrolysis involves heating the waste, so that it is turned into a fuel, which can be used to generate energy.



Energy from waste incineration these systems burn, or incinerate, the waste directly and recover energy and/or heat.

Waste that cannot be recycled or otherwise treated is sent to landfill. In addition, some treatment processes produce material (such as ash) that is sometimes sent to landfill.



Landfill

Landfill capacity is still required to store waste that cannot be recycled or recovered using other facilities.

PART TWO

The Department's management of the waste PFI programme

2.1 The Department's management of the waste PFI programme has required it to address three main issues:

- i** the establishment of a programme of projects and a thriving, competitive supply market (section A);
- ii** the delivery of the projects in a timely fashion (section B); and
- iii** the appropriate oversight of individual projects so that the deals entered into by local authorities are likely to secure value for money for the taxpayer (section C).

A) Establishing a programme of projects and a supply market

Establishing a programme of projects

The amount of PFI Credits available

2.2 The amount of PFI credits allocated to the Department as part of the Government spending reviews has been a factor affecting the number and size of PFI projects local authorities have undertaken. PFI credits were limited in the early years of the programme (especially prior to 2003) (**Figure 7**). There were not always sufficient PFI credits available to fund all local authorities' requests for financial support and it was necessary to ration funds between projects.

The Department's initial approach to programme management

2.3 The Department needed to encourage local authorities to make the best use of resources available. However, the Department was slow to develop a rigorous approach to establishing a programme of projects, which limited the number and size of projects being developed. Prior to 2003 in particular, there were shortcomings in three areas.

7 The Department's allocation of PFI credits was increased substantially in the 2007 Spending Review

Spending Review (Year)	PFI Credits allocated to the Department (£m)	Maximum PFI Credit for any project allowed by the Department (£m)
2002	355	25
2004	275	40
2007	2,000	No absolute limit (credit capped at maximum of 50 per cent of capital cost of projects)

Source: Defra PFI project approval criteria

- **The approach to programme management was not sufficiently well organised.** Until 2003 it was not clear to local authorities where responsibility for managing the programme lay within the Department. In 2003 the Department introduced a Waste Implementation Programme to oversee its overall strategy on recycling and waste management, which established an identifiable leadership and management structure. Local authorities have noticed an improvement in communication as a result of this change.
- **The PFI programme was not focused on landfill diversion.** The Department's first standard criteria for the approval of PFI projects, released in 2001, did not focus explicitly on landfill diversion or the EU directive. In 2003 the Department updated its criteria so that project targets had to be specified in terms of the landfill diversion targets. The 2001 criteria also discouraged the use of energy from waste (incineration) as a means of diverting waste from landfill. The 2003 criteria removed this restriction.
- **There was no systematic approach to bringing forward and prioritising projects.** Projects were approved on a case by case basis. There was no explicit focus on encouraging the authorities that were sending the most waste to landfill to develop new infrastructure.

The Department's subsequent action to improve programme management

2.4 In July 2006, the Department set up a delivery unit, the Waste Infrastructure Delivery Programme (WIDP), to accelerate the delivery of waste infrastructure. WIDP is supported by Partnerships UK and 4ps, the project advisory bodies for central and local government. WIDP's annual budget is over £4 million. Currently it has around 30 full time equivalent staff comprising a mix of departmental staff, staff contracted from Partnerships UK and 4ps and specialists seconded from other agencies (**Figures 8 opposite and 9 overleaf**). Programme management activities undertaken by WIDP are listed at Appendix 7.

2.5 WIDP has overseen major changes to both the financial resources associated with the programme and the way in which projects are organised and prioritised:

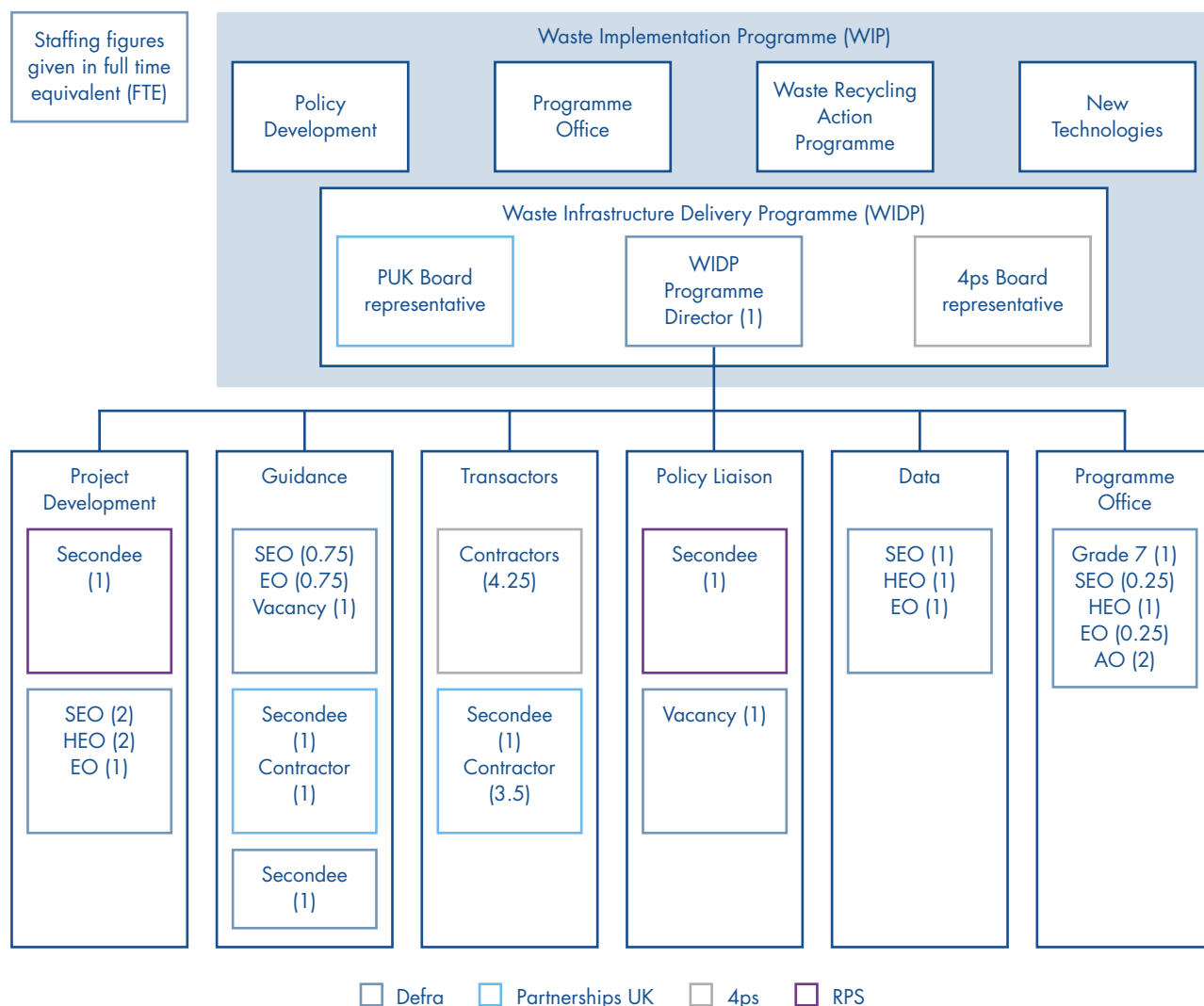
- The 2007 Spending Review allocated a substantial increase in PFI Credits for waste projects. The Department has received a provisional allocation of £2 billion (figure 7). The Department is using this increase both to fund more projects and also to provide individual projects with more PFI Credits. There is no longer a limit on the PFI Credits available to each project although the credit is capped at a maximum of 50 per cent of the capital cost.
- WIDP has improved the organisation of the forward programme. It now invites local authorities to develop projects for the Department's approval in organised procurement rounds. This replaces the previous 'first come, first served' approach. The Department publishes the forward programme on its website to allow contractors and other authorities to see what projects are likely to be coming to market.

8 Budget allocation for running WIDP

Year	Budgeted Cost (£m)
2006-07	2.7
2007-08	4.5
2008-09	4.4

Source: Defra

9 WIDP organisation chart



Source: Defra

The effect on the number and timing of projects

2.6 PFI projects were advertised and signed at a slow rate prior to 2004. This rate has now increased (**Figure 10 overleaf**), reflecting both the improvements in programme management and the increasingly tough landfill restrictions that local authorities face.

2.7 The Department expects a substantial number of further contracts to be let over the next five years (**Figure 11**). Although PFI will continue to play a significant role in delivering these projects, not all of these will necessarily be funded by PFI. For example, a local authority can raise its own finance, known as Prudential Borrowing, if it can prove that it can repay the loan through its own resources. The Local Government Act 2003 entitles authorities to borrow on this basis without the consent of central government.

