

# 2009/10 Business Plan

**A Priorities Plan for the London Waste and Recycling Board**

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# foreword

I want to make waste an outdated concept.

Every year Londoners produce some 20 million tonnes of waste. Some of this is recycled, but most of the waste that boroughs collect, and nearly half that business produces, goes to landfill or incinerators without capturing the value in that waste. This material is a resource that could be reused or turned into energy – so we are literally throwing away material that has an economic value.

A new type of waste infrastructure needs to emerge, one that is suitable for today's demands, but flexible enough to meet the future needs of the 21st century, where waste can be turned into a local source of heat and electricity, where food waste can be used to power vehicles, and where fuel cells could even be powered by the unwanted rubbish from restaurants and supermarkets.

There is huge opportunity to make London a global leader in the way waste is managed. The formation of the London Waste and Recycling Board creates an opportunity for all the main players – working together for the first time in London's history – can make that change happen. This will not only help solve London's waste challenges but will create real business opportunities and jobs for London.

This is a real example of what the much-vaunted new green economy can mean in concrete terms.

To harness this opportunity, we will need to work with everyone from the households and businesses that produce waste through to energy users. We will need to work closely with and through the boroughs, the waste companies, and the community, voluntary and charitable (third) sector.

The Board can provide support through the offer of funding but, perhaps even more importantly, the Business Plan sees the creation of a brokerage service that will link up waste producers with site owners, London boroughs and energy users to result in new waste management approaches and new infrastructure.

This 'dating agency' will be vital for anyone who has a great idea for getting energy from our waste or recycling our rubbish - they won't have to wade through endless bureaucracy but can get the expertise and help they need. It will mean that innovators and entrepreneurs can turn bright new ideas into real investment opportunities and, ultimately, into new projects on the ground.

Together I truly believe we can make London a zero-waste city. I look forward to seeing your expressions of interest.



**Boris Johnson**  
Mayor of London  
Chairman of London Waste and Recycling Board



# executive summary

The London Waste and Recycling Board (the Board) was formally constituted in September 2008 with funding of £84 million from both central Government and the London Development Agency, with the objectives of using that fund in Greater London to promote and encourage the production of less waste, an increase in the proportion that is reused or recycled, and the use of methods of collection, treatment and disposal of waste that are more beneficial to the environment.

This is the first business plan produced by the Board and builds on the priorities agreed by the Board at its December 2008 meeting, describing the steps that it is going to take to deliver its objectives. The Board has identified the waste materials that it will focus upon, and the interventions that it will support based on the ability of the Board to make a significant impact.

## Priority materials and interventions

Following analysis of London's waste composition and the way that it is treated the Board has prioritised **mixed plastic, organic** (including food) and **wood**, as materials that offer the best opportunities for improvement in treatment, given the proportion of those materials that currently go to landfill with the associated economic and environmental cost; and **metals, paper & board** and **textiles** where the current methods of management in some sectors are providing inadequate capture of materials.

The Board has indicated the level of funding it will apportion to its interventions (the waste hierarchy), based on the impact it can realistically have on diverting these materials from landfill and on climate change mitigation. The provisional allocation across the life of the fund is:

### *Medium to high priority*

- Recycling (43%)
- Energy (39%)

### *Low to medium priority*

- Reuse (15%)
- Reduction (3%)

**Recycling:** the Board can have an effective impact on recycling performance and material capture. A critical success factor in recycling is to ensure a consistent quality and price of material, which compete effectively with the virgin material supply chains.

**Energy from waste:** the Board can have an effective impact on the amount of waste that is captured and treated to generate energy.

**Reuse:** the Board believes it can have an effective impact on increasing the amount of products and resource that are reused.

**Reduction:** the greatest landfill diversion and carbon dioxide (equivalent) savings for all waste materials come from waste reduction. However the Board's ability to make a big impact in achieving significant waste reduction is limited because this is more geared to producer responsibility. The Board's impact in this area will be limited to awareness campaigns.

### **Actions in 2009/10**

Over the coming year the Board will deliver an infrastructure fund as well as delivering number of campaigns to target awareness of waste reduction, reuse and recycling. This infrastructure investment may be by way of grant, loan, equity or guarantee. It will take the form of funding of projects or through brokerage activities, where the Board will facilitate the development of projects through linkages with waste producers, technology suppliers, material/energy/fuel users and other potential delivery partners.

The Board is seeking to achieve substantial leverage of its fund through the participation of private equity groups, venture capital trusts and bank finance, and is also investigating the ability to increase the funds available for infrastructure through participation in a European match-funding scheme.

The Board will be seeking expressions of interest for funding support throughout 2009/10, and has put in place a process to enable proposals to be reviewed at each of its meetings in the coming year. The criteria for investment and application forms for the first tranche will be published shortly, for submission by the end of March 2009 and review at the May 2009 Board meeting.

Based on preliminary assumptions of activity the Board aims to commit approximately £37 million in 2009/10, of which £2.6m would be spent on campaigns, nearly £16m on infrastructure with a further £18m earmarked for the European match-funding programme (which would generate a further £18m for disbursement on waste infrastructure by 2015).

The Board will put in place a small central team to support these activities and ensure that the appropriate level of financial control and scrutiny of its activities are in place.

### **Measuring the Board's performance**

Over the coming year the Mayor's Municipal Waste Management Strategy and the London Plan will be reviewed, and the Board will develop medium and long-term targets and plans consistent with any revisions. A series of Key Performance Indicators for the Board have been developed to monitor and report on progress of the Board over 2009/10, based on tangible economic targets and process milestones.

### **Next steps**

Following approval of this Business Plan the Board will:

- put in place the proposed support structure, including the creation of Investment and Audit Committees, expansion of the Board's officer team and hold discussions with organisations that could provide additional commercial and technical support if required;
- publish application forms and guidance for expressions of interest;
- prepare and implement a stakeholder communication strategy, which will include holding a number of stakeholder events;
- follow up European match funding options (JESSICA) for discussion at the next Board meeting.

# introduction

London, like other major cities, consumes materials and energy and generates waste – nearly 21 million tonnes each year. Waste is increasingly being viewed not as a single entity to be disposed of, but as a collection of individual materials. If harnessed these materials provide an opportunity to displace some of the virgin materials and fossil-derived energy that London consumes, as well as providing a double dividend of reduced disposal cost and Carbon Dioxide (CO<sub>2</sub>) reduction.

In order to realise this opportunity we will need to develop a new kind of infrastructure to deal with London's waste.

Public concern over the location of new waste treatment facilities will need to be addressed by making clear the social, economic and environmental benefits that such facilities can bring.

To address these challenges, all key stakeholders agreed that London would benefit from a more strategic approach to waste management decision making. To this end the Greater London Authority (GLA) Act 2007 granted the Mayor positive planning powers for strategic waste infrastructure and enabled the establishment of a new statutory body, the London Waste and Recycling Board (the 'Board'), bringing together the Mayor of London, the London Boroughs and others involved in managing the capital's waste.

