

North London Waste Authority

Strategic Environmental Assessment of North London Joint Waste Strategy

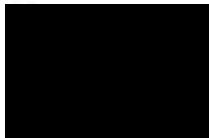
Non Technical Summary

May 2008

Entec UK Limited

Report for (or Specification, etc)

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Document Revisions

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V1	First Draft to Client	21/12/07
V2	2 nd draft to client	18/1/08
V3	Draft for Borough consultation	17/3/08
V4	Amendments to client pre-public consultation	28/04/08
V5	Track change version pre public consultation	02/05/08
V6	Public consultation version	02/05/08

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1. Non Technical Summary

1.1 Introduction

The North London Waste Authority (NLWA) has carried out a Strategic Environmental Assessment of the North London Joint Waste Strategy (NLJWS). The resulting Environmental Report is being published for consultation alongside proposed changes to the NLJWS. The NLWA are seeking your views on this Environmental Report.

1.2 What is the North London Joint Waste Strategy (NLJWS)?

In September 2004, the seven North London boroughs and the NLWA produced the Joint Waste Strategy for North London, which set out the combined plan of the eight partners to meet the challenge of how best to manage the rising amount of municipal waste (almost 1 million tonnes) that is produced in North London each year. The strategy sets out a number of actions to help prevent waste being produced in the first place and where it is produced to enable greater levels of recycling, composting and recovery of waste. A number of options are considered and a preferred solution put forward which would provide the basis for providing new recycling, composting and waste treatment facilities in the future.

1.3 What is a Strategic Environmental Assessment

The NLJWS should help achieve the protection of the environment and the NLWA should consider any environmental effects when preparing the NLJWS. European legislation known as the Strategic Environmental Assessment (SEA) Directive was formally adopted by UK law on July 20th 2004. The aim of the SEA Directive is to ensure that environmental issues are properly considered and incorporated with the NLJWS. An SEA is required for the NLJWS under the SEA Directive and UK SEA Regulations.

1.4 Background to the SEA of the NLJWS?

Under the SEA regulations plans which had been started before September 2004 and which were adopted before 22nd July 2006 would not be subject to SEA. Work on the Mayor's Draft NLJWS started before September 2004, but the strategy had not been formally adopted by 22nd July 2006, so the requirement to carry out SEA applies, as outlined below.

1.5 How is the Strategic Environmental Assessment carried out?

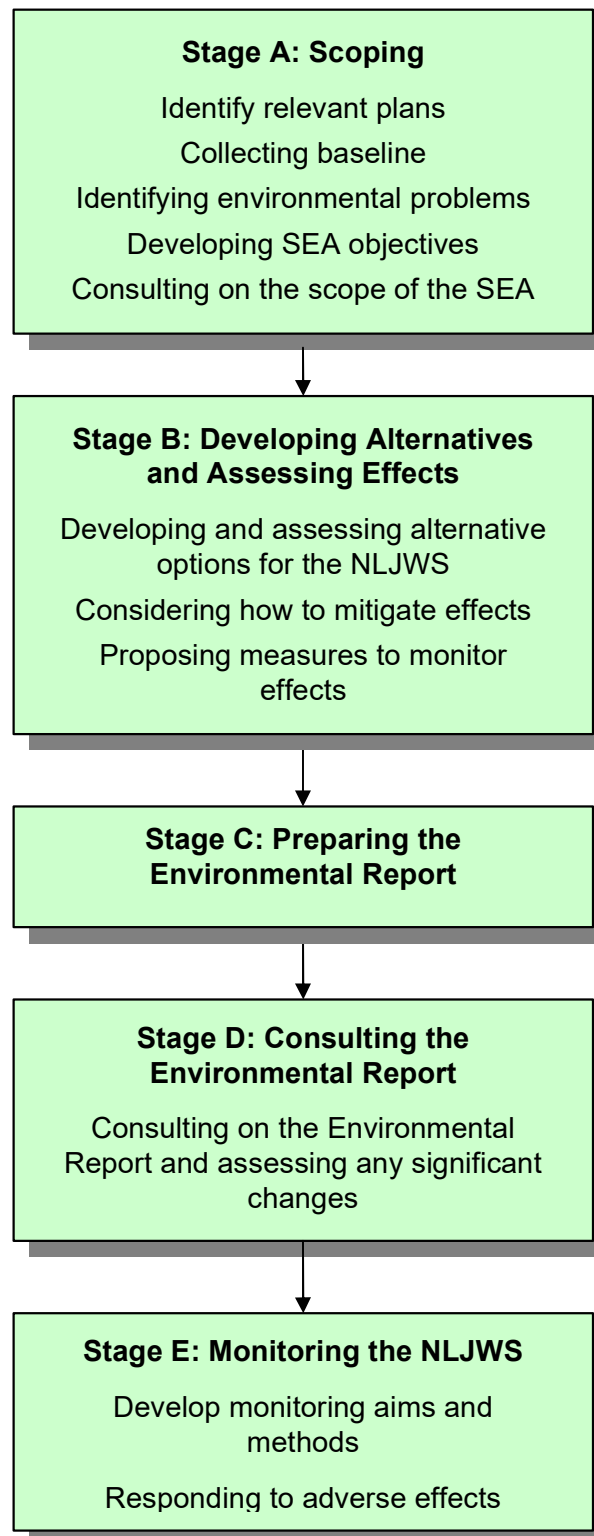
The aim of SEA is to assess the likely effects of the NLJWS on the environment and to inform decision making throughout the development of the NLJWS. The SEA should help to identify any significant environmental effects which may arise from the proposed strategy.