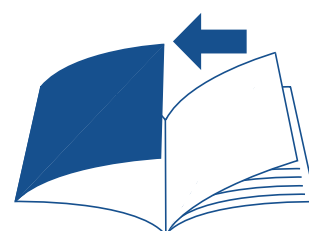
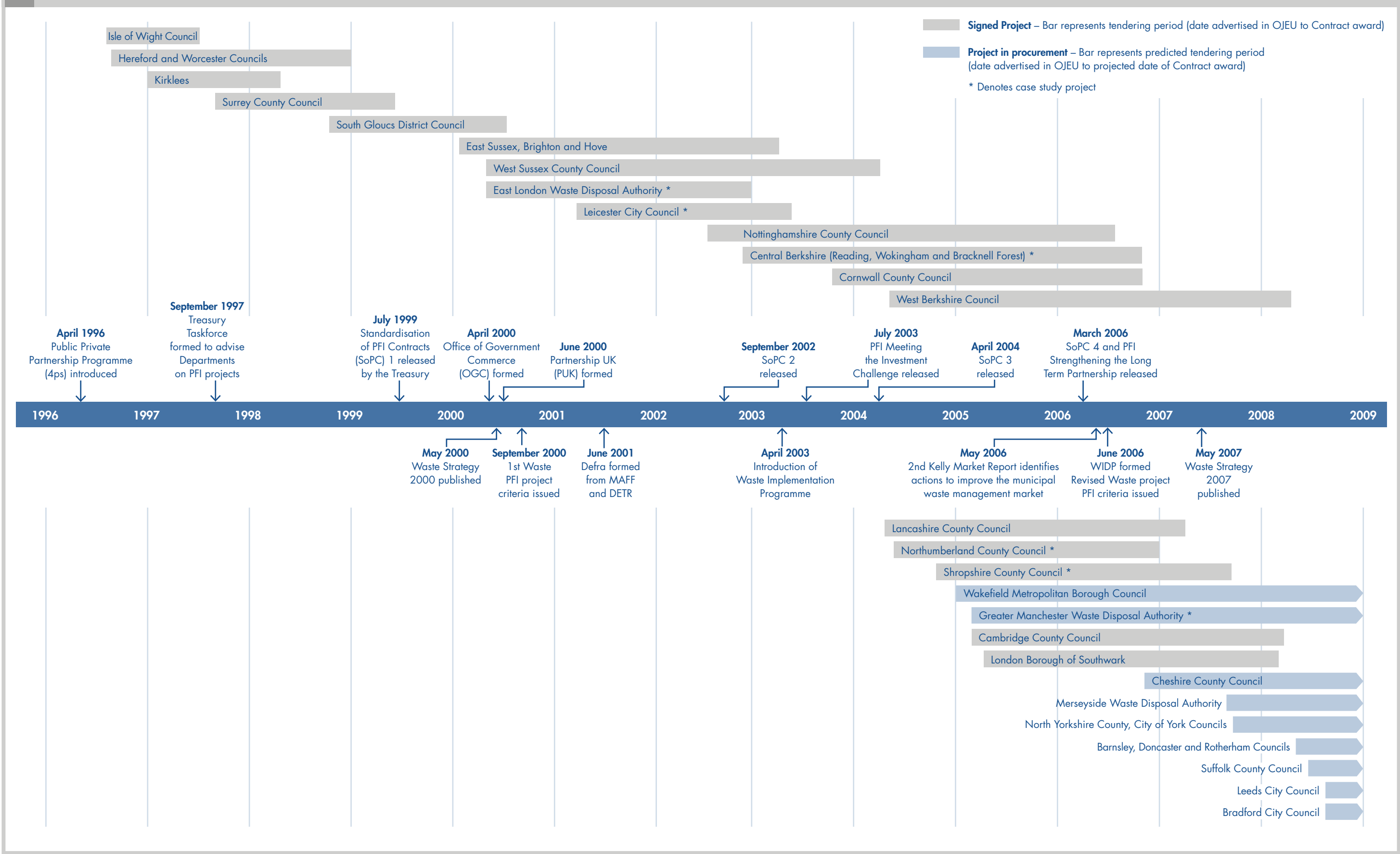


Figure 10 overleaf

10 Overview of waste PFI projects (signed and in procurement) and key developments policy (top) and programme management (bottom)



2.8 Local authorities are developing projects in greater numbers than in previous years: at summer 2008, nine projects were in procurement and a further 19 had submitted a business case, or expressed an interest in using PFI. Projects yet to start procurement will not contribute significantly to landfill diversion in time for 2013, though they will make a substantial difference to the 2020 target.

The effect on the size of projects

2.9 Authorities signing contracts to date were not those responsible, on average, for sending the largest amounts of waste to landfill. In our 2006 report we recommended that the Department prioritised authorities that historically sent the largest amounts of waste to landfill.

2.10 The Department has made progress in this area. Projects in procurement in the summer of 2008 were significantly larger in terms of tonnes of waste sent to landfill, because the sponsoring authorities originally sent more waste to landfill (**Figure 12**). These larger projects are critical to delivering the 2013 landfill target.

2.11 The Department has also sought to increase the size of projects by encouraging neighbouring authorities to develop joint projects. The potential benefits of joint projects are: fewer facilities needing planning permission; economies of scale in project costs; the pooling of risks; and possible operating benefits from a joined up local approach to waste management. The majority of contracts signed to date have been single-authority deals. There are, however, good examples of collaborative working between local authorities to date, including:

- neighbouring authorities working together such as East Sussex and Brighton and Hove Councils, Herefordshire and Worcestershire, three councils within Central Berkshire (Wokingham, Bracknell Forest and Reading) and Lancashire with Blackpool; and
- where a waste disposal authority has worked with collection authorities in its area to agree an integrated strategy to procure 'joined up' services which include residual waste facilities. Examples have been East London Waste Authority and Greater Manchester Waste Authority.

11 The Department's planned programme of contracts to be let

2007-08 (Actual)	2008-09	2009-10	2010-11	2011-12	Total
4	5	6	13	12	40

Source: Defra

NOTE

These projects will be delivered by PFI or other forms of procurement.

12 The average amount of waste being dealt with in each future PFI project is expected to be greater than that dealt with in the projects where contracts have already been entered into

Status of project at the time of our audit	Entered into PFI contract	PFI project in procurement	Developed project plans (Outline Business Case submitted)	Initial expression of interest	No PFI solution currently proposed
Waste to landfill (thousands of tonnes in 2006-07)					
Average (per project)	171	376	291	299	n/a
Average (per authority involved)	140	260	174	166	90

Source: Defra municipal waste statistics

2.12 The Department's efforts to encourage joint working have had an effect. Projects in procurement and at an early stage of development are involving a greater number of authorities for each project than the projects for which contracts have been let (**Figure 13**).

Establishing a supply market

Developing a competitive marketplace

2.13 Competition between bidders is an important factor in achieving value for money. Developing a competitive supply market in the waste sector has been challenging. Up until 2006:

- the waste contractor market in the UK as a whole had been dominated by a small number of firms³, whose activities had been centred on waste collection and landfill;
- contractors and lenders needed to assess a range of new risks, including the possibilities of using different technologies; and
- there were very few suppliers equipped to develop plans for waste treatment infrastructure of the size required or to bid simultaneously for a number of projects.

2.14 There has nevertheless been competition for waste PFI contracts. Twelve of the 17 projects developed since the Department was formed in 2001 received three or more bids (**Figure 14**). Initially there were only a small number of projects coming to the market. The Department has worked with the Department of Business, Enterprise & Regulatory Reform and UK Trade and Industry to encourage firms to bid for these contracts. Since the Department started to increase the number of projects, there has been a corresponding increase in the number of firms interested in bidding.

2.15 Although there have been sufficient bidders to generate competition for the contracts, the range of successful bidders has been relatively restricted. Two firms, SITA and Veolia, have won ten out of the 18 PFI waste contracts let to date, including six of the nine projects signed in 2006-07 and 2007-08 (**Figure 15**). Veolia won three of the four contracts let in 2007-08. Veolia's bids proposed to finance the projects out of Veolia's existing financial resources, rather than seeking specific new project related finance. Amongst the factors in appointing Veolia was the prospect of faster deal closure than alternative bids relying on project finance.

13 The number of authorities involved in individual PFI projects is increasing

Status at the time of our audit	Entered into PFI contract	PFI project in procurement	Developed project plans (Outline Business Case submitted)	Initial expression of interest	No PFI solution currently proposed
Number of Projects	18	9	9	10	n/a
Waste Disposal Authorities involved	22	13	15	18	51
Authorities per project	1.2	1.4	1.7	1.8	n/a

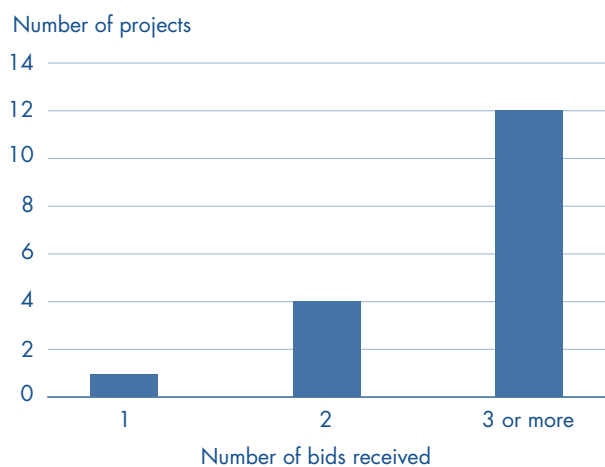
Source: PFI pipeline and Defra municipal waste management statistics

NOTE

The number of authorities is one greater than the number of waste disposal authorities in England (122 as opposed to 121) because one authority that has already let a contract is also part of another potential project at an early stage of development

³ OGC (2006) OGC Kelly Report to the Financial Secretary to the Treasury.

14 Projects and bidders since 2001



Source: Defra

2.16 In exceptional cases where competition is absent, local authorities and the Department adopt alternative procedures to provide assurance on value for money.

Case Example 1 overleaf shows how one local authority dealt with a lack of competition for its project after a number of bidders withdrew from the competition.

2.17 The Department's recent strategy, implemented by WIDP, has sought to strengthen competition for these projects by:

- educating the business community about the waste sector to widen the range of potential bidders; and
- focussing on contracts for waste processing and disposal that exclude other aspects of waste management, such as waste collection and recycling.

15 Successful bidders for PFI contracts since 1997

Project Signed	SITA	Veolia	Biffa	Donarbon	Focsa	Shanks	Viridor	Global Renewables	Waste Recycling Group	Total
1997-98	–	–	1	–	–	–	–	–	–	1
1998-99	1 ¹	–	–	–	1	–	–	–	–	2
1999-00	1	–	–	–	–	–	–	–	–	1
2000-01	1 ¹	–	–	–	–	–	–	–	–	1
2001-02	–	–	–	–	–	–	–	–	–	–
2002-03	–	1	–	–	–	1	–	–	–	2
2003-04	–	–	1	–	–	–	1	–	–	2
2004-05	–	–	–	–	–	–	–	–	–	–
2005-06	–	–	–	–	–	–	–	–	–	–
2006-07	2	1	–	–	–	–	–	1	1	5
2007-08	–	3	–	1	–	–	–	–	–	4
Total	5	5	2	1	1	1	1	1	1	18

Source: Defra portfolio of projects

NOTE

1 In these cases SITA acquired the contracts through merger with or acquisition of the original contractor.

CASE EXAMPLE 1

Northumberland County Council: dealing with a single tender

In 2004 five bidders pre-qualified and submitted outline solutions for this project. Of these, one experienced financial difficulties and one was deselected by the Authority. Two more bidders subsequently withdrew, citing commercial reasons. A single tender was received from SITA, the incumbent waste service provider.

