
**WASTE MANAGEMENT ENVIRONMENTAL OPTIONS ASSESSMENT
FOR MUNICIPAL WASTE IN DARLINGTON**

**Responsible Cabinet Member(s) - Councillor Stephen Harker,
Consumer and Environmental Services Portfolio**

Responsible Director(s) - John Buxton, Director of Development and Environment

Purpose of Report

1. To inform Cabinet of the recently completed Environmental Options Assessment for Municipal Waste in Darlington prior to a waste strategy being drafted.

Background

2. Darlington Borough Council is a Unitary authority which was created in April 1997 and as such has responsibilities for all aspects of Waste Management including the collection and disposal of waste. The disposal responsibility has only existed since April 1997 - prior to this date it was administered by Durham County Council via a contract with Premier Waste Management Company and since then we have also been contracted with them. This contract may end on 31 January 2008 or soon afterwards.
3. Over recent years the EU and UK government have imposed strict targets to encourage greater recycling of waste and taxes and fines to significantly reduce landfilling of biodegradable waste.
4. As a result of these pressures Darlington Borough Council urgently needs to plan an appropriate waste management solution and to put this in place as soon as possible.

Information and Analysis

5. Steps have already been taken to ensure that our planning and consequent actions are timely. Waste Management as a subject is included as one of the of Leading Edge Projects which means that it is given high priority and subject to strict management controls. The project has been operating now for 6 months and good progress is being made.
6. Early project working recognised the need for us to conduct an environmental options assessment. The Government Waste Strategy 2000 states:- *Decisions on Waste Management, including decisions on suitable sites and installations for treatment and disposal, should be based on a local assessment of the Best Practicable Environmental Option (BPEO)*

7. Specialist environmental consultants were engaged to conduct the BPEO assessment work in October this year and their final report (**attached as Appendix A**) was published in January 2006. Their work included facilitating a workshop in which a cross section of senior Council officers agreed seven modelling options and considered and weighted objectives (comprising environmental, socio economic and operational) to be applied against these.

Modelling Options and Findings of the BPEO Report

8. The table below summarises the seven modelling options considered in the BPEO assessment and indicates how these ranked in terms of final overall score. It also offers a brief explanation of each option and about the treatment method which is involved – further detailed information on the different and emerging treatment methods is included in the Consultants’ report.

Option	Proposed Change	Brief Description of Treatment	Ranking
Base Case – Landfill based:	No changes to recycling levels (23%) and no new facilities introduced. Main disposal route through landfill.	No treatment of waste other than current recycling. Majority of waste landfilled.	7
Maximised waste minimisation and high recycling:	Waste minimisation activities increased and recycling performance increased to 40%. Include bio waste (green and kitchen waste) collection using 140 litre wheeled bin collected fortnightly. In vessel composting (IVC) facility for bio waste collected. Main disposal route through landfill.	In Vessel Composting (IVC) will convert all green and kitchen waste into a soil conditioner via aerobic digestion (generally takes 9 days).	5
Energy from waste incineration at a site within Darlington:	No changes to collection recycling levels (23%). New energy from waste (EfW) facility within Darlington taking residual waste.	The majority of waste will be incinerated in Darlington with heat exchanged via steam/turbines into electricity which is then tapped into the national grid.	4
Energy from waste incineration at a site outside Darlington:	No changes to collection recycling levels (23%). Energy from waste (EfW) facility outside Darlington taking residual waste.	As above but assumes the incineration process being situated outside Darlington.	1
Mechanical biological treatment facility within Darlington	Increased recycling performance (35%) via residual treatment facility and bio waste (green and kitchen waste) collection using 140 litre wheeled bin collected fortnightly. New in-vessel	Mechanical Biological Treatment (MBT) is a relatively new technology which will treat all residual waste in vessel via anaerobic digestion and produces fuel pellets. The digestion process takes 9+ days or more.	6

	composting facility constructed for bio waste and new Mechanical Biological Treatment Facility with Anaerobic Digestion (MBT-AD) facility within Darlington, taking residual waste and the Refuse-Derived Fuel (RDF) going to a third party for combustion.		
Gasification facility within Darlington	No changes to recycling collection levels (23%). New gasification facility within Darlington taking residual waste.	Another relatively new technology , gasification is essentially an incineration process but with the absence of oxygen. Heat is exchanged to electricity which is tapped into the National Grid.	3
Energy from waste incineration within Darlington and increased recycling	Increased recycling performance (29%) via green waste collection using 140 litre wheeled bin, collected fortnightly. New energy from waste (EfW) facility within Darlington taking residual waste.	See previous description(s) for Energy for waste.	2

9. The results from the BPEO exercise clearly indicate that diversion of waste away from landfill is the best option and that thermal treatment with energy recovery (ranked 1, 2, 3 and 4) is favourable. They also highlight a limitation with mechanical biological treatment (MBT) (ranked 6) in less landfill diversion, reduced energy recovery, and the uncertainty of markets for the end products.
10. However, it should be appreciated that the actual waste management solution will not necessarily be one of the scenarios which have been modelled. The modelled scenarios are merely to illustrate the key aspects that will be typified by the final solution. Examination of the result of the BPEO work shows that these key aspects include:-
- (a) Need to divert more waste away from landfill..
 - (b) Energy recovery through thermal treatment ranks highly on overall performance.
 - (c) MBT technology has uncertainty of markets for refuse-derived fuel (RDF) and for compost/digestate that needs to be carefully considered.
 - (d) Improvement of the recycling and composting performance is beneficial and can aid the diversion of biodegradable municipal waste (BMW) by potentially reducing the extent that residual treatment facilities are required.
 - (e) Utilisation of a third party treatment ranks highest on overall performance.

11. The Consultant's report on Environmental Options Assessment for municipal waste in Darlington including BPEO will inform Darlington's Waste Management Strategy which is now being prepared.

Outcome of Consultation

12. The Public Protection and Community Partnerships Scrutiny Committee was consulted on the BPEO report at its meeting held on 7 March 2006. The Scrutiny Committee resolved:
 - (a) That Members of this Scrutiny Committee endorse the Best Practicable Environmental Option Assessment for municipal waste in Darlington including the scenarios assessed and the weighted objectives.
 - (b) That the thanks of this Scrutiny Committee be extended to the officers involved for their hard work to date.

Legal Implications

13. This report has been considered by the Borough Solicitor for legal implications in accordance with the Council's approved procedures. There are no issues which the Borough Solicitor considers need to be brought to the specific attention of Members, other than those highlighted in the report.

Section 17 of the Crime and Disorder Act 1998

14. The contents of this report have been considered in the context of the requirements placed on the Council by Section 17 of the Crime and Disorder Act 1998, namely, the duty on the Council to exercise its functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent, crime and disorder in its area. It is not considered that the contents of this report have any such effect.

Financial Implications

15. There are no direct financial implications resulting from this report.

Council Policy Framework

16. The issues contained within this report do not represent change to Council policy or the Council's policy framework.

Decision Deadline

17. For the purpose of the 'call-in' procedure this does not represent an urgent matter.

Recommendation

18. Cabinet are requested to note the options and weighting included in the environmental assessment to allow these to be taken forward and consulted upon in the context of the emerging Waste Management Strategy.

Reasons

19. The recommendations are supported to allow work on Waste Management to progress according to the project plan.

John Buxton
Director of Development and Environment

Background Papers

No background papers were used in the preparation of this report.

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