The SEA looks at a range of environmental topics including the effects on biodiversity, flora & fauna, population effects, human health, soil, water & air quality, climatic factors, material assets, cultural heritage and landscape. The NLJWS is likely to have social and economic effects and therefore the SEA has been broadened to include these topics, which allows a better assessment of all sustainable development topics.

The assessment considers different types of effects including effects in the short, medium and long term, permanent or temporary effects, positive and negative effects and effects different geographical areas.

The assessment also considers certain other types of effects, namely secondary or indirect effects, cumulative effects (combination of several individual effects) and synergistic (combined effects greater than the sum of individual effects).

The main stages of the SEA are summarised briefly in the diagram below. The full details are set out in government guidance - A Practical Guide to Strategic Environmental Assessment (September 2005).

Figure 1.1 Stages of SEA Process

The following sections set out a summary of the key conclusions in the Environmental Report.

1.6 What are the Key Environmental Issues Affecting North London?

Based on an assessment of baseline information about North London key issues were identified and are set out below.

Table 1.1 Key Environmental Issues for North London

SEA Objective	Strengths	Challenges
Population and Human Health	All boroughs populations have increased over the last 20 years Average age across all boroughs is lower than national average	Reducing the existing health inequalities between the boroughs
Biodiversity	The North London Authority has a number of habitats and species of local, national and international importance.	Three of the SSSIs are in unfavourable condition
Soil		Maximising the use of previously developed land
Water	Quality of rivers in generally good. Only one river failed its River Ecosystems Targets	Water consumption – The Thames region is the most populated region in the UK and consequently water is scarce Some areas at risk of groundwater pollution. Some high levels of nitrate concentrations
Air	Emissions reducing in some boroughs as a result of the congestion zone	Reducing nitrogen dioxide and particulate matter pollutants across the North London Authority
Climatic Factors		Inner boroughs more susceptible to temperature rises as result of high densities Risk of flooding from the Lee flood plain
Material Assets/Resources	Average waste growth over the last 5 years of just 0.2%	Meeting statutory targets for recycling, recovery and landfill diversion
Built and Historic Environment	The area has a number of historic parks and gardens, listed buildings and conservation areas Large amount of high quality open and greenspace	Protecting a number of listed buildings 'at risk' due to neglect and decay Protecting land from new urban developments (predominantly urban area)
A Stable Economy	The green/environmental industry sector provides a potentially high employment source for local communities in the future	Maximising employment opportunities arising from implementing the WMS
Accessibility and participation	Access to all services is generally good	Recycling and waste services provided to households vary from borough to borough reflecting differing local circumstances Improving access to recycling centres

1.7 Are There Any Uncertainties or Risks Associated with the Information Collected?

The baseline data was mainly sourced from the Sustainability Appraisal Scoping Report for the North London Waste Development Plan undertaken by the seven boroughs and published in July 2007. The report identifies a number of data gaps relating to health, economy, background noise levels, and groundwater provision. Data on predicted future trends is also limited.