The Authority undertook a full evaluation of SITA's bid. From this the Authority considered it worthwhile to proceed with the procurement process. In seeking approval the Authority also detailed the measures it would take to determine value for money in the absence of direct competition. The main measures were:

- transparent negotiation, including benchmarking against other PFI projects where possible; and
- the use of advisers to review SITA's proposal.

The Department agreed that the procurement process could continue on this basis, but that the project would be subject to a detailed review prior to progressing to appointment of preferred bidder status.

The focus of the negotiations with SITA was improving project affordability. The mechanical biological treatment based proposal was eliminated. The focus was placed on energy from waste and increasing the projected landfill diversion rate. This strategy achieved the desired objectives and resulted in a significant reduction in price between SITA's tender submission and its appointment as preferred bidder. Further price reductions were achieved prior to contract signature.

Throughout the process, the Authority, together with the bidder SITA, the Department, the Treasury and Partnerships UK, used the methods the Authority had proposed to secure value for money in the absence of direct competition. In addition there was a three-month review, conducted by the Treasury.

Overall the procurement took 32 months to complete, which although longer than originally planned, was in line with the experience of waste PFI projects at this time – see figure 10.

2.18 These approaches have started to make an impact. General construction companies and overseas companies have made bids for recent projects. For example, the Australian firm Global Renewables in partnership with Lend Lease Corporation has won a PFI contract with Lancashire County Council and Cambridgeshire County Council has entered into a contract with Donarbon Waste Management Ltd, a local firm. More new entrants are currently engaged on projects at an advanced stage of negotiation and have been appointed as preferred bidders: in Greater Manchester a consortium of Viridor and John Laing and in Wakefield VT Group plc, through VT Environmental Engineering and its recently acquired Estech Europe subsidiaries.

Commercial terms

2.19 The Department developed, in consultation with the private sector, contract terms which vary the Treasury's standard PFI terms. These amended terms seek to secure value for money on issues specific to PFI waste projects. Local authorities are expected to incorporate these terms in their PFI waste contracts.

Financing projects

2.20 Many of the banks and other funders that finance other PFI projects are now interested in waste PFI. There are two main components to the cost of debt finance for waste PFI projects: the underlying interest rate and the risk margin. The risk margin reflects the complex risks of waste projects and the fact that waste projects do not display the uniformity of other PFI building projects such as hospitals or schools. In addition, all PFI projects have been facing higher risk margins in 2008 compared with previous years because of uncertainties in financial markets (**Figure 16**). Recent decreases in underlying interest rates should, however, be an offsetting factor in future deals.

2.21 If financing markets recover there may be opportunities for the investors to refinance PFI waste projects on improved terms. As from October 2008, the Treasury expects all PFI contracts that are signed during the current disruption to the credit markets to require up to 70 per cent of refinancing gains to be given to the public sector. The previous normal arrangement was 50 per cent.

Wider markets for the products of waste treatment

2.22 To date there have been limited markets for products from the waste treatment process, particularly mechanical biological treatment. These products include solid recovered fuel (SRF) and compost-like materials. Potential sales of these products provide opportunities for contractors to generate revenue, which may reduce the price of the project to the authority. Energy companies are potential purchasers of products. Producing energy from waste is however subject to various regulations and also competition from overseas companies. Some authorities have had to develop alternative strategies for disposing of the products, including sending them to landfill (see Case Example 2).

2.23 The Department recommends that local authorities do not rely on sales of products to fulfil either affordability or landfill diversion requirements. Energy from waste incineration is currently likely to be more affordable to local authorities, but is unpopular with local residents, increasing the risk of delays to obtaining planning permission.

2.24 There are also markets for materials recycled from waste. Contractors often have the opportunity to derive income from selling recyclable materials. Market rates for recyclable materials such as plastic and metal have increased substantially in recent years. Some authorities have contracts which have not entitled them to benefit from this increase in the rates for recycled materials. The Department is encouraging recycling and now expects local authorities to provide for revenue sharing in their contracts.

B) Delivering projects

2.25 For the EU landfill targets to be achieved, the new facilities must be delivered to the timescales planned. Capital intensive waste treatment facilities, which provide significant diversion from landfill, have however often been subject to delays compared to the project timetables. In total, it takes between five and nine years from the planning stage to bring these new facilities into operation. Delays can occur at project development, procurement and after contract letting.

16 Typical risk margins on waste PFI projects compared with other PFI projects

	Waste PFI projects (%)	Other PFI infrastructure such as hospitals and schools (%)
Before the effects of the current problems in the financing markets	1.2	0.8–1.0
Including the effects of the current problems in the financing markets ¹	1.7+	1.3+

Source: Defra and PUK database of projects

NOTE

¹ Since the problems in the finance markets few deals have been closed and financing rates have been volatile and a wide range of rates have been experienced.

CASE EXAMPLE 2

Waste products and the wider market

Leicester City Council's PFI project, signed in 2003, utilises mechanical biological treatment technology that produces a fuel material from mixed wastes. The facility is not yet fully operational to expected contract output standards due to post contract modifications to the anaerobic digester. It should, however, realise its full potential by December 2008.

The contractor has found the market for solid recovered fuel is currently restricted and the use of it is generally concentrated around use in cement kilns. The contractor on this project also indicated that overseas companies were able to provide higher specification materials for similar prices.

If the material cannot be used or sold it is sent to landfill. The waste counts as Biological Municipal Waste (BMW). The amount is significant – 20,000 tonnes in 2007 – enough to impact on the diversion performance of the project as a whole. Liability has been disputed between the authority and the contractor: it costs approximately £25 a tonne (at present) to send this material to landfill and this cost will rise as landfill costs increase.

With the Department's issue of the May 2006 PFI credit allocation criteria, authorities are now required to identify firm outlets for solid recovered fuel as a condition of credit award.

Project Development

2.26 The Project Review Group has often required local authorities to make changes or improvements to project business cases prior to approval. The most common issues have been related to the project's approach to obtaining planning permission. Revising business cases can take several months which local authorities have not always allowed for in their timetables. More recent business cases presented to the Project Review Group have been approved at their first consideration.

Procurement

2.27 In our 2006 report *Reducing the Reliance on Landfill in England*⁴ we found that the average procurement period for waste management contracts approved since 2000 was approximately two years. Similar findings were obtained in a survey conducted by the Office of Government Commerce in 2005. The average tendering time for contracts signed since the formation of the Department in 2001 has increased to 38 months, slightly higher than the average for all projects across central government of 34 months we reported in 2007.⁵ In part the increase in waste PFI procurement times reflects the fact that recent contracts have tended to be larger and more complex than the early contracts.

2.28 A further issue affecting waste procurement times is that there have sometimes been changes to authorities' plans for the method of delivering the waste solution, or affordability issues have required the scope to be reconsidered. **Figure 17** shows examples of changes to projects between the Outline Business Case and Full Business Case stages. Figure 17 also shows that there can be considerable increases to the costs of projects whilst they are being developed. In the projects shown the cost increases were due to initial underestimates. The changes to the proposed technologies were made in part to reduce costs and were not a factor in the cost increases.

2.29 In each of the cases set out in **Figure 17** the Department sought information from the authority to explain the change in technology and cost, including confirmation from the respective Councils that they were committed to funding the project. Nevertheless, changing the plans for the projects inevitably added to the procurement times.

2.30 There is scope for reducing waste PFI procurement times. The Department has set a target average of 24 months for future procurements, though only four, relatively simple, projects have previously been procured within 24 months. Achieving the Department's target will be challenging as the current difficulties in the financial markets are adding to the time needed to close some deals. Also changes to EU procurement rules, known as the Competitive Dialogue, now require material issues to be discussed with all final bidders before selection of the preferred bidder.

2.31 Achievement of the EU landfill targets depends on efficient procurement completed within timescales which have been accurately forecast. Procurement timetables set out in business cases were, like the cost estimates, often optimistic. We found that the projects signed since the formation of the Department in 2001 were signed, on average, 19 months after the date set out in the approved Outline Business Case⁶, reflecting delays in both the development and procurement phases.

After contract award

2.32 Projects have also been delayed after the award of contracts, particularly in the construction phase. The most serious delays have been to the main treatment facilities such as energy from waste and mechanical biological treatment plants which come at the end of the waste treatment process. These residual waste treatment plants are particularly important because they are typically the most expensive single element of the contract and tend to provide the highest tonnage diversion from landfill of the facilities commissioned.

2.33 The factors most likely to cause delays are: failure to acquire a suitable site for construction; failure to gain planning approval for the facilities, or both. Some early projects suffered significant delays as a result. For example, in Surrey and in Hereford and Worcester construction was delayed for several years because of delays in obtaining planning permission (**Figure 18 on page 26**). There is no evidence, however, to suggest that planning delays were caused or exacerbated by the use of PFI as the procurement route. Other, non-PFI waste infrastructure projects have also suffered planning delays over the last decade.

⁴ HC1177 (2005-2006).

⁵ *Improving PFI Tendering* (8 March 2007, HC149).

⁶ Based on 10 out of 13 projects signed since 2001 where there this was stated in the Outline Business Case.