## **London Waste and Recycling Board**

The Board's<sup>1</sup> objectives<sup>2</sup> are to promote and encourage, so far as relating to Greater London:

- (a) the production of less waste;
- (b) an increase in the proportion of waste that is reused or recycled;
- (c) the use of methods of collection, treatment and disposal of waste that are more beneficial to the environment.

In doing so the Board is required to act in accordance with the Mayor of London's Municipal Waste Management strategy and in general conformity with the Spatial Development strategy for Greater London (the 'London Plan').

The Board comprises eight members under the chairmanship of the Mayor of London<sup>3</sup>.

The Board was formally constituted at its inaugural meeting on 11 September 2008.

## **London Waste and Recycling Fund (the 'Fund')**

The Board has an investment fund of up to £84 million over four years, comprising £60 million from Government (the Department for the Environment Food and Rural Affairs – DEFRA) over three years starting 2008/09, and up to £24 million provided by the London Development Agency (LDA) over three years starting in 2009/10.

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<sup>1</sup> The Board has primary provisions made in Section 356A and 356B of the GLA Act 1999 (as amended by the GLA Act 2007). Its membership and constitution are set out in the London Waste and Recycling Board Order 2008 (Statutory Instrument 2008 No. 2038) (the 'Order').

<sup>2</sup> As set out in the GLA Act 1999 (as amended by the GLA Act 2007).

<sup>3</sup> The remaining seven members are as follows:

- Four London borough councillors appointed by London Councils
- Two independent members appointed by London Councils
- One independent member appointed by the Mayor

The Board has committed £2 million of its Fund in 2008/09, £1.5 million to the GLA to deliver the Recycle for London campaign and up to £0.5 million on initial set-up and running costs.

### **Desired outcomes**

The outcomes that the Board is looking to achieve from its Fund (incorporating its objectives) are:

- material tonnage diverted up the waste hierarchy from landfill;
- climate change mitigation through sustainable resource management;
- additional economic benefits; and
- valuable social benefits.

This document sets out the Board's ambitions for 2009/10 and the mechanisms by which the Board will begin to realise them.

### **London Waste and Recycling 2009/10 Board Business Plan**

The Board must prepare a Business Plan by 31 March each year<sup>4</sup> during the life of the Fund.

This document sets out the Board's 2009/10 priorities, the intervention opportunities to address these priorities and an indicative apportionment of the 2009/10 Fund allocations to these interventions.

The Board will ensure fairness and openness in the allocation of its Fund by setting out details of the funds available, the purposes for which they will be provided, the issues which the Board will consider when making funding decisions and the process by means of which the Board will arrive at decisions.

### **The strategic context**

The new Mayoral administration decision to work closely with London's Boroughs represents a fresh opportunity to deliver much-needed waste infrastructure. The Business Plan is written in a context where the Mayor's municipal waste management strategy and the London Plan are to be reviewed. Clearly this means that the 2009/10 Business Plan should be seen as an interim document. It is not the purpose of this document to seek to rewrite or prejudge what the new Mayor's strategy and plan will look like and to this extent is operating in an evolving policy context.

The Board looks forward to working closely with the Mayor and the London boroughs to ensure that the 2010/11 Plan is fully integrated into the new policy landscape.

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<sup>4</sup> In accordance with the Order and its draft funding agreement with the LDA

# Board's priorities

The Board has identified six priority materials<sup>5</sup> that have significant potential to displace virgin materials and fossil fuel derived energy. These are:

*Group 1*– materials that offer the best opportunities for improvement given percentage of material stream currently landfilled and its associated economic and environmental cost:

- Mixed plastics
- Organic (including food)
- Wood

*Group 2*– materials where there is inadequate capture despite existing management solutions:

- Metals – Municipal waste
- Paper & board – commercial and industrial waste
- Textiles – municipal waste and commercial and industrial waste

The board has followed the following process in selecting these priority materials and designating their appropriate groupings:

## **Step 1: Identification of priority waste stream materials**

Priority waste stream materials have been identified by considering the following variables:

- total tonnage produced in London, and of this, the tonnage and percentage currently landfilled;
- overall tonnes CO<sub>2</sub> equivalent resulting from disposal to landfill (table of these factors and calculation shown in Appendix 4b);
- CO<sub>2</sub> mitigation impact from diverting away from landfill:
  - Reduction – CO<sub>2</sub> emissions saving from reducing production of waste material, including through reuse;
  - Recycling – CO<sub>2</sub> emissions saving from recycling material back to original form; and
  - Energy – CO<sub>2</sub> emissions saving from converting material to energy source.
- total cost of incineration and landfill – estimate of costs to landfill and incineration (table of these factors and calculation shown in Appendix 4c).

Table 1 lists all the key waste streams and highlights (in green) the ones that have been identified as a priority.

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<sup>5</sup> Other material streams that are not specifically mentioned above (WEEE, hazardous, Refuse Derived Fuel (RDF) / Solid Recovered Fuel (SRF) etc) which can deliver a significant impact, against the Board's outcomes may be considered by the Board on a case-by-case basis

Table 1: Priority materials selection

| Waste stream        | Total Tonnage (000s) produced in London | Tonnage disposed of to landfill (000s) | Percentage of total disposed of to landfilled | Tonnes CO <sub>2</sub> equivalent resulting from disposal to landfilled | Tonnes of CO <sub>2</sub> equivalent savings per annum by moving the management of the material up the waste hierarchy |           |               | Total cost of incineration and landfill (£million) |
|---------------------|---|--|---|---|--|-----------|---------------|--|
|                     |   |  |   |   | Reduction (including reuse)  | Recycling | Energy saving |  |
| Aggregates          | 9,075                                   | 1,409                                  | 16%   | 14.09   | 157,808  | 19,726    | -35,225       | 74.7   |
| Paper & Board       | 3,068                                   | 1,400                                  | 46%   | 962.  | 4,540,200  | 1,960,000 | 1,092,000     | 85.6   |
| Organic             | 2,674                                   | 1,067                                  | 40%   | 210   | 1,553,019  | 0         | 322,234       | 93.3   |
| Plastic             | 1,124                                   | 610                                    | 54%   | 6.  | 7,021,100  | 553,270   | -649,955      | 39.6   |
| Wood                | 867                                     | 505                                    | 58%   | 151   | 279,770  | 153,015   | 441,875       | 32.3   |
| Mixed               | 657                                     | 447                                    | 68%   | 0   | 0  | 0         | 0             | 33   |
| Glass               | 898                                     | 394                                    | 44%   | 4.  | 557,904  | 230,096   | -13,790       | 24.7   |
| Metallic            | 753                                     | 299                                    | 40%   | 3   | 2,696,532  | 1,851,707 | 117,059       | 20   |
| Chemicals           | 579                                     | 180                                    | 31%   | 0   | 0  | 0         | 0             | 14.9   |
| Mineral waste       | 364                                     | 172                                    | 47%   | 0   | 0  | 0         | 0             | 9.1  |
| Textiles            | 201                                     | 117                                    | 58%   | 27  | 2,284,659  | 177,489   | -1,404        | 9  |
| Soil                | 128                                     | 85                                     | 66%   | 1   | 1,190  | -510      | -2,125        | 4.5  |
| Ceramic             | 68                                      | 17                                     | 25%   | 0   | 0  | 0         | 0             | 0.9  |
| Discarded equipment | 94                                      | 13                                     | 14%   | 0   | 0  | 0         | 0             | 0.9  |
| Rubber              | 15                                      | 7                                      | 47%   | 0   | 0  | 0         | 0             | 0.4  |
| Sludge              | 74                                      | 7                                      | 9%  | 0   | 0  | 0         | 0             | 0.4  |