1.8 What Objectives have been Used to Assess the NLJWS?

Objectives are statements of what is intended i.e. a desired change. The SEA has identified 20 objectives covering a range of mainly environmental but also social and economic factors. These objectives are supported by appraisal criteria i.e. more detailed questions to assess the NLJWS and indicators (measures to quantifying changes).

These are set out below:

Objective 1: To conserve and enhance natural habitats and wildlife, especially priority habitats and species
Objective 2: To maximise the health and well-being of the population
Objective 3: To conserve and enhance natural soil structure and composition
Objective 4: To improve air quality
Objective 5: To improve water quality
Objective 6: To achieve the wise management and sustainable use of water resources
Objective 7: To address the causes of climate change
Objective 8: To adapt to the unavoidable consequences of climate change
Objective 9: To minimise the production of waste arising from households and local authority business customers
Objective 10: To maximise reuse, recycling and recovery rates by viewing waste as a resource
Objective 11: To minimise the global, social and environmental impact of consumption of resources
Objective 12: To enable waste to be disposed of at the nearest appropriate installation
Objective 13: To enhance and protect the existing built environment including heritage assets and the wider historic environment.
Objective 14: To ensure new buildings and associated infrastructure are designed and constructed in a sustainable way
Objective 15: To improve efficiency of land use through the sustainable re use of previously developed land and existing buildings.
Objective 16: To stimulate regeneration and urban renaissance that benefits the most deprived areas and communities
Objective 17: To encourage a strong, diverse and stable economy.
Objective 18: To improve the resilience of businesses and their environmental, social and economic performance.
Objective 19: To maximise the accessibility and equality of services
Objective 20: To promote civic participation, ownership and responsibility and enable individuals, groups and communities to contribute to improving their environment

1.9 Are the NLJWS Objectives Compatible with the Environmental Objectives?

The NLJWS strategy includes 8 key objectives and these were tested against the SEA objectives to see if they were compatible. The NLJWS objectives are compatible with the SEA objectives and further amendments are not considered necessary.

1.10 What Options have been Considered?

A number of options for managing waste have been considered. These are set out below.

Table 1.2 Summary of residual treatment options

Element	Option 1 Minimum Compliance Scenario	Option 2 Borough-led Scenario	Option 3 Partnership Scenario	Option 4 Mayor's Aspirational Scenario	Option 5 Procurement Scenario
Recycling and Composting Standards	Waste Strategy 2000 (30% by 2010, 33% by 2015), 50% by 2020 from kerbside collection	Strategy Unit proposals (35% by 2010, 45% by 2015), 50% by 2020 from kerbside collection	Strategy Unit proposals (35% by 2010, 45% by 2015), 50% by 2020 from kerbside collection	50% by 2010, 55% by 2020 from kerbside collection Recycling/composting through the MBT performance increases the level to 60%.	45% by 2015 50% by 2020 from kerbside collection
Recycling and Composting Collection Method	Mix of kerbside sorting and commingled collections	Mix of kerbside sorting and commingled collections	Mix of kerbside sorting and commingled collections	Mix of kerbside sorting and commingled collections	Mix of kerbside sorting and commingled collections
Recycling and Composting Processing Method	Sorting and bulking materials before delivery to reprocessors In-vessel and open windrow composting facilities	Sorting and bulking materials before delivery to reprocessors In-vessel and open windrow composting facilities	Sorting and bulking materials before delivery to reprocessors In-vessel and open windrow composting facilities	Sorting and bulking materials before delivery to reprocessors In-vessel and open windrow composting facilities	Sorting and bulking materials before delivery to reprocessors In-vessel and open windrow composting facilities
Energy Recovery Treatment Technology	New Energy from Waste (EfW) plant (450,000 tonnes per year) replaces existing Edmonton EfW plant in 2015)	Edmonton EfW plant no longer available in 2015 and is replaced by 2 gasification plants taking a total of 250,000 tonnes per year; 2 Mechanical and Biological Treatment (MBT) Plants with Refuse Derived Fuel (RDF) facilities capacity to take 385,000 tonnes per year; 2 MBTs with Anaerobic Digesters (AD) to take 270,000 tonnes per year.	New EfW plant (450,000 tonnes per year) replaces existing Edmonton EfW plant in 2015, plus a 250,000 tonnes per year MBT with AD Plant	New EfW plant (270,000 tonnes), representing North London's per capita share of London's current energy from waste capacity, replaces Edmonton EfW plant in 2015 plus 200,000 tonnes per year MBT with AD plant.	New EfW plant (540,000 tonnes per year) replaces Edmonton EfW in 2015 plus a 250,000 tonnes per year MBT with RDF plant.