17 During procurement there have been changes in terms of both technology and project net present value based on a NAO review of six projects

Project	Procurement	Signed	Project NPV (£m)		Preferred technology		Reason for technology change
			Outline Business Case	Full Business Case	Outline Business Case	Full Business Case	
East London Waste Authority	2000-01	2002-03	308	500	None stated	Mechanical biological treatment	n/a
Leicester City Council	2000-01	2003-04	127	126	Mechanical biological treatment	Mechanical biological treatment	n/a
Central Berkshire	2002-03	2006-07	159	248	Mechanical biological treatment	Energy from waste	An opportunity arose during procurement to make use of a 3rd party (merchant) energy from waste facility in neighbouring Slough.
Northumberland County Council	2004-05	2006-07	208	318	Mechanical biological treatment	Energy from waste	During the procurement process it became clear that energy from waste would provide enhanced landfill diversion and be more affordable than mechanical biological treatment.
Shropshire Waste Partnership	2004-05	2007-08	307	370	Mechanical ¹ biological treatment	Energy from waste	Uncertainty around landfill diversion performance of the project given regulation precluding application of mechanical biological treatment products to land and markets for solid recovered fuel.
Greater Manchester WDA	2004-05	2008-09 (expected)	1,950	Project being finalised	Mechanical biological treatment	Mechanical biological treatment with refuse derived fuel	n/a

Source: National Audit Office review of the case studies

NOTE

1 Shropshire Waste Partnership did not promote a preferred technology within the procurement process; however mechanical biological treatment was identified in the Outline Business Case reference project.

18 Progress in delivering residual waste treatment facilities

Project	Signed	Type of residual waste facility	Construction of residual facilities completed?
Signed before the formation of Defra			
Isle of Wight	June 1997	EfW ¹	n/a
Hereford and Worcester	December 1998	EfW	X – not started
Kirklees	April 1998	EfW	✓ (2002)
Surrey	June 1999	EfW	X – not started
South Gloucestershire	July 2000	n/a ²	X – not started
Signed after the formation of Defra			
East London	December 2002	MBT	✓ 2 facilities one in 2006 and one in 2007
East Sussex & Brighton & Hove	March 2003	EfW	X – not started
Leicester City Council	May 2003	MBT	✓ (2005)
West Sussex	March 2004	n/a ²	n/a
Nottinghamshire	June 2006	EfW	X – not started
Central Berkshire	October 2006	EfW ³	X – in progress
Cornwall County Council	October 2006	EfW	X – not started
Northumberland	December 2006	EfW ⁴	X – in progress
Lancashire	March 2007	MBT	X – in progress
Shropshire	September 2007	EfW	X – not started
Southwark	February 2008	MBT/EfW	X – in progress
Cambridgeshire	March 2008	MBT	X – in progress
West Berkshire	March 2008	n/a ²	n/a

EfW – Energy from Waste (Incineration); RDF – Refuse Derived Fuel; MBT – Mechanical Biological Treatment

✓ – completed

X – not completed

Source: National Audit Office

NOTES

- 1 Refurbishment of existing facility.
- 2 No new residual facilities are being built as part of the PFI contract: the contractor will use other facilities to help meet landfill diversion obligations.
- 3 This project will use a merchant Energy from Waste facility (under construction) in Slough.
- 4 This project involves an extension of an existing facility in Middlesbrough.

2.34 Once contracts are signed, the Department is unable to influence planning decisions directly. The Department has therefore revised its guidance to state that local authorities should provide suitable sites, but that the contractor should apply for planning permission once the contract has been awarded. Obtaining sites and planning permission can however be challenging, as **Case Examples 3 and 4** show. In some circumstances WIDP may advise authorities to make their own planning application. With this approach there is, however usually no right of appeal against an adverse determination and also a risk that the transfer of design risk to the contractors may be compromised.

2.35 Planning permission remains a key risk for future projects. Adverse public opinion and opposition is often made worse by a lack of awareness and objective information about modern waste facilities, such as how they work, what they look like and why they are needed. At present the Department does not directly support local authorities in developing communication plans or public relations strategies aimed at providing better information to the public. It is, however, planning to pilot a communications toolkit to help local authorities in this area and has commissioned a report on best practice approaches to securing planning consent.

CASE EXAMPLES 3 AND 4

Site acquisition and planning permission

East Sussex and Brighton and Hove Councils completed procurement of their project in 2003. The contractual responsibility for site acquisition and planning lies with the contractor. However, the contractor's attempts to acquire a key site for one of the residual waste facilities by private tender failed and caused considerable delays to the original project programme. The delays necessitated a renegotiation of the contract, which resulted in an extension of the contract term from 25 to 30 years. Construction of key facilities has been delayed, although the contract has thus far delivered its agreed performance targets for landfill diversion because the contractor has been able to use alternative facilities.

Lancashire County Council's project is for two mechanical biological treatment plants, with provision for a third if required. The Council retained contractual liability for planning permission risk. The Council's Planning Committee's initial decision to grant planning permission for one of the sites was subsequently subjected to a Judicial Review. It caused a delay of 49 weeks, resulting in a £15 million compensation claim from the contractor, as well as the potential additional costs of landfill tax and purchasing LATS as a result of the delay.

C) Oversight of projects

2.36 In common with other aspects of programme management, the Department's oversight processes have improved over time and have been consolidated under WIDP.

Procurement

2.37 WIDP has strengthened the provision of direct support to authorities undertaking procurements through guidance and by supplementing local authority teams with a project Transactor. Initially introduced in 2003, Transactors are individuals with commercial experience from the advisory bodies Partnerships UK and the 4ps under the supervision of WIDP. Where WIDP provides Transactor resource to an authority the parties sign a Memorandum of Understanding which sets out the role and responsibilities of the Transactor. Transactors sit as a 'critical friend' to the project, for example, helping the authority to assess the value for money of the bidders' proposals and providing a conduit for passing information to and from the Department. Local authorities told us that the Transactors had in general made a helpful contribution to their projects. Some authorities reported, however, that they had not been clear on the Transactor's precise role and remit.

2.38 Local authorities are now required to demonstrate that there is a value for money case for their proposed method of dealing with waste and for using PFI as a means of procurement. The Department's information on changes to the price of deals after preferred bidder selection is incomplete for some projects. The Department has taken steps through WIDP to strengthen reporting requirements and now seeks monthly information updates on the progress of negotiations. This includes a rating of the likelihood of timely delivery based on an assessment of a range of key success criteria.

2.39 The Department offers the same level of non-financial support to all authorities including those procuring non-PFI projects. As there is no central funding those undertaking non-PFI procurement are not obliged to take up this service.⁷ Nor is there any requirement for local authorities to submit information about these projects to the Department. The lack of such information limits the Department's ability to monitor the progress of these projects, which are expected to deliver around 20 per cent of the volume of waste treatment capacity to be brought into operation by 2013.

⁷ The local authority adviser 4ps is also available to provide support to these projects.

Contract management

2.40 Oversight of operational experience of local authorities/projects will become increasingly important. To date only four PFI residual waste treatment facilities are fully operational. Although some experienced delays, these have not resulted in additional costs to the local authorities involved. In general these projects are now delivering the expected performance in terms of diversion from landfill (**Figure 19**).

2.41 To date the Department has focused its scrutiny efforts on procurement, and less on contract management. There will, however, be increasing numbers of projects coming into operation in the next few years. No matter how good the contract is, effective contract management is essential for successful projects. WIDP has arranged to meet with projects in the planning or construction phase to determine the nature and level of support they would like.

2.42 Some local authorities are concerned about the availability of the skills and resources required to undertake aspects of contract management. Project teams will need more support and guidance on contract management issues.

2.43 There is also scope for the Department to improve the information by which it monitors projects after contract letting. In contrast to the procurement phase, when monthly reports are received, management information is collected six-monthly after contract award. More frequent information on construction performance would be appropriate as this stage is critical to delivering projects on time. Performance information from the projects when they are in operation will also be important to the Department's assessments of whether the EU landfill targets will be achieved.

19 Summary of performance on the four projects where residual waste facilities are complete

Project	Isle of Wight	Kirklees Council	East London Waste Authority	Leicester City Council
Type of facility built	No new build – existing energy from waste facility refurbished	Energy from waste	MBT (2 plants)	MBT
Expected date of full operation		April 2002	October 2006 (first plant) and March 2007 (second plant)	June 2005
Actual date of full operation		April 2002	April 2007 (first plant) and September 2007 (second plant)	November 2007
Reason for difference		n/a	Although the granting of planning permission was promptly achieved there were delays in getting the related legal agreements between local authorities and developers	Towards the end of the commissioning period, a contractor undertaking welding work on the Cascade Mill ignited the rubber cushioning membrane causing extensive damage to the Mill. When the necessary repairs were completed, an Independent Certifier identified a number of issues over the specification which required the contractor to make modifications to the plant.
Impact		n/a	Equivalent impact on contractual performance	The fire was treated as a relief event which protected the contractor from contract penalties, although the contractor did have to meet the cost of additional landfill tax. Throughput of waste at the facility was reduced by 50 per cent for 18 months while repairs were conducted.
Performance	The project is performing as expected	The project is performing as expected	The project is performing as expected	The facility is now almost fully operational to the expected contract output standards except for some post contract modification work to the anaerobic digester facility. However issues around products from the waste treatment process which is currently being sent to landfill could impact on the overall landfill diversion performance of the project in future years if a solution is not found (see case example 2).

Source: National Audit Office review of projects

PART THREE

Achieving the landfill targets

3.1 The Department aims to ensure that England will meet the landfill targets set out in the EU Directive. Its interventions to better manage both supply and demand have started to have a positive effect on the development of the programme. Insufficient early prioritisation of larger projects, the slow development of the programme, and delays to individual projects have, however, all put pressure on the fulfilment of these targets.

Progress in meeting the targets

3.2 The Department uses information on the progress of projects to forecast performance against the landfill targets. We examined the assumptions and operation of the model the Department uses to predict landfill levels.

3.3 Assuming a prudent annual waste growth at the current level of around 1.5 per cent, the 2010 target for landfill reduction in England will probably be met, principally due to increased levels of recycling. The 2013 and 2020 targets are, however, challenging. They are capable of being met if the Department's plans for improving timescales for procuring projects and bringing them into operation are achieved.