## Step 2: Determination of priority groupings

Having selected the six priority materials, the board has allocated each a grouping (Group 1 or 2) based on how established the collection system is for the material stream:

- Group 1 identifies materials where there is inadequate capture and high waste to landfill due to limited collection and reprocessing systems in place
- Group 2 identifies materials where there is inadequate capture and high waste to landfill despite having established existing collection and processing systems in place

## Step 3: Identification of priority categories within Group 2

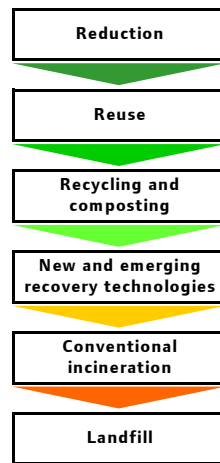
For those material streams where recycling collection schemes are established, the board has identified specific categories (i.e. municipal, C&I or CDEW) that currently have a high proportion of waste sent to landfill. Those waste categories for which fifty percent or more tonnage goes to landfill have been identified as Group 2 priority areas.

*A more detailed explanation of the process of identifying priority material streams is included in Appendix 4*

### Approach to intervention

The Board has used the waste hierarchy (figure 1) as the starting point for the development of its interventions.

Figure 1: the Mayor's waste hierarchy



The overall effectiveness of each tier of the waste hierarchy (or intervention) and potential actions together with some indicative funding priorities, are summarised in Table 1.

Table 2 – Board Interventions and impacts

| <b>Intervention (waste hierarchy)</b> | <b>Potential Board Actions</b>  | <b>Probable impact of the Board on landfill diversion</b> | <b>Impact on climate change mitigation</b> | <b>Total Board Impact</b> | <b>Indicative funding priority</b> |
|---------------------------------------|---|---|--|---------------------------|------------------------------------|
| <b>Reduction</b>                      | -Campaigns<br>-Advice   | Low (difficult to measure)                                | High due to avoided energy impact          | Low                       | Low                                |
| <b>Reuse</b>                          | -Campaigns<br>-Infrastructure<br>-Reuse standard<br>-Market development<br>-Government procurement                | Low- medium (easier to measure)                           | High due to avoided energy impact          | Medium                    | Medium                             |
| <b>Recycling</b>                      | -Campaigns<br>-Breaking down market barriers<br>-Market development<br>-Infrastructure<br>-Government procurement | Medium  | Medium-high                                | Medium - High             | Medium – High                      |
| <b>Energy</b>                         | -Energy supply risk mitigation<br>-Decentralised energy<br>-Technology evolution<br>-Infrastructure               | High  | Low-medium (technology specific)           | Medium                    | Medium-High                        |

The Board has applied the interventions in table 2 to its priority materials and table 3 summarises the potential effectiveness of those interventions. This reflects the Board’s view of the likely landfill diversion and CO<sub>2</sub> savings.

Table 3: Potential effectiveness of Board intervention for the priority materials

| <b>Priority Materials</b>  | <b>INTERVENTIONS</b> |              |                  |               |
|----------------------------|----------------------|--------------|------------------|---------------|
|                            | <b>Reduction</b>     | <b>Reuse</b> | <b>Recycling</b> | <b>Energy</b> |
| Organic                    | ✓                    |              | ✓ ✓              | ✓ ✓ ✓         |
| Wood                       | ✓                    | ✓ ✓          | ✓ ✓              | ✓ ✓ ✓         |
| Plastics                   | ✓                    | ✓ ✓          | ✓ ✓ ✓            | ✓             |
| Metals                     | ✓                    | ✓ ✓          | ✓ ✓ ✓            |               |
| Textiles                   | ✓                    | ✓ ✓ ✓        | ✓                | ✓             |
| Paper and Board            | ✓                    | ✓            | ✓ ✓ ✓            | ✓ ✓           |
| <b>BOARD EFFECTIVENESS</b> | LOW - MEDIUM         |              | MEDIUM - HIGH    |               |

### **Indicative funding of the Board's interventions**

The Board has given each intervention a provisional fund allocation:

*Low to medium priority*

- Reduction (3%)
- Reuse (15%)

*Medium to high priority*

- Recycling (43%)
- Energy (39%)

Percentages are indicative for the life of the Fund, and dependent on the opportunities available. Therefore the weighting given to an intervention from year to year may vary.

# project selection and funding principles

The Board may provide financial assistance<sup>6</sup> to any person towards or for the purposes of:

- (a) The provision of facilities for or in connection with the collection, treatment or disposal of waste produced in Greater London;
- (b) Conducting research into new technologies or techniques for the collection, treatment or disposal of waste;
- (c) Securing, or assisting in securing, the performance of any function of a London borough council or the Common Council relating to waste.

In addition, under the draft LDA funding agreement the Board may provide financial assistance to catalyse a significant (and quantifiable) improvement in the management, and management capacity, of commercial and industrial waste in London while making use of synergies with municipal waste management and infrastructure.

## The Fund

The funds available to the Board are mainly allocated by DEFRA (£60m over three years to 2010/11) and the LDA (£24m over the period until 2011/12). Table 4 shows the current profile of this funding. The Board will also inherit the balance of funds held by London Waste Action, which is being liquidated, estimated at some £400,000.

Table 4: Current Fund Profile (Indicative)

|                   |              | 2008/09<br>(£million) | 2009/10<br>(£million) | 2010/11<br>(£million) | 2011/12<br>(£million) |
|-------------------|--------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>LDA</b>        | Revenue      |                       | 1.0                   | 1.0                   | 1.0                   |
|                   | Capital      |                       | 7.0                   | 7.0                   | 7.0                   |
|                   | <b>Total</b> |                       | <b>8.0</b>            | <b>8.0</b>            | <b>8.0</b>            |
| <b>Government</b> | Revenue      | 2.0                   | 9.3                   | 17.2                  |                       |
|                   | Capital      |                       | 19.5                  | 12.0                  |                       |
|                   | <b>Total</b> | <b>2.0</b>            | <b>28.8*</b>          | <b>29.2*</b>          |                       |
| LWA (revenue)     |              |                       | 0.4                   |                       |                       |
| <b>Total Fund</b> |              | <b>2.0</b>            | <b>37.2</b>           | <b>37.2</b>           | <b>8.0</b>            |

\* The Government allocation includes £16.3 million uncommitted rollover from 2008/09, and £1.5million currently held in the Board's reserve.