1.11 What were the Results of the Options Appraisal?

The table below summarises the performance of the options against the 20 SEA objectives and this is set out in more details in **Appendix D**.

Table 1.3 Summary of appraisal of waste management options

SEA Objectives		1.EfW (450ktpa)	2.Gasifier (250ktpa)/ MBT-AD (270ktpa)/ MBT-RDF (385ktpa)	3.EfW (450kt)/ MBT-AD (250ktpa)	4.EfW(270ktpa) /MBT- AD(200ktpa)	5.EfW (540kt)/MBT- RDF(250ktpa)
O1	Biodiversity	+?	++	+?	+?	++
O2	Health	++	++	++	++	++
O3	Soil	0	0?	0?	0?	0?
O4	Air	++	++	++	++	++
O5	Water Quality	+?	++	+?	+?	++
O6	Water resources	?	?	?	?	?
O7	Addressing Climate Change	+	++	++	++	++
O8	Adapting to climate change	?	?	?	?	?
O9	Production of waste	/	/	/	/	/
O10	Reuse, recycling and recovery	-?	++?	++?	-?	++
O11	Consumption of resources	++	++	++	++	++
O12	Waste disposal	+?	+?	+?	+?	+?
O13	Built environment.	?	?	?	?	?
O14	Infrastructure	?	?	?	?	?
O15	Land use	++?	-?	+?	+?	+?
O16	Deprivation	+?	++?	++?	++?	++?
O17	Stable economy.	?	?	?	?	?
O18	Economic performance.	+	++	+	+	+
O19	Accessibility	+?	+?	+?	+?	+?
O20	Civic participation	?	?	?	?	?

SEA Marking System (based on degree of influence on achieving the objectives)

-- Move away significantly	- Move away marginally	+ Move towards marginally	++ Move towards significantly	/ No relationship	Neutral 0	? Uncertain
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The results table above shows that overall the options all score positively for the majority of the SEA objectives where information is known. However there are differences between the options.

Option 5 is the best performing option as a result of its choice of technologies, the high volume of waste it will be able to treat and its high recycling targets and no negative effects are identified. Option 2 also performs well against the majority of the objectives as a result of the number of facilities being provided and the types of technology proposed. The number of facilities will have positive effects upon economic performance and deprivation as it would create employment. The negative effects of this option will be in relation to the efficient use of land as six facilities will require a large amount of land to be developed.

Option 1 is the worst performing option as it scores negatively against objectives for soil and re use, recovery and recycling as a result of the option only proposing one Energy from Waste facility with a capacity for 450,000 tonnes of waste

Options 3 and 4 score positively due to the technologies they are proposing which includes anaerobic digesting facilities. Under Option 4, overall recovery levels are lower and therefore more biodegradable municipal waste is going to landfill up to 2020.

1.12 How has the SEA Helped in Choosing the Preferred Option?

The NLJWS explains how the four strategic alternatives or options were originally produced for the draft NLJWS published in 2004. The options were originally assessed using a technique called Best Practicable Environmental Option (BPEO). Since the original assessment BPEO has been replaced by SEA as the basis for decision making on waste management options. The SEA has taken account of new issues including the need to update the options and to include a fifth option which reflects the NLWAs procurement strategy.