3.4 The Department expects new infrastructure to be in operation by 2013 capable of treating seven million tonnes of waste. Contracts already let or in procurement account for the majority of the new infrastructure expected to be in operation by 2013 (**Figure 20**).

3.5 **Figure 21 overleaf** sets out the Department's base projection for waste to be sent to landfill in 2013 and 2020 with two alternative scenarios. Taking account of the additional treatment capacity that it expects to come into operation the Department's base projection shows as follows:

- **2013:** The Department's baseline scenario for 2013 shows a modest shortfall of 52,000 tonnes against the EU target. However, with a two year delay to developing projects and bringing them into operation (which a number of projects have previously incurred) it is possible that over 2.4 million more tonnes of waste could be sent to landfill than permitted by the EU target (Scenario Three).

20 Estimated additional treatment capacity of waste by end 2012

	Signed	PFI projects		Other projects	Total
		In procurement	In development		
Capacity of infrastructure planned by end 2012 ('000s of tonnes) ¹	3,021	2,000	424	1,353	6,798
Percentage of total	44.4	29.4	6.3	19.9	100

Source: Defra's waste capacity model

NOTE

¹ Other projects include local authority projects not funded via PFI.

21 Delivery against the landfill directive targets for England in three scenarios as at June 2008

Year	Waste Growth Per Annum	BMW to landfill (tonnes '000) ¹		
		Scenario One	Scenario Two	Scenario Three
	Waste growth rate	The Department's base projection (no delay to future projects, plants operating at 90% efficiency ³)	Mid-range shortfall against base projection (1 year delay to all future projects, plants operating at 80% efficiency ³)	High-range shortfall against base projection (2 year delay to all future projects, plants operating at 70% efficiency ³)
	-1.0%	5,427	6,768	7,814
	0.0%	6,224	7,564	8,610
	1.0%	7,070	8,410	9,456
2013	1.5%	7,512	8,853	9,898
Allowance: 7,460 thousand tonnes	Excess use of landfill compared with EU allowance	52	1,393	2,438
	2.0%	7,968	9,308	10,354
	3.0%	8,920	10,260	11,306
	-1.0%	1,583	2,358	3,125
	0.0%	2,866	3,641	4,407
	1.0%	4,326	5,102	5,868
2020²	1.5%	5,130	5,906	6,672
Allowance: 5,220 thousand tonnes	Excess use of landfill compared with EU allowance	(90)	686	1,452
	2.0%	5,988	6,763	7,529
	3.0%	7,875	8,650	9,416

Key

■ Target missed

■ Target Met

Source: Defra

NOTES

1 Assuming recycling at 40 per cent in 2013 and 50 per cent in 2020 in line with Waste Strategy 2007.

2 Based on all currently known diversion capacity as at June 2008. It will be possible to include further capacity as the Department receives more information from local authorities currently developing projects.

3 Plant efficiency takes into account down time caused by maintenance and other limits to effectiveness such as waste composition.

- **2020:** It is harder to assess whether the 2020 target will be met. The likelihood of meeting the target will depend on the successes of the investment programme being managed by WIDP as well as continuing efforts by local authorities and consumers to produce less waste and recycle more. The current forecast shows that this target may also be at risk if there are delays to the programme.

3.6 The Department has made a number of assumptions in developing this scenario analysis. Our assessment of the level of risk associated with each of the main assumptions, which is based on our assessment of the programme to date, is shown in **Figure 22**.

22 Assumptions and risks in projected amounts of BMW to landfill

	Baseline assumption made	Level of risk associated with this assumption
A delay to the programme	The programme of projects are all delivered on time	High A delay of two years (which a number of projects have previously incurred) may lead to local authorities significantly exceeding the 2013 and 2020 landfill allowances. Around 20 per cent of waste treatment is due to be through non-PFI contracts which are currently outside the Department's control as there is no central funding support. The Department's projected timetable for contracts to be completed and for facilities to be operational could be put at risk if the current problems in the finance market continue.
Recycling rates	Recycling at 40 per cent in 2013 and 50 per cent in 2020 in line with Waste Strategy 2007 ¹	Medium In 2006-07 the rate of municipal waste recycling was 31 per cent. Although this rate represents a substantial increase from the 12 per cent achieved in 2001 further substantial increases are required if the assumed rates are to be met.
Waste growth	Annual growth of 1.5 per cent	Low – Medium The amount of waste sent to landfill is sensitive to this figure. The Department's baseline figure of 1.5 per cent is, however, reasonable – waste growth in 2006-07 was 1.4 per cent and for the five years to 2005-06 was less than one per cent. The Waste Strategy Board has commissioned WIDP to carry out further modelling work on the waste growth assumptions.
Operating efficiency	Plants are 90 per cent efficient when fully operational	Low It is unlikely that treatment plants can be used to one hundred per cent capacity all the time. Routine maintenance, fluctuations in the flow of waste available and accidents may reduce the capacity of the plant. The Department's assumption is reasonable.

Source: National Audit Office

NOTE

- 1 Defra (2007) *Waste Strategy for England 2007*.

3.7 The Department is continuing to monitor the assumptions underlying these projections. It is carrying out an ongoing detailed review of the assumptions and the risks to delivery on a project by project basis. This ongoing review includes the expected impact on the programme arising from the problems in the finance markets. As at 30 November 2008 it does not foresee any significant change in the likelihood of achieving the approaching 2010 and 2013 targets from that shown by its June 2008 projections (Figure 21) and our analysis of the associated risks (Figure 22).

3.8 It is expected that the EU will levy fines on the UK if its total allowance is exceeded, although the EU has yet to announce the rate of such fines. Any shortfall against the targets by individual authorities will lead to substantial financial penalties being levied on them by the Government. Local authorities in England will be fined £150 for each tonne over their allowances (Figure 23). As the figure shows, penalties imposed on local authorities could range from around £8 million per annum to as high as £365 million per annum.

23 Potential financial penalties for local authorities for missing the 2013 targets

Assumption regarding project delivery and operational efficiency	Shortfall of diversion of waste from landfill compared with target (tonnes '000s)	Financial penalty (at expected rate of £150 per tonne) (£ millions per annum)
Small improvement in project delivery or operational efficiency compared with Department's current projections	Nil	Nil
Scenario One	52	7.8
Scenario Two	1,393	209.0
Scenario Three	2,438	365.7

Source: Defra

NOTE

Assuming fines of £150 per tonne, 1.5 per cent annual waste growth and 40 per cent recycling. Plants are unlikely to run at 100 per cent efficiency due to maintenance and fluctuations in the waste flow. In Scenario One plants are assumed to operate at 90 per cent efficiency, in Scenario Two they operate at 80 per cent efficiency and in Scenario Three at 70 per cent efficiency.

APPENDIX ONE

Glossary

Key terms and concepts

European Union (EU)
Landfill Directive

A Directive announced in 1999 requiring all Member States to reduce the amount of biodegradable municipal waste (BMW) sent to landfill.

Biodegradable Municipal Waste (BMW)

Municipal waste includes all waste from households, as well as other waste, which, because of its nature or composition, is similar to waste from households. Around 70 per cent is thought to be biodegradable although the precise figure is not known.

The Landfill Allowance Trading Scheme (LATS)

Introduced in April 2005, LATS sets gradually reducing individual allowances for all disposal local authorities for the amount of biodegradable municipal waste that can be landfilled each year. If met, the allowances will collectively fulfil the Landfill Directive requirements. Individual local authorities may have surplus landfill capacity which can be traded to other waste disposal authorities.

Landfill Tax

Introduced from October 1996 to encourage more sustainable waste management by local authorities and divert waste from landfill. Landfill tax was introduced at two rates: a standard rate for active waste (substances that either decay or contaminate land, which includes household waste) at £7 a tonne; and a lower rate for inert materials at £2 a tonne.⁸ The rate of landfill tax has increased in recent years and the Government has announced further increases until at least 2010-11. Landfill tax receipts have risen from £333 million in 1998-99 to £877 million in 2007-2008.

Private Finance Initiative (PFI)

A way of funding major capital investments in which private consortia are contracted to design, finance, build and operate projects. Most waste PFI projects last for around 25 years.

PFI Credits

PFI credits represent a promise to pay a PFI grant upon approval by the Department and by the cross-Department Project Review Group and completion of procurement.

Waste treatment facilities

Waste treatment facilities such as mechanical biological treatment plants or energy from waste plants treat waste to convert it into a usable material such as fuel, and to recover energy. Different types of technology are available. Since 2006 the Department has stated a preference for PFI contracts that are for these types of facilities only.

8 (source: HMRC)

Integrated waste management contract

'Integrated' PFI waste projects include construction and operation of recycling, materials reclamation and composting facilities as well as waste treatment facilities. A small number of contracts also include collection of waste and other environmental services such as street cleansing. Most PFI contracts signed to date are integrated contracts.

Organisations and bodies involved

The Department for the Environment, Food and Rural Affairs (the Department)

Responsible for setting a national strategy for waste disposal and overseeing the programme of local authority PFI projects.

Waste Implementation Programme

Set up by the Department to manage overall strategy on waste management in response to the package of strategic measures recommended by the Strategy Unit (SU) report *Waste Not, Want Not* (November 2002).

Waste Infrastructure Development Programme (WIDP)

A special delivery unit within the Waste Implementation Programme, set up in 2006 to accelerate the delivery of waste infrastructure and support local authorities undertaking projects. The board includes representatives of Partnerships UK and the 4ps.

Partnerships UK

Established by the Government in 2000 to support public authorities undertaking large or complex procurements and programmes, particularly those undertaken as Public Private Partnerships (PPPs), including under the Private Finance Initiative (PFI). PUK supports public bodies throughout the UK at central, devolved and local authority levels. It is itself a PPP.

The Public Private Partnerships Programme (4ps)

Set up in 1996, works in partnership with all local authorities to secure funding and accelerate the development, procurement and implementation of PFI schemes, public private partnerships and other complex projects and programmes.

Local Authorities

Waste Disposal Authorities (WDAs)

34 County Councils and 6 Statutory WDAs (covering more than one local authority area) have responsibility for disposing of municipal waste in their area. Statutory WDAs also deal with waste collection.