- In addition to the programme spend the Board's administration cost must be drawn from the Fund (detailed later under Operational Support).
- The split between Capital and Revenue for each year of the Government element of funding has a degree of flexibility (with the Revenue element available for Capital investment if required; however the Capital element is fixed) and will be determined once expressions of interest have been received and analysed.
- Conditions will apply to the LDA funding which will be set out in the legal agreement between the LDA and the Board.

<sup>6</sup> As set out in the GLA Act 1999 (as amended by the GLA Act 2007).

### **How the Fund will be distributed**

The Board will adopt a flexible approach to disbursing the Fund. This will include grants, equity participation, loans, guarantees and other funding vehicles (discussed in Appendix 5). Support will be tailored to achieve not only flexibility but also the greatest and most cost effective contribution towards the Board's desired outcomes.

Initially the Board will use those distribution methods that can be set up speedily in order to deliver financial assistance in 2009/10. In future years the Board will look to distribute funds using more innovative and flexible schemes.

State Aid is a key legal consideration in the evaluation of the projects the Board chooses to fund – particularly where the recipient of the assistance is undertaking competitive commercial activities. Appendix 7 sets out in more detail how State Aid is defined and its relevance and impact on Board activities. The Board will put in place a process to ensure that State Aid risk is considered when a project is first evaluated and full use is made of any applicable exemptions.

### **How the Board will select projects**

In the previous section the priority materials and intervention processes that the Board wishes to support. Initially it will be seeking expressions of interest for funding, and will shortly publish application forms and guidance.

Examples of the type of project that the Board will support include:

- technologies or infrastructure (including logistics infrastructure that is part of phased implementation of a larger strategic reprocessing or energy infrastructure project) that significantly reduce the CO<sub>2</sub> equivalent emissions and divert waste from landfill;
- infrastructure for reuse;
- infrastructure for manufacturing of recyclate into new materials;
- recycling and composting/anaerobic digestion facilities;
- new and emerging advanced thermal and/or chemical conversion technologies, with preference for technologies that have the potential to produce hydrogen from waste (e.g. anaerobic digestion and gasification/pyrolysis); and
- projects that contribute towards district heating networks and connections to maximise Combined Heat and Power opportunities.

The Board also wishes to support the development of facilities, technologies or aspects of a technology that can currently not be delivered to the London market. These could include:

- a facility that has desirable outcomes but commercial viability is some time away;
- technology that has not yet been 'proven' within London or the UK, and may consequently be unable to access private finance due to perceived high risk;
- demonstrable failure to access suitable land or appropriate sites; and
- facilities that are needed to catalyse markets for waste materials.

The Board will also support awareness campaigns, which convey broad messages about sustainable waste management (reduction, reuse and recycling), and campaigns that target priority materials or specific community sectors, identified at a regional level.

Projects that the market would have delivered without Board funding will be ineligible (although they may be suitable for development support), and the Board will not fund:

- mixed waste solutions<sup>7</sup>; and
- landfill.

### **What else the Board will be looking for**

When assessing the suitability of a proposal for support, the Board will look at a number of factors:

- *Legacy*: projects must have a lasting impact - the Board will not fund 'quick fixes', projects designed to plug a current funding gap but with no strategic goal or legacy potential.
- *Market led solutions*: projects will require a full market assessment before funding can be granted. The Board will, however, consider opportunities to 'add value' to market ready projects through expansion of scope, e.g. where there is opportunity to optimise the environment benefits and CO<sub>2</sub> equivalent savings through the addition of further technology solutions, or by use of its market knowledge to fund additional processing capacity.
- *Partnerships*: the Board recognises the value of working with partners and will help to facilitate partnerships where appropriate. Organisations seeking funding will be strongly encouraged to develop cross-boundary and cross-sectoral delivery partnerships and demonstrate how these partnerships deliver:
  - collaboration benefits;
  - economies and efficiencies of scale;
  - value for money; and
  - shared risk.

The development of partnerships is likely to increase the chances of a project receiving funding.

- *Excellent environmental performance*: the Board will look for excellence and innovation in environmental performance with a focus on developing low carbon solutions. Successful project proposals will need to fulfil Best Practice Environmental Option (BPEO) procedure.
- *Enhancing the value of the Fund – leverage*: the Board will seek to involve external strategic partners who are able to make financial and in-kind investments themselves, thus increasing the value of the fund (see Appendix 8 for the Board's approach to financial markets). This will be achieved through a number of mechanisms:
  - the formation of joint ventures, where investors provide extra funding;
  - the commitment of long-term budgets to support projects initiated by the fund (particularly in the case of Local Authorities who are less likely to be able to raise capital funding);
  - the benefits of tax or carbon credits accruing to the projects; and
  - participation in other funding schemes such as EU matched funding.
- *Equalities and Diversity*: the Board will ensure that funded projects make use of opportunities for positive impacts on minority and excluded groups. Projects that create or exacerbate social or economic exclusion will not be supported. Equalities and diversity therefore run through the preceding factors.

### **The application process**

The process for allocating funding will be rigorous, but will avoid being overly bureaucratic. Applicants to the Fund will first be invited to submit expressions of interest, containing headline information on the proposed projects, such as:

- conformity with the Board's desired outcomes;

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<sup>7</sup> In this instance a "mixed waste solution" refers to a final waste disposal solution (including for energy production) accepting a feedstock with minimal or no pre-treatment and/or materials extraction (e.g. recyclate). It does not refer to pre-treatment waste solutions that take a mixed waste feedstock for sorting (material extraction or fuel preparation).

- focus on priority materials;
- details of partners;
- type of project;
- approximate project costs and spending timetable;
- approximate funding to be applied for (and in which year);
- outline project timetable; and
- key planned outputs and benefits (included projected legacy).

On approval of an expression of interest the Board will adopt an 'incubator' approach with the provision of technical and project management support and guidance to help bidders realise funding and partnership proposals. Bidders will benefit from consultancy support, which could be in the form of workshops and dedicated support tailored to their needs. This is discussed later under 'Operational support & project delivery'.

### Timing

As well as expressions of interest for funding in 2009/10, the Board will call for expressions of interest from organisation(s)/partnerships for all funding years as well as proposals that require funding in more than one year. This will allow the Board to start planning for future years.

The Board has scheduled meetings for 2009/10 as set in table 5. Expressions of interest must normally be received 7 weeks before a Board meeting to allow time for analysis, except for the 5 May Board meeting when the deadline is 1 April 2009.

Table 5

| <b>Deadlines for receipt of completed expressions of interest</b> | <b>Board meetings</b>     |
|---|---------------------------|
| 1 April 2009  | Tuesday 5 May 2009        |
| 11 August 2009  | Tuesday 29 September 2009 |
| 20 October 2009   | Tuesday 8 December 2009   |
| 19 January 2010   | Tuesday 9 March 2010      |

# fund profile

Given the forecast spend of £2m in 2008/09, the balance available from 2009/10 is £82.4 million. Initial estimates of administration costs over the period of the Fund are approximately £2.9 million, leaving £79.5 million available for programme spend. Table 6 shows the indicative weighting per intervention for the life of the Fund (as shown under the Board Priorities, Tables 2 & 3).