The conclusion of the options appraisal was that Option 5, the procurement scenario performed best against the range of environmental, social and economic effects. The preferred option selected by NLWA is based on Option 5, the Procurement Scenario. The reference project assessed as part of this scenario was based on provision of an Energy from Waste facility. The Partner Authorities recognise that Energy from Waste incineration, which is included in this scenario, offers the only energy recovery treatment technology that is currently proven at the scale, cost and efficiency necessary for delivery of the Procurement Scenario. However it is also recognised that this may change before any final procurement decisions are taken and at this stage, no technology choices have been fixed. Consideration will also need to be given to the

Mayor of London's preference for new and emerging waste technologies when making final technology choices in relation to residual waste treatment.

The NLJWS is also being updated throughout to take account of new legislative and other developments to include updated data and statistics. A revised version of the North London Joint Waste Strategy, has been prepared for public consultation along with this SEA Environmental Report which outlines the proposed changes to the NLJWS resulting from this review.

1.13 How did the Actions in the NLJWS Perform Against the SEA Objectives?

The NLJWS includes 84 implementation actions. Those actions which were not likely to have significant environmental effects were not appraised and the remainder were grouped into common themes which were then subject to appraisal against the SEA Objectives. The appraisal is set out in detail in Appendix E and F of the Environmental Report.

Table 1.4 Summary of Predicted Effects of the NLJWS Implementation Actions

Groups of NLJWS Action	Comments
Waste Minimisation	Positive effects on most SEA objectives, especially those relating to waste production and resource consumption. Some uncertainty regarding effects on achieving equality.
Composting	Positive effects on many SEA objectives especially those relating to soil, waste recycling and recovery, access to services. Some uncertain effects including on climate change adaptation and in relation to health.
Recycling	Positive effects on many SEA objectives especially those relating to waste recycling and recovery, climate change mitigation, resource consumption and access to services. Some uncertain effects on environmental objectives as exact details of implementation not known.
Delivering facilities	Positive effects on many SEA objectives especially those relating to waste recycling and recovery, climate change mitigation, resource consumption and disposing of waste in the nearest appropriate installation. Some uncertain effects on environmental objectives as exact details of implementation not known.
Edmonton EFW	This action only relates to the current waste disposal contract until 2014 so only has effects in the short term. Some positive effects as a result of its role in diverting waste from landfill. No relationship with a number of the SEA objectives.
Renewables	Significant positive effects on climate change mitigation and on economic objectives. No relationship with many of the objectives.
Landfill	Positive effects on most of the objectives due to the benefits of diverting waste from landfill. Uncertain effects on climate change adaptation and the built environment. No relationship on some objectives.
Abandoned vehicles/fly tipping	Positive effects on many of the objectives due to the benefits of better management of these wastes. Some uncertain effects including disposing of waste in the nearest installation as the disposal outlets not known. No relationship with some objectives.
Other household wastes	Significant positive effects on objectives relating to recovery and recycling, efficient use of land, encouraging participation and access to services. A number of other positive effects. Uncertain effects on climate change adaptation, and disposing of waste in the nearest installation as the disposal outlets not known

Commercial wastes	These actions relate to various charging issues and have some positive effects including on recycling and recovery, waste production, and resource consumption. There is no relationship with some objectives and uncertain economic effects.
Construction and Demolition waste	Significant positive effects on recycling and recovery and resource consumption and a number of other positive effects. Uncertain effects on the objective of disposing of waste in the nearest installation as the location of facilities is not known. No relationship with some objectives.
Working in partnership	Significant positive effects on recycling and recovery and on encouraging participation. Positive effects on a number of other objectives. No relationship with some objectives. Uncertain effects on sustainable construction

Table 1.4 (continued) Summary of Predicted Effects of the NLJWS Implementation Actions

Groups of NLJWS Action	Comments
Special events	Positive effects on a number of objectives as a result of actions promoting better waste management at events. No relationship with a number of objectives.
Transportation	A number of positive environmental effects as a result of actions promoting rail/water use in preference to road. No relationship with some objectives. Uncertain effects on climate change adaptation, disposing of waste in the nearest appropriate installation and water quality.
Preferred strategy for residual waste treatment	Significant positive effects on objectives on recycling and recovery, resource consumption and climate change. No negative effect. Positive effects on biodiversity, health, air and water quality, waste production, economy. Uncertain effects on a number of objectives.