Waste Collection Authorities (WCAs)

273 District Councils within two tier (county council) areas, which have responsibility for collecting household waste in their area.

Unitary Authorities

81 unitary authorities act as both WDA and WCA in their area.

Waste contractors

Enter into PFI contracts with local authorities to build and operate new infrastructure and in many cases manage waste. The main contractor may hold sub-contracts with construction companies, technology providers and waste collection contractors.

APPENDIX TWO

Study scope and methodology

Audit scope

This report focuses on the Department's management of a programme of PFI projects in order to fulfil a specific objective: delivering sufficient infrastructure to ensure that EU Landfill Directive obligations are met.

The scope included all projects that had received or applied for PFI Credits, and which had begun procurement prior to March 2008. As the focus was on Defra's use and management of resources we did not examine projects which have not received or applied for any central Government financial support. A full examination of the value for money of the individual projects was outside the scope of the audit. However, we did review the Department's data on projects, and reviewed documentation held by the Department for a sample of procurements, in order to assess whether the Department's processes were sufficiently robust to ensure that the projects being entered into by local authorities were likely to offer value for money.

Methodology

Quantitative and financial analysis

We reviewed Departmental data on municipal waste and the current and future PFI projects. We also worked with the Department to undertake scenario analysis to assess the impact of non delivery or late delivery of infrastructure on the EU landfill targets. We also analysed municipal waste statistics in order to draw comparisons between local authorities with no PFI projects and with PFI projects at various stages of development.

Statistical tests were conducted to compare amounts of waste sent to landfill by groups of authorities with PFI projects at different stages of development. Since the differences are not normally distributed, nonparametric tests were applied. In all cases a 95 per cent confidence level was used. We also compared authorities with projects in procurement and at an earlier stage of development (those that have submitted outline business cases to the Department for review and with those that had expressed an interest in PFI but have not yet submitted a business case) to authorities with currently signed projects. The difference was significant ($p < 0.05$) when comparing authorities with projects in procurement, with signed projects, but no other significant relationships were found. This difference is unlikely to reflect the fact that those authorities with PFI contracts are already delivering landfill diversion as most projects are not yet complete and can therefore be reasonably taken to indicate a difference in the size of authorities now coming through the PFI programme, compared to those that have previously let contracts.

Stakeholder consultation

Interviews with local authorities and contractors

We undertook interviews with 40 local government officers representing 24 waste disposal authorities. Interviews were semi-structured. The Department was able to provide up to date contact details for all projects. The majority of interviews, 16, were conducted face-to-face, with eight telephone interviews conducted. One local authority completed a postal return as they were unable to divert resources away from their procurement. Each interview was attended by between one and four interviewees and typically took around two hours. The face-to-face interviews were all conducted at local authority premises. Topics covered included:

- Rationale and justification for a PFI solution;
- Partnership working;
- Affordability concerns;
- The procurement process, including:
 - Level and nature of competition;
 - Evaluation of bids;
 - Skills, experience and resources;
- Delivery of the project, including:
 - Delivery of assets;
 - Site acquisition and planning permission;
 - Satisfaction with contractor performance;
- Support from the Department, Transactors and others;
- Lessons learned from the process; and
- Any other issues relevant to the project

The interviews were annotated and used to populate a matrix of issues. The questions were initially derived from the issue analysis but were updated as the audit progressed.

We also conducted interviews with the private sector, covering the same topics for the six projects, whose documentation we reviewed in more detail. These interviews involved one or two representatives of the main contractor. Interviews were also semi-structured and lasted around one hour.

Focus Group with Defra Transactors

Transactors provide direct support to projects and are provided by WIDP under contract with Partnerships UK and the 4ps. Prior to the focus group a short survey was circulated, which was used to distil the key issues and topics to cover. Fifteen delegates attended the group (13 Transactors and two trainee Transactors), which was facilitated by two members of the NAO Private Finance Practice. The group was held at the Transactors' annual away day at the Institute of Directors, in Reading.

Consultation with other stakeholders

We conducted a series of meetings with the Department, Partnerships UK and the 4ps and also other stakeholders including the Department's advisers.

Review of departmental information on projects

We undertook a desktop review of files in order to produce an overall impression of the reliability and robustness of the processes in place to ensure the value for money of individual projects prior to contract signature. We also developed our own checklist of questions based on our Framework for Evaluating the Value for Money of PFI Projects and compared this to desktop review tools used by the Department.

Files were largely complete. It was notable that for later projects a larger volume of documentation was available. The department made available all relevant files in hard and soft copy (where available). Key documents also contained more information on later projects. As we have not reviewed the local authorities themselves this is not a full value for money review of the projects. Reviews covered formal processes, such as the Department's desktop reviews of projects but also less formal, but equally important, issues such as communication, timeliness of responses and the depth of challenge. Documents included:

- Expressions of Interest;
- Outline Business Cases;
- Full Business Cases;
- Monthly updates from Transactors;
- External reviews (where undertaken);
- Correspondence with projects and other stakeholders; and
- Minutes from meetings with the Department

24 Detailed review project selection

Project	Local Authority type	Approved (year)	Signed (year)	PFI Credits (£m)	Contractor
East London Waste Authority	Statutory Waste Disposal Authority	2000-01	2002-03	47	Shanks
Leicester City Council	Unitary authority	2000-01	2003-04	30.84	Biffa
Central Berkshire ¹	Multiple unitary authorities	2002-03	2006-07	37	Waste Recycling Group
Northumberland County Council	Two-tier (county council)	2003-04	2006-07	40.8	SITA
Shropshire Waste Partnership	Two-tier	2004-05	2007-08	40.8	Veolia
Greater Manchester WDA	Statutory Waste Disposal Authority	2005-06	2008-09 (expected)	100	Viridor/John Laing (Preferred Bidder)

Source: Defra

NOTE

1 Comprising Reading, Wokingham and Bracknell Forest Councils.

The six projects were selected to give a mix of: older and more recent projects; lower and higher contract values and PFI credit allocations, types of local authority, single authority and partnership projects and a mix of contractors

Expert panel consultation

We convened an expert panel. The consultation was undertaken via an email survey following a simplified Delphi process. Three rounds of questionnaires were used in total. The first posed questions in broad terms; the second questionnaire presented our analysis of the issues arising and asked for further feedback. The third round comprised a discussion paper, circulated mainly for high level comment. Delphi consultations are typically used to identify or predict future developments. This was used to provide additional insight into how the Department's approach to PFI may affect a programme of long term projects. This was the first time this method had been used by the NAO.

25 Delphi Panel

Public Sector

- Audit Commission
- South East Centre for Excellence

Waste Contractors

- Biffa
- Viridor
- SITA

Advisers and funders

- Mott MacDonald
- Bevan Brittan
- Trowers Hamlin
- Walker Morris
- HBOS
- Bank of Ireland
- Scott Wilson
- SLR Consulting
- Barclays PFI Unit
- Deloitte & Touche
- Ernst & Young

Other stakeholders

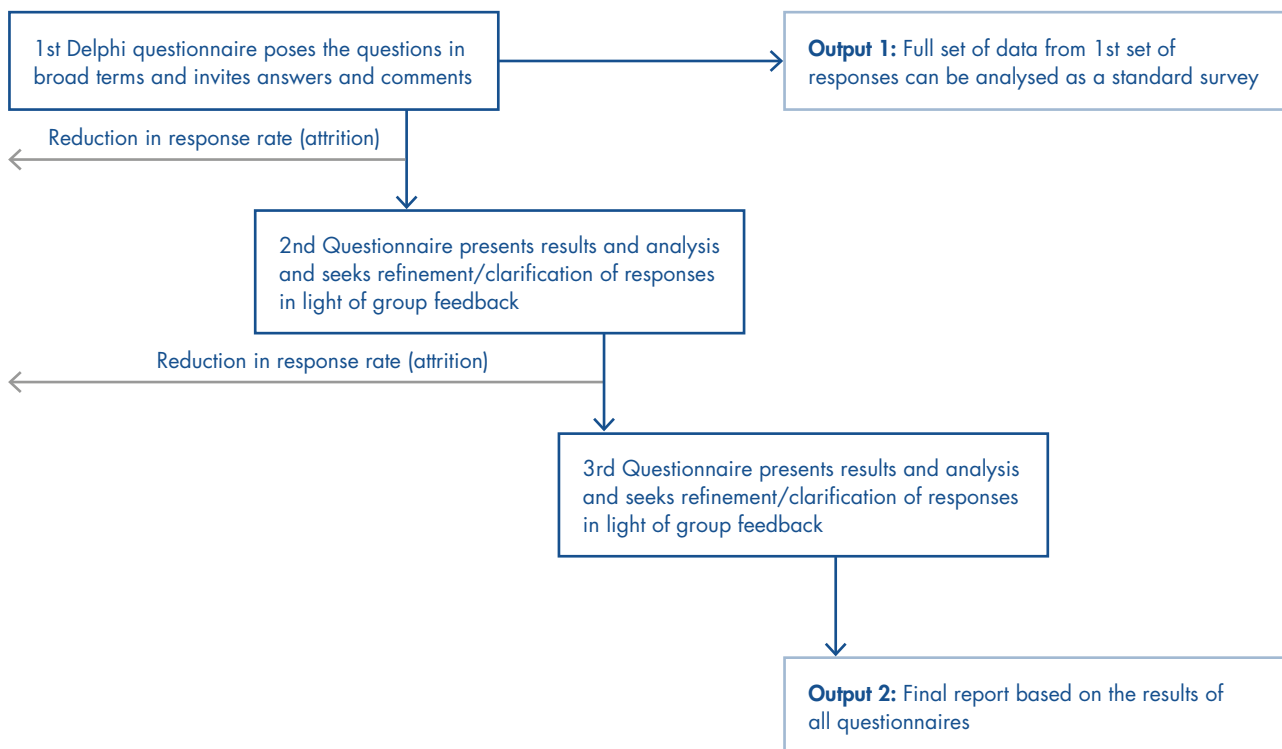
- Environmental Services Association
- Friends of the Earth Europe
- Unison
- Chartered Institute of Wastes Management

Source: National Audit Office

The findings of the panel were used to develop a theoretical model of how PFI could be used under ideal circumstances, based on elements of consensus from a diverse panel of experts. They were also used to populate our Issue Analysis throughout the audit, to identify key areas of risk in obtaining value for money from the use of PFI in Waste Management and to triangulate our findings later in the study.