Table 6:

| Intervention                  | Indicative percentage weighting per intervention | £m allocation over life of fund |
|-------------------------------|--|---------------------------------|
| Reduction                     | 3%   | 2.5                             |
| Reuse                         | 15%  | 12                              |
| Recycling                     | 43.5%  | 34                              |
| Energy                        | 38.5%  | 31                              |
| <b>Total Programme Budget</b> |  | <b>£79.5m</b>                   |

## Distribution Strategy for 2009/10

The Board will have an infrastructure fund open to all which will:

- Develop projects with Local Authority partners; and
- Operate as a brokerage service, open to any organisation that either produces waste, provides infrastructure or uses waste derived energy, fuel or materials;

The Board will also seek to increase the value of the infrastructure fund through participation in the Joint European Support for Sustainable Investment in City Areas (JESSICA) – Appendix 9.

In addition waste reduction, reuse and recycling will be targeted through regional awareness campaigns. The Board will commission an awareness campaign(s) for 2009/10 based on the Recycle for London brand as this has already established a significant degree of brand equity.

### Infrastructure Fund

- *Local Authorities*

The fund will encourage waste infrastructure projects in the areas of reuse, recycling and energy generation, with the aim of helping local authorities to:

- meet their Landfill Allowance Trading Scheme (LATS) allocations (particularly in Landfill Directive Target years 2009/10, 2012/13 and 2019/20<sup>8</sup>); and
- deliver their National Indicator targets agreed as part of their Local Area Agreements (LAAs<sup>9</sup>)<sup>10</sup>.

- *Brokerage*

The Board will develop an assisted brokerage service open to waste producers (including boroughs), waste technology providers and material, energy or fuel users. The Board will invite expressions of interest and facilitate discussions between these parties with the aim of

<sup>8</sup> London's aggregated allowances is 1.72 million in the first Landfill Directive target year of 2009/10, then to 1.15 million in the second target year, 2012/13, and finally 0.80 million in the third target year, 2019/20.

<sup>9</sup> The Local Area Agreement (LAA) replaces the Best Value Performance Indicator regime with a series of National Indicator. From a basket of National Indicators, boroughs have negotiated with the Government Office for London a series of priorities for their area as expressed in the LAA targets.

<sup>10</sup> For: per capita reduction in CO2 emissions in the LA area (NI 186), residual household waste per household (NI191) and percentage of household waste sent for reuse, recycling and composting (NI192)

generating partnerships and developing projects. Where the Board decides that a project is not eligible for capital funding it may approve some support in the form of advice and/or assistance to help the applicant to develop a business case or to seek appropriate partners.

Table 7a shows the indicative split by intervention in 2009/10. Given the time it takes to develop major investment projects the Board has identified a high risk of under-spend in 2009/10. It is recognised therefore that an element of the 2009/10 allocation may be reprofiled into 2010/11.

Table 7a 2009/10 Funding (£ million)

| 2009/10                        |            |                |             |                |               |
|--------------------------------|------------|----------------|-------------|----------------|---------------|
| Interventions                  | Campaigns  | Infrastructure | Jessica     | Administration | TOTAL         |
| Reduction                      | 2.6        |                |             |                |               |
| Reuse                          |            | 6.0            |             |                |               |
| Recycling                      |            | 9.7            | 18.0        |                |               |
| Energy                         |            |                |             |                |               |
| <b>Total</b>                   | <b>2.6</b> | <b>15.7</b>    | <b>18.0</b> |                |               |
| <b>Total programme funding</b> |            |                | <b>36.3</b> | <b>0.9</b>     | <b>£37.2m</b> |

Table 7b Funding Profile for the remaining life of the Fund

| 2010-12                        |            |                |   |                |               |
|--------------------------------|------------|----------------|---|----------------|---------------|
| Interventions                  | Campaigns  | Infrastructure | Jessica                                 | Administration | TOTAL         |
| Reduction                      | 3.0        |                |   |                |               |
| Reuse                          |            | 2.5            |   |                |               |
| Recycling                      |            |                |   |                |               |
| Energy                         |            | 37.7           | Funds to be allocated to infrastructure |                |               |
| <b>Total</b>                   | <b>3.0</b> | <b>40.2</b>    |   |                |               |
| <b>Total programme funding</b> |            |                | <b>43.2</b>                             | <b>2.0</b>     | <b>£45.2m</b> |

Note: the Fund Profile indicates the level of funds **committed** rather than **disbursed**.

# performance measures

## Measuring success

At the start of this document the Board identified the broad outcomes it will look to achieve through its interventions (by the allocation of its Fund).

These will be achieved mainly through the development of waste infrastructure for London. By their nature infrastructure projects can take several years to become operational, and so the Board will adopt a set of medium to long-term targets against which annual Strategic Performance Indicators (SPIs) can be set to measure its progress. As discussed earlier the 2009/10 Business Plan is written in a context where the Mayor's Municipal Waste Management Strategy and the London Plan are to be reviewed, and the Board will be developing its medium/long term plan and performance indicators accordingly.

To monitor and report on the progress of the Board in 2009/10 more tangible economic and process Key Performance Indicators (KPIs) will be used:

| <b>London Waste and Recycling Board – Key Performance Indicators 2009/10</b>  |   |
|---|---|
| <b>Indicator</b>  | <b>Timing</b>                               |
| <i>Programme Delivery</i>   |   |
| 1. Receipt of initial expressions of interest   | April 2009                                  |
| 2. Delivery of three further tranches of expressions of interest (based on the Board meetings cycle), including reporting on: <ul style="list-style-type: none"> <li>• number of expressions of interest received; and</li> <li>• number of expressions of interest proceeding to business plan and project development.</li> </ul> | August 2009<br>October 2009<br>January 2010 |
| 3. Ten infrastructure projects developed to Business Plan stage, of which: <ul style="list-style-type: none"> <li>• five projects would be supported by Board funding commitment; plus a further</li> <li>• five projects would be brokered but not funded by the Board</li> </ul>  | March 2010                                  |
| 4. Funding of up to £2.7 million for regional awareness campaigns for reduction, reuse and recycling (with suitable performance monitoring in place);   | March 2010                                  |
| 5. Participation in the JESSICA programme: <ul style="list-style-type: none"> <li>• Board support for commitment to Programme</li> <li>• Signature of Funding Agreement</li> <li>• Selection and procurement of investment partners (Urban Delivery Funds)</li> </ul>   | 5 May 2009<br>31 July 2009<br>31 March 2010 |
| 6. Signature of funding agreement with LDA  | By 31 March 2010                            |
| <i>Future planning</i>  |   |
| 7. Working with the GLA team responsible for drafting the Mayor's Municipal Waste Management Strategy and review of the London Plan to establish consistent long term targets for the Board   | December 2009                               |
| 8. Preparation and publication of the Board's ten year plan and 2010/11 Business Plan in accordance with new Mayoral strategies,  | March 2010                                  |
| 9. Agree with DEFRA their proposed level of grant support for the Board over the next Spending Review period (2011/12 to 2013/14)   | March 2010                                  |

| <b>Indicator</b>  | <b>Timing</b>               |
|---|-----------------------------|
| <i>Operational Support</i>  |                             |
| 10. Appointments to the Investment and Audit Committees   | 1 April 2009                |
| 11. Staff appointments: <ul style="list-style-type: none"> <li>• Business development team, Secretariat and Communications Officer in place</li> <li>• Permanent COO appointed</li> </ul> | 1 May 2009<br><br>June 2009 |
| 12. Annual Report and Accounts published  | 30 September 2009           |
|   |                             |