The assessment of secondary, cumulative and synergistic effects concludes that there are significant positive effects in relation to objectives relating to access to services and encouraging participation. There are also positive effects on most of the other objectives. There are uncertain effects on sustainable construction and climate change adaptation.

1.13.1 Uncertainties

In carrying out the appraisal a number of the effects on sustainability objectives were determined to be uncertain. This is because the strategy does not deal in detail with the type and location of facilities which will be delivered.

Effects on, for example, the built environment and water resources are very much dependent on the location and nature of the facility. The location of the waste facilities is not dealt with in the strategy as this is a matter for consideration through the land use planning process and the North London Waste Plan. Therefore whilst some effects are uncertain due to a lack of detail regarding location these issues will be addressed through the North London Waste Plan and planning controls.

Some of the effects, for example those relating to air quality and health are dependent on the type of facilities which are selected. Whilst this is not specified in the strategy, these effects will be regulated by planning and environmental controls.

1.14 How Could the SEA Help Improve NLJWS?

This Environmental Report is a key part of the process of the NLJWS's preparation and development.

Where appropriate recommendations have now been made (which are summarised in **Table 1.5**). Consultation on the Strategic Environmental Assessment will allow the stakeholders involved to analyse the NLJWS with regard to environmental (and social and economic) objectives. This will help to highlight issues with regard to the performance of NLJWS against these objectives and associated indicators.

By addressing these issues, it enables the NLJWS to help minimise and wherever possible enhance its environmental effects. The net result has been to make the NLJWS's policies more sound, which should make their implementation more effective too.

The recommendations that were made during the appraisal process and the changes that have now been incorporated are shown below

Table 1.5 Summary of SEA Recommendations

Effect	Relevant Implementation Actions	Mitigation
Uncertain effects regarding climate change adaptation and potential to enhance reference to climate change mitigation.	Actions relating to composting, recycling and delivery of facilities, landfill, other household wastes	Consider enhancing references in the NLJWS to climate change and the links between waste management and climate change adaptation and mitigation.
Uncertain effects on environmental objectives resulting from provision of new recycling, composting and recovery facilities/services.	Actions relating to composting, recycling and delivery of facilities.	Consider amending strategy actions/text to provide clear reference as to how environmental impacts of projects will be dealt with.
Uncertain effects on objectives relating to sustainable design and construction.	Actions relating to and delivery of facilities.	There is potential to improve the performance of the strategy against this objective by providing a clearer commitment to achieving high standards of sustainable design and construction when commissioning new facilities e.g. use of BREEAM standards.
Uncertain effects on the efficient use of land	Actions relating to composting, recycling, delivery of facilities, other household wastes.	Although mentioned in the strategy the actions could make a clearer commitment to the use of previously developed land for new treatment facilities and for the co-location of services and facilities on existing waste sites where appropriate.
Uncertain effects on the objective 19 relating to equality	Actions relating to waste minimisation, recycling, composting, commercial waste charging, working in partnership	The strategy actions/text could explain more clearly how the strategy will ensure that the needs of the more deprived and hard to reach groups within the community will be addressed.

1.15 Conclusions on the Performance of the NLJWS

The results of this assessment show that the NLJWS performs well against the SEA objectives, however a number of 'no relationship' or 'uncertain' scores were identified due to the strategic or non site specific nature of the policies.

No explicit negative relationships were identified during the appraisal of actions and only minor recommendations were afforded, as shown in Table

Overall, it is considered that the NLJWS provides a robust framework of implementation actions which will contribute towards the protection of the environment and to sustainable developments.

1.16 What Proposals are in Place for Monitoring?

The Environmental Report sets out the approach towards monitoring which would be linked to the Annual Monitoring Report required for the Waste Development Framework and the monitoring on the Action Plans associated with the NLJWS. A number of indicators are suggested based on information gathered during this Strategic Environmental Assessment.