The panel was a purposive sample derived from desktop research into organisations active in the waste PFI market in the broadest sense. The purpose of the sample was to provide a deliberately varied and diverse range of viewpoints, in order to identify where consensus could be derived, if at all. Where possible, existing contacts were used.

26 Overview of the expert panel consultation process



Source: National Audit Office

APPENDIX THREE

Risk in waste PFI projects

Overview and key risks involved

Waste PFI projects are complex and can differ from typical uses of PFI in several important respects. As an industrial process, waste management makes greater use of technology and carries more risk in the construction and operational phases than a serviced asset such as a school or hospital (**Figure 27 overleaf**).

27 Waste management PFI projects – operational risks

Waste management PFI projects		
Capital value range (signed projects)	Risk	£40m–£200m
Contract term		25-30 years
Design	↔	There is now a good deal of experience in designing the facilities required. As with other buildings, the physical design of waste treatment plants is important as the appearance of facilities may influence public opinion and in turn affect whether there are objections to applications for planning permission. There have been examples of technology failure (see obsolescence and termination risk).
Construction	↗	Unlike most other PFI projects, planning permission on waste projects is typically gained after the contract has been awarded to the contractor. There have been several examples of failure to obtain planning permission resulting in significant delays to projects (see Part 2).
Legislative	↗	Legislation and regulation in the waste sector changes rapidly as a result of both UK and European intervention. The European legal definition of waste is not fixed. The required environmental performance of waste treatment facilities may also change over time as a result of changing regulation. Examples might be emissions standards and restrictions on the use of refuse-derived products such as fuels and composts.
Demand	↔	Local authorities must plan ahead to predict the capacity that may be required from their infrastructure. Factors that may affect this include the amount of waste (affected by waste growth and recycling) and composition of waste. The level of risk will vary depending on the technology or technologies chosen: once constructed, incineration-based facilities should be relatively tolerant to changes in waste composition. Other technologies require a carefully controlled mix of wastes.
Performance	↔	Where facilities have been completed authorities we contacted were satisfied overall with contract performance.
Obsolescence	↗	Given the legislative and waste composition risk, the risk of technology obsolescence is relatively high. What marks waste projects out from many other PFIs is that the risk profile of the project will not be so clearly divided into construction and operational phases. The enduring risks mean that the project's risk profile (regardless of who bears the risk) remains higher in the operational phase.
Residual Value	↔	The residual value of assets will depend on other risks such as technology, obsolescence and demand. In some cases local authorities indicated that they will take ownership of assets at the completion of the contract, but there is little evidence around the lifespan of many of the technologies and facilities being built at this stage.
Termination	↗	Two early waste projects, in Neath-Port Talbot and Dundee, suffered technical difficulties which resulted in the contract being terminated based on contractor default. This type of event is extremely rare in PFI projects and may have had an impact on funders' confidence in the sector.

Risk (compared to a typical PFI such as a serviced asset such as a hospital or school)

↔ waste deal are comparable in terms of risk

↗ waste deals present a particular risk in this area

↘ waste deals do not present a particular risk in this area

Source: National Audit Office

APPENDIX FOUR

The process of delivering a waste PFI project

In order to qualify for central government support via PFI credits, projects must be formally approved by both the Department and the Project Review Group (PRG), which is a cross-Departmental committee chaired by the Treasury.

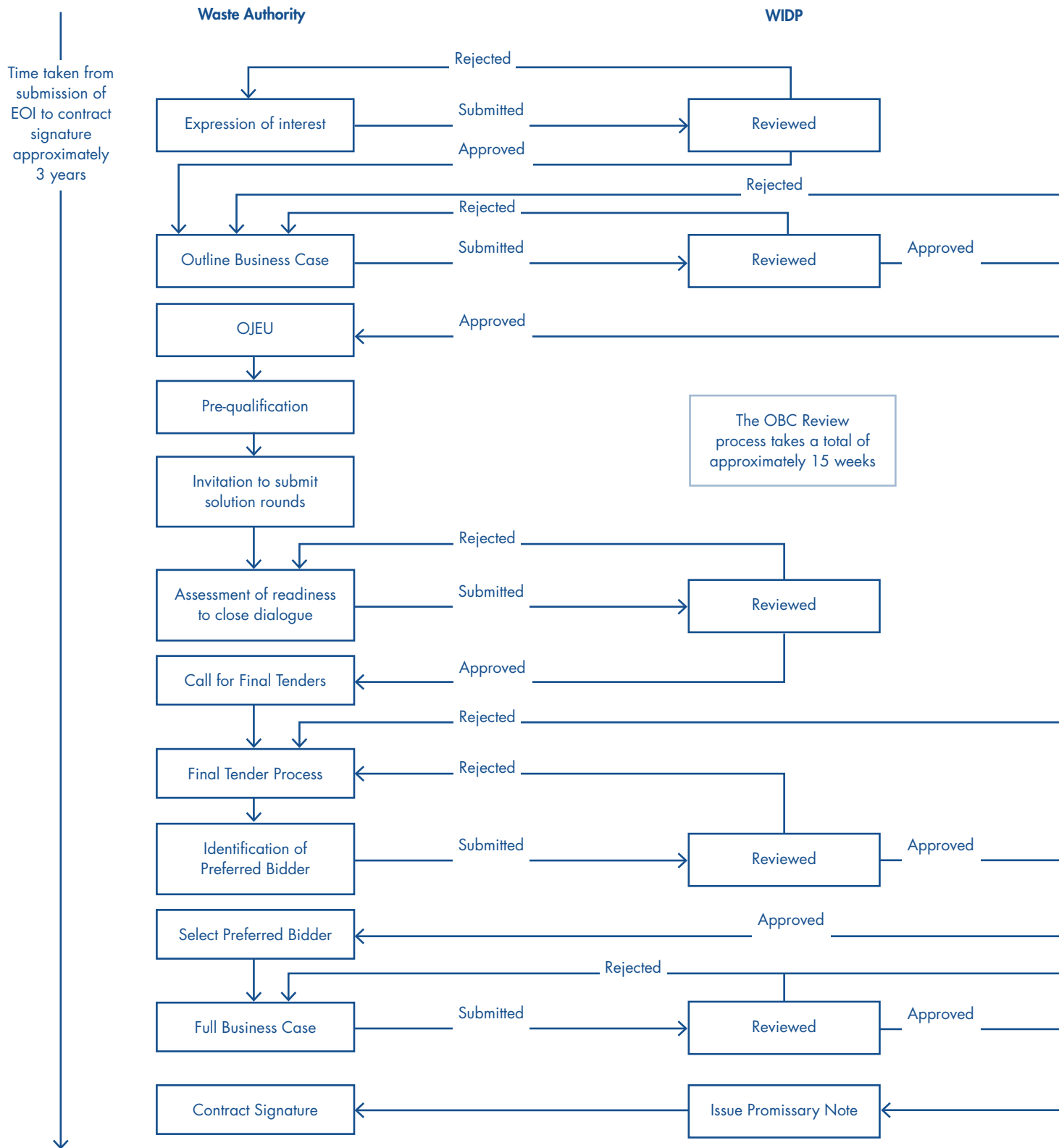
Projects first submit an Expression of Interest (EOI) to the Department. This is evaluated against the PFI Credit Criteria. Following this, authorities must submit an Outline Business Case (OBC). First the Department reviews the OBC and if satisfied seeks ministerial approval for the project. Once that approval is received, the project then moves on to the Project Review Group (PRG) stage.

Following approval by PRG, projects enter procurement. Projects are now typically following EU Competitive Dialogue procedures. At the stage where the authority is ready to enter into a contract with its preferred bidder, a Final Business Case (FBC) is submitted to the Department. The FBC summarises any changes since the OBC and provides assurance that the project still represents value for money. If approved, the project proceeds to contract award.

Following signature, projects typically enter an initial service phase. If an integrated service contract is in place, some services such as kerbside collection of recyclables may commence within a few weeks of signature. The main contractor will also oversee the construction and subsequently operation of any capital infrastructure specified in the contract.

28 Key stages in the waste management PFI approvals, scrutiny and procurement process

PFI Application and Scrutiny Process



Source: National Audit Office/DEFRA

Project Review Group/ Minister Approval

The EOI Review
process takes a total of
approximately 8 weeks

Reviewed by PRG
and subject to
Ministerial Approval

The Review process takes
a total of approximately
6 weeks

Stage 2 Review at
monthly scheduled
meetings

Submission to Minister

Approved

The Review process
takes a total of
approximately 4 weeks

Final Business
Case Template
in development

The FBC Review
process takes a total of
approximately 4 weeks

Contents of Expression of Interest

- 1 Executive Summary
- 2 Background
- 3 Waste Management Strategy
- 4 Procurement Strategy
- 5 Risk Management, Risk Allocation and Contractual Structures
- 6 Project Team and Governance
- 7 Sites, Planning and Design
- 8 Costs and Budgets
- 9 Stakeholder Consultation
- 10 Timetables

Contents of Outline Business Case

- 1 Abbreviations and Glossary
- 2 Executive Summary
- 3 Background
- 4 Strategic Waste Management Objectives
- 5 Procurement Strategy and Reference Project
- 6 Risk Management, Risk Allocation and Contractual Structures
- 7 Project Team and Governance
- 8 Sites, Planning and Design
- 9 Costs, Budget and Finance
- 10 Stakeholder Communications
- 11 Timetable

Appendices

- A DEFRA criteria for Awarding Waste PFI Credits
- B PRG Criteria for Approving Outline Business Cases
- C Design Quality and Sustainable Development Checklist
- D Planning Health Framework

APPENDIX FIVE

Wider issues affecting the waste PFI programme

The Department's PFI programme is also affected by a variety of external factors. Some of these are outside its direct control. The main issues we identified are:

1 Changes in environmental legislation and regulation. The changes may be at a European or national level. The Department's programme must continue to interface with the developing agendas on carbon emissions and renewable energy. Both present risks and opportunities in the use of waste as a source of energy. These issues may affect the desirability of certain technologies and the potential cost of the projects.