### **Reporting**

The Board will monitor and report on its KPIs quarterly:

- Status of key activities in the past quarter;
- Status of spending in the past quarter and cumulative;
- Performance against outputs in last quarter and cumulative;
- Key risks and mitigation strategies;
- Plans for next quarter;

The Board will also produce Annual reports, beginning with annual report for 2008-09 and ending with annual report for 2011-12, including:

- Description of key activities in the past year;
- Status of spending in the past year and cumulative;
- Performance against business plan and ten-year strategy;

Annual Project Monitoring reports, beginning with 2012-13 and ending in 2017-18, including:

- Status report of funded projects;
- Performance against outputs in last year and cumulative;

*NB: outputs of each project funded will be monitored for 3 years following it becoming operational; projects are expected to become operational within 5 years of being awarded funding – project contracts can include a provision to cope with delay, where it cannot be avoided, subject to agreement by the Board*

# operational support

## **Role of the Board's support team**

The main function of the Board support structure is to ensure that the Board's strategy and objectives are effectively developed and achieved through annual Business Plans in accordance with the London Waste and Recycling Board Order 2008. The key elements of this are:

1. to establish processes for the development of investment policies and proposals;
2. to act as a clearing house to facilitate the development of partnerships for new waste projects. A key element of this will be building and maintaining relationships with stakeholders and delivery partners;
3. to manage the funding provided to the Board and its profiling, and monitoring the use of those funds against agreed parameters;
4. to develop a risk register and risk management strategy for the Board;
5. to provide support for Board members; and
6. to manage the daily running of the Board.

The level of Board support activity will increase and change in nature as the year progresses. In the early stages effort will be biased towards stakeholder communication and encouraging expressions of interest and proposals for funding to be brought forward.

## **Central Team**

The Board will have a small central team fulfilling a number of functions:

- a permanent Chief Operating Officer (COO), managing the team and being responsible to the Board for finance (as Chief Financial Officer), legal matters, day to day management of Board activities, the development of Board strategy and implementation of the Business Plan, and governance arrangements. The COO will also be responsible for maintaining the day to day relationship of the Board with its funders (DEFRA and London Development Agency) and principal stakeholders (London Councils and the GLA);
- a Secretariat officer, responsible to the COO for administration of the Board and the Fund. Key administration and support functions (including accommodation) will be provided by the GLA, London Councils or the LDA under a Service Level Agreement. The Secretariat would also be first point of contact for enquiries about the Board;
- a Business Development team (initially two to three staff, increasing during the year to five to six as the workload increases, subject to Board approval), responsible for building up relationships with stakeholders, delivery partners and other potential participants in waste projects, encouraging and supporting applicants developing expressions of interest and business cases, with additional skills subcontracted in if required. The team will also maintain and develop the Board's waste policies and priorities, supporting any strategic review commissioned by the Board;
- A Communications officer principally responsible for developing, managing and monitoring campaigns – supported by an existing team (either GLA or London Councils Communications team).

Any other roles would be performed by specialist advisors as required. These should include:

- Legal advice - Burges Salmon LLP have already been appointed by the Board;
- External audit – the Audit Commission have been appointed as auditors and an initial meeting to plan the 2008/09 audit has already taken place;

- Internal audit – a firm of accountants to provide internal audit services will have to be appointed before the 2008/09 accounts are finalised:
- Consultancy support – a procurement exercise may be undertaken to enable the Board to call in subcontractors with specialist skills, particularly commercial and technical (if required). The opportunity to work with other organisations is being investigated.

### **Investment Committee**

The Board will form an Investment Committee, which will operate as an *advisory* committee reporting to the Board. It will meet at least quarterly (or more frequently as required to guide the development of investment policies and procedures) to review expressions of interest and funding proposals that have been analysed by Board officers, and produce recommendations for Board consideration.

Membership will comprise the COO of the Board, officers from London Councils, the LDA and the GLA and will include external members (in particular to provide expertise, support and advice on procurement, technical, third sector and project finance matters). Cases would be presented to the Committee by the Business Development team.

The Investment Committee's main roles are:

- to review expressions of interest and business cases for potential investment, and recommend proposals for Board support;
- to review and develop investment priorities and criteria for investment as required by the Board.

The Investment Committee will take over the role currently covered by the Policy Committee, which will be disbanded having fulfilled its initial remit.

It is planned to hold meetings 4-5 weeks before each Board meeting to enable the conclusions to be presented for Board discussion and approval. Additional meetings may be scheduled as necessary, subject to the number of applications received.

### **Audit Committee**

An Audit Committee will be established as an *executive* committee with powers delegated by the Board. Its main activities will be:

- to ensure that the Board maintains adequate financial, risk management and internal control systems;
- to liaise with the internal and external auditors; and
- to review and approve for signature the Board's annual report and accounts

### **Administration Costs**

Our objective is to keep administration costs to a minimum. A review of some comparable organisations shows administrative costs ranging from three to three point five percent of total expenditure; the Board should aim to be within that range, bearing in mind that the other organisations have been operating for a number of years and the Board inevitably faces a number of one off start-up costs. A more valid comparison may be with its predecessor The London Recycling Fund, who spent just under four point five percent of its overall funding on management and administration between 2002 and 2006. At three point five percent management and administration would be limited to £2.9 million out of the £82.4 million total funding over 2009-12. The indicative budget for 2009/10 and 2010/12 shows that this is achievable.

# project delivery

The Business Development team are an outward facing group with diverse commercial and waste management skills who are tasked with encouraging the development of new projects and providing support for the preparation of cases for submission (using specialist subcontractors as required): their main tasks are:

- to build up relationships with stakeholders and delivery partners;
- to provide assistance for applicants preparing expressions of interest and, later, business cases;
- to act as catalysts/brokers to link parties together and facilitate new projects: in many cases these projects may not be eligible for direct investment by the Board whose role in such cases would be as an 'incubator';
- to conduct peer group assessment of proposals prior to their review by the Investment Committee (supported by additional expertise in procurement, financial and legal areas where required); and
- to develop and maintain contacts with stakeholders.

Appendix 6 show a flow chart of the process for project development.

## **Provision of assistance for applicants and analysis of proposals**

Applicants may need advice on the areas covered, content and format of expressions of interest, and help in their preparation prior to submission. For the former a key element will be the clarity and simplicity of our instructions to applicants: these are outlined in our 2009/10 Business Plan. Board officers would also be able to provide additional clarification. With regard to preparation of applications we will be discussing with DEFRA access to their Knowledge Transfer Network, which provides free advice in this area, and may bring in additional external expertise as required.