2 Amount and composition of waste produced. The Department must constantly update its estimates of the new infrastructure required based on changing amounts of waste produced and the proportion of waste being dealt with by other means, such as recycling.

3 Technology performance. Developing new technologies could reduce the cost of waste treatment for the public sector. This depends on the private sector having the appetite and finance to devote to developing new technology. The private sector may however find it difficult to finance new technologies. If finance can be obtained, it may be relatively expensive unless the technology has been proven to work. The Department recognises the importance of this issue. Although it does not endorse or discourage use of any particular waste treatment technology it is supportive of the private sector exploring different technology solutions. It has appointed a team, headed by a commercially experienced secondee, to lead this work. This has included the commissioning of a programme of projects (the New Technologies Demonstrator Programme) that demonstrate the use of new technologies on a relatively small scale.

4 Planning permission. Local planning policy is outside the Department's control. As noted in Part 2 difficulties in obtaining planning permission have delayed certain projects coming into operation.

5 Wider markets. The development of markets' recyclates and products from waste could also help reduce the cost of waste infrastructure to authorities. This depends to a large extent on the commercial attractiveness of the products to energy companies and other potential users.

Overall we found that the Department has anticipated these risks and is taking account of them in taking forward the PFI programme. They do, however, illustrate that as well as the complex PFI issues involved in waste infrastructure procurement, there are wider issues which the Department has to also be aware of and react to in managing the PFI programme.

29 We assessed the Department's readiness to deal with wider issues that may affect the PFI programme and provided actions which the Department could implement alongside our recommendations

	Changes in environmental legislation and regulation	Amount and composition of waste
Description of the issue	Wider regulatory and legislative regulation on the use of waste materials will affect both types of projects (MBT and EFW) that are needed and the operational performance of projects. Key issues that are subject to frequently changing legislation are: Carbon emissions; incineration permits and taxes; recycling targets; changes to the requirements for renewable energy and whether waste-based processes count as renewable energy; and the use of products derived from the waste treatment process (such as fuels).	The Department must constantly update its estimates of the new infrastructure required based on changing amounts of waste produced and the proportion of waste being dealt with by other means, such as recycling. Local authorities must plan ahead to predict the required capacity from their infrastructure. Some technologies may be sensitive to changes in the type of waste generated. An authority faced with too little capacity may have to invest in new infrastructure to mitigate this or would have to purchase capacity from elsewhere, which could be very expensive.
Impact on operational projects	Changes to facilities may be required. This may require additional capital and operational expenditure.	The impact would depend on the type of change, the technology being used and the output specification of the project. For projects with well designed output specifications, the impact of composition changes should be relatively small, although the risk would usually lie with the local authority.
Impact on projects in development	Changes to project scope may be required. Costs may change during procurement if new legislation is foreseen.	Future projects should be better placed to understand the issue and develop output specifications that account for possible changes. If authorities are procuring multiple collection, processing and treatment contracts under the new PFI criteria it must take great care to ensure that it has accounted for this risk across all contracts, not just the PFI contract.
What the Department has done	Most of these issues are outside WIDP's direct control. The Department has set up a variety of initiatives to deal with these various and complex issues. In terms of specific actions on PFI projects, the Department has issued special derogations to the Treasury's standard PFI contract to deal with the issue of potential changes in law. The Department has issued guidance on these derogations.	The Department is now collecting monthly information on project development and is updating its capacity model on a regular basis. The Department has produced and is consulting on a draft payment mechanism that provides specific mechanisms to account for potential changes in the volume and composition of waste. Where changes are required, these would be covered by Treasury's guidance on handling changes to operational contracts.
What it could do to improve this	On an ongoing basis the Department should, as it is in a position to do so, identify specific changes in law and issue specific guidance on these laws and set out how these should be interpreted under the derogations. The developing list should be regularly updated.	The Department should analyse data on changes in volume and composition of waste from operational projects. The Department should ensure that project output specifications are sufficiently robust to deal with foreseeable changes. If there is an issue around the capability of certain technologies to cope with these changes, it should be prepared to revise its guidance on acceptable technologies.

Source: National Audit Office

Technology performance

The range of technology solutions being used on PFI projects is limited. The Department recommends local authorities use proven technologies such as Energy from Waste and Mechanical Biological Treatment. Better access to a greater range of technologies may improve choice and may be more appropriate for local needs.

Any impact on authorities would be relative, depending on the nature of their initial solution.

Better access to a greater range of technologies may improve choice and value for money of future projects.

The Department has established a New Technologies Demonstrator Programme (NTDP) in partnership with the private sector, in order to demonstrate the viability of newer and less well-used technologies in a small scale working environment.

The Department should do all it can to promote the NTDP to both local authorities and the private sector. If possible, it should work with banks to develop a better understanding of the evidence they require to consider funding new technologies within the PFI programme, and seek to gain this evidence from the NTDP.

Planning permission

Failure to gain planning permission for waste facilities delays construction, which reduces the effectiveness of the programme.

We found several examples of significant delays to projects as a result of this problem (see part 2).

Our consultation with local authorities confirmed that this remains a key risk for future projects. Authorities with experience of this issue told us that adverse public opinion and opposition is often made worse by a lack of awareness about modern waste facilities: how they work, what they look like and why they are needed.

Planning policy is outside the Department's direct control. The Department for Communities and Local Government's planning policy statement 10 (PPS 10) sets out the principles of planning for sustainable waste management. The Department issued revised guidance stating that the authority should provide suitable sites but that the contractor should apply for planning permission once the contract has been awarded, and also advising local authorities to engage at an early stage with their planning departments.

The Department needs to continue to work with Department for Business, Enterprise and Regulatory Reform and the Department for Communities and Local Government to find ways to minimise the chances of delays due to the planning system.

Wider markets

As well as the direct contractor marketplace, issues in wider markets such as the market for waste-derived outputs and the energy market are also important to the value for money of waste PFI projects. Some waste treatment processes include saleable products including recyclates, solid recovered fuel (SRF) and compost-like products. Potential sales of these provide opportunities to generate revenue, which may reduce the overall cost of the project to the authority. Despite initially high expectations, a market for SRF has been slow to develop.

Some projects are experiencing reduced performance as a result of limited opportunities to sell these products.

Local authorities may face reduced choice of technology and/or increased costs as a result of the risks associated with these wider markets. Contractual arrangements will dictate the extent to which local authorities share in any gain or loss from changes to the market value of recyclates, SRF or other products.

The Department has appointed a senior secondee to lead work with industry. The Department has also established the New Technologies Demonstrator Programme (NTDP).

The Department, in partnership with other relevant Departments including the Department for Business, Enterprise and Regulatory Reform and the Department for Communities and Local Government, should draw up and implement a strategy for accelerating the development of wider markets for waste derived products such as solid recovered fuel.

APPENDIX SIX

PFI Credit Allocations: Waste PFI projects

30 PFI Credit allocations: waste PFI

Authority	Original PFI Credits Approved by Project Review Group	PFI credits approved (£m)			Capital Value (£m) ³
		Original	Additional	Total	
Isle of Wight	December 1997	14		14	16
Herefordshire & Worcestershire	February 1998	57		57	81
Kirklees Council	February 1998	34		34	44
Surrey County Council	June 1998	86		86	103
South Gloucestershire Council	August 1998	34		34	43
East London Waste Authority	April 2000	47		47	131
East Sussex County Council and Brighton & Hove Council	April 2000	49		49	144
Leicester City Council	December 2000	30		30	48
Central Berkshire ¹	August 2002	37		37	41
West Sussex County Council	August 2002	25		25	43
West Berkshire Council	May 2003	24	5	29	64
Cornwall County Council	May 2003	25	20	45	191
Nottinghamshire County Council	August 2003	32	6	38	140
Lancashire County Council with Blackpool Council	November 2003	75	15	90	246
Northumberland County Council	March 2004	34	7	41	91
Shropshire Waste Partnership	September 2004	36	5	41	128
London Borough of Southwark	January 2005	35		35	64
Cambridgeshire County Council	January 2005	35		35	40
Total signed projects		709	58	767	1658
Wakefield Metropolitan District Council	December 2004	33	In procurement ²	33	98
Greater Manchester Waste Disposal Authority	January 2005	100	In procurement ²	100	390 ⁴
Cheshire County Council	May 2006	40	In procurement ²	40	139
Merseyside Waste Disposal Authority	April 2007	90	In procurement ²	90	436
North Yorkshire County Council & City of York Council	August 2007	65	In procurement ²	65	170
Bradford	March 2008	62	In procurement ²	62	147
Barnsley, Doncaster and Rotherham	March 2008	77	In procurement ²	77	149
Suffolk	March 2008	102	In procurement ²	102	191
Leeds	March 2008	69	In procurement ²	69	126
Total projects in procurement		638	n/a	638	1846
TOTAL		1347	58	1405	3504

Source: Defra/Treasury

NOTES

- 1 Comprising Reading, Wokingham and Bracknell Forest Councils.
- 2 Projects may apply for additional PFI Credits whilst in the procurement phase.
- 3 Expected capital value for projects in procurement.
- 4 In addition there is £214 million for a thermal power station.

APPENDIX SEVEN

Defra's Investment Programme Management Activities

31 Programme management activities undertaken by WIDP

Activity

Public sector communications and coordination
(inc. joint working)

Investment pipeline management

Market engagement and communications

Capacity building (private sector)

Capacity building (public sector) inc. knowledge and
skills retention

Risk management

Project preparation and quality assurance

Procurement management support

Contract management support

Standardisation of processes and contracts

Guidance and best practice

Communications and stakeholder management

Source: Defra