For more complex expressions of interest and the development of business cases where an expression of interest has received Investment Committee/Board approval members of the Business Development team would be available to work with applicants to provide technical support and ensure that cases cover all the criteria required for consideration. Additional skills, if required, could be accessed by call off contracts with one or more firms of consultants; in addition, the Board would consider secondment of specialists from local or central government to work with the Board in the team for a defined medium term period (say 6 months to a year).

The assessment of proposals for submission to the Investment Committee will initially be by peer group review, using members of the Business Development team (supported by specialist skills if required). The purpose of the assessment is to provide the Committee with an outline of any proposal, how it fits with the Board's funding principles and criteria for investment and whether there are any additional areas to be investigated or information required before the proposal can be put forward for consideration.

## **Catalysing partnerships – the London Clearing House**

Given the limitations of funding by the Board a significant proportion of waste and resource projects in London may not qualify for Board investment: however, the Board has an important role to play as a catalyst or facilitator, where we believe that there is a huge opportunity to bring interested parties together and provide advice and expertise to promote the development of commercial waste projects that could otherwise not proceed. The Board will act as a "clearing house" to facilitate the development of new waste projects through partnerships, linking project

developers with feedstock suppliers, waste companies and boroughs. This 'incubator' role could potentially provide significant progress towards achieving London's waste targets for relatively little investment by the Board.

### **Delivery partners**

There are some other public sector funding programmes for similar technologies and facilities; however each of these programmes has different challenges. The most relevant schemes are described below:

The Waste Resources Action Programme (WRAP) is using DEFRA money to launch a £10m funding programme for Anaerobic Digestion and a £16m programme for other food waste treatment facilities - however their funding is intended to be used country-wide.

DEFRA is currently providing PFI credits for waste infrastructure however this infrastructure will be geared towards facilities to cater for municipal waste only.

The Carbon Trust is an independent company set up by the Government in 2001 with a mission is to accelerate the move to a low carbon economy by working with organisations to reduce carbon emissions and develop commercial low carbon technologies. Carbon Trust Investments finances emerging clean energy technology businesses that demonstrate commercial potential. It specialises in identifying and investing in early stage technologies.

Thames Gateway Economic Development Investment Plan (EDIP) funding: there may be an opportunity for the Board to access funding from the Department for Communities and Local Government for waste infrastructure. However, the funding would be restricted to the London Thames Gateway.

We are also looking at potential linkages with the Technology Strategy Board.

### **Stakeholders**

The Board will have an ongoing requirement to develop and maintain contacts with stakeholders: this will be done by members and officers of the Board, supported by the subcontractors who will be working with applicants as described above. In addition, the Board will hold a number of stakeholder events for communication and give interested parties the opportunity to raise issues that concern them.

# appendices

## **Appendix 1: Main objectives of the Board**

It is important to note that the remit of the Board is very wide, but that the Board can only act in accordance with the legislation (including the Order).

According to Section 356A of the GLA Act 1999: the objectives of the Board are to promote and encourage, so far as relating to Greater London:

- (a) the production of less waste;
- (b) an increase in the proportion of waste that is reused or recycled;
- (c) the use of methods of collection, treatment and disposal of waste which are more beneficial to the environment.

For the purpose of achieving its objectives, the Board may provide financial assistance to any person towards or for the purposes of:

- (a) the provision of facilities for or in connection with the collection, treatment or disposal of waste produced in Greater London;
- (b) conducting research into new technologies or techniques for the collection, treatment or disposal of waste;
- (c) securing, or assisting in securing, the performance of any function of a London borough council or the Common Council relating to waste.

For the purpose of achieving its objectives, the Board may provide advice on such matters as it thinks fit to any of the following:

- (a) the Mayor;
- (b) any London borough council;
- (c) the Common Council;
- (d) such other persons as the Board thinks fit.

In carrying out its functions, the Board must:

- (a) act in accordance with the municipal waste management strategy;
- (b) act in general conformity with the spatial development strategy so far as relating to the collection, treatment and disposal of waste

The Board may do anything that it thinks will facilitate, or is incidental or conducive to, the carrying out of its functions under subsections (2) to (4) above.

## Appendix 2: London's waste

London produces an estimated 20.6 million tonnes of waste per year<sup>11</sup>. Of this just less than 4.2 million tonnes is municipal waste<sup>12</sup>, collected by London's local authorities, (approximately 3.3 million tonnes<sup>13</sup> collected from London's 3.1 million households<sup>14</sup>, and the remaining 808,000<sup>15</sup>, tonnes from businesses).

Approximately 6.6 million tonnes of commercial and industrial (C&I) waste is produced by London's 398,000 businesses<sup>16</sup> across a wide range of sectors. Construction, demolition and excavation waste (CDEW) makes up the largest proportion of London's total waste with an estimated 9.8 million tonnes produced per year<sup>17</sup>. These wastes are collected by a wide range of private sector waste companies.

Approximately fifty seven percent is recycled, thirty three percent landfilled, and of the remaining six per cent incinerated (summarised Table 1).

*Table 1: Summary of how waste is currently managed in London*

| <b>Waste Category</b> | <b>Total waste arising (million tonnes)</b> | <b>% Recycled</b> | <b>% Incinerated</b> | <b>% Landfilled</b> | <b>(%) Other<sup>18</sup></b> |
|-----------------------|---|-------------------|----------------------|---------------------|-------------------------------|
| C&I                   | 6.6   | 42                | 4                    | 39                  | 15                            |
| CDEW                  | 9.8   | 82                | 0                    | 18                  | 0                             |
| Municipal             | 4.2   | 21                | 22                   | 56                  | 1                             |
| <b>Total</b>          | <b>20.6</b>                                 | <b>57</b>         | <b>6</b>             | <b>33</b>           | <b>5</b>                      |

*NB: Due to rounding some figures do not add to exactly one hundred percent.*

<sup>11</sup> This differs from the London plan figure of 18.1 million tonnes due to revised calculation for construction, demolition and excavation waste (CDEW).

<sup>12</sup> Table 1: Municipal waste arisings, 2007/8, Municipal Waste Management, DEFRA November 2008

<sup>13</sup> Table 1: Municipal waste arisings, 2007/8, Municipal Waste Management, DEFRA November 2008

<sup>14</sup> Demographic projections 2001-2026, GLA Data Management and Analysis Group (DMAG), March 2008

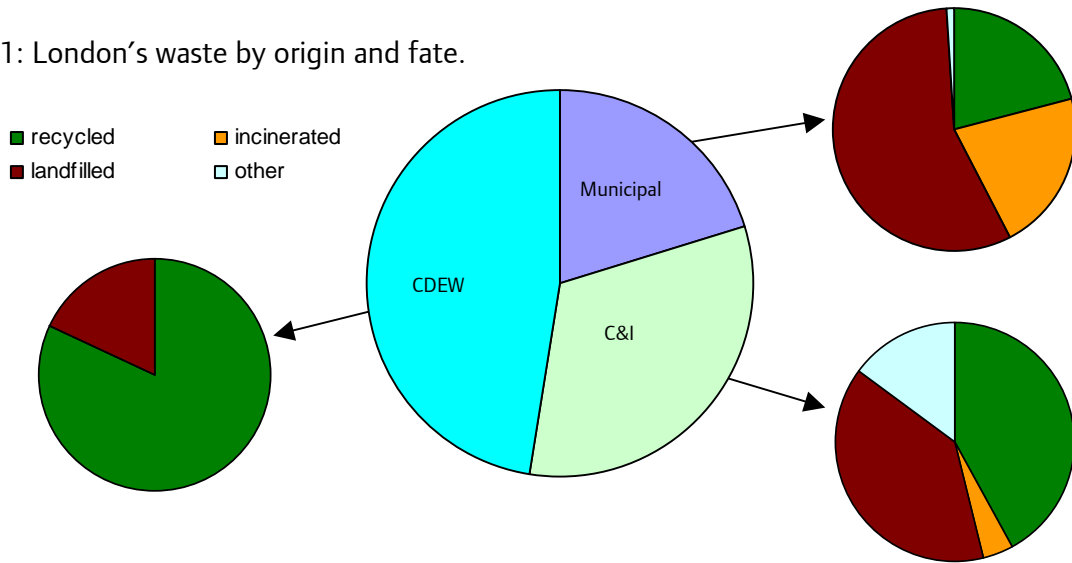
<sup>15</sup> Table 1: Municipal waste arisings, 2007/8, Municipal Waste Management, DEFRA November 2008

<sup>16</sup> Number of Local Units in VAT and/or PAYE based enterprises by broad industry group, Inter Departmental Business Register (IDBR), Office for National Statistics (ONS), 2003.

<sup>17</sup> This differs from the 7.2 million tonnes projected in the London Plan due to revised calculations (Refer to the CDEW calculation methodology).

<sup>18</sup> 'Other' includes material which is sent for Mechanical Biological Treatment (MBT) or disposed through other treatment processes.

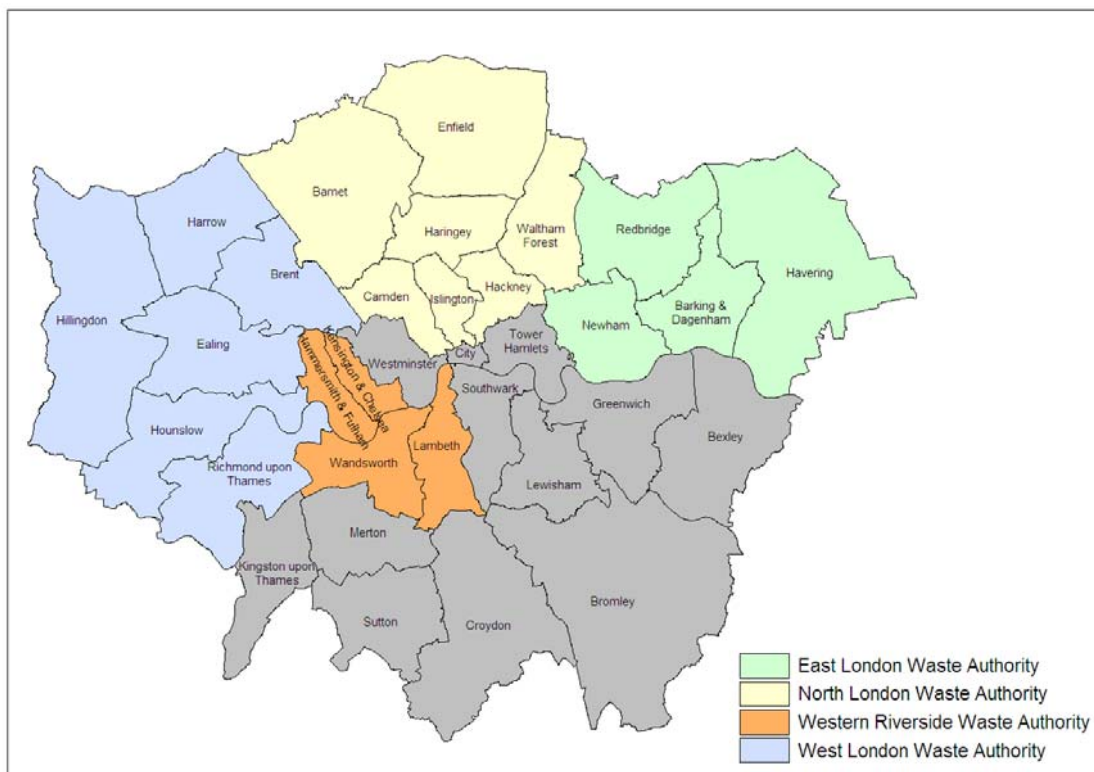
Figure 1: London’s waste by origin and fate.



**Municipal waste management arrangements**

Since the abolition of the Greater London Council (GLC), the responsibility for municipal waste disposal has been dispersed. There are twelve unitary authorities in London that are responsible for both collection and disposal of its waste<sup>19</sup>.

The remaining 21 London boroughs are responsible for the collection of their own waste. Disposal of waste however is arranged across four Waste disposal authorities comprised of the East London Waste Authority (ELWA), North London Waste Authority (NLWA), Western Riverside Waste Authority (WRWA) and the West London Waste Authority (WRWA).



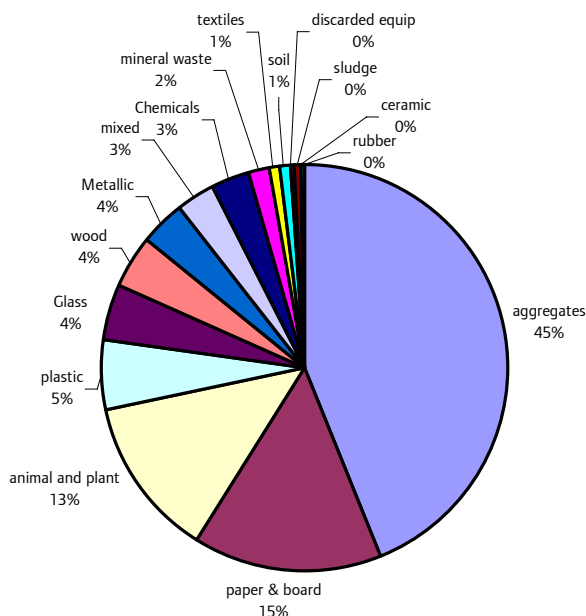
Map showing London’s waste collection and Disposal Authorities

<sup>19</sup> Bexley, Tower Hamlets, City of London, Westminster, Southwark, Lewisham, Greenwich, Sutton, Merton, Kingston, Croydon and Bromley.

### Appendix 3: London’s waste composition

A detailed composition of London’s waste is shown in Figure 1. Aggregates (forty five percent), paper and board (fifteen percent), organic (including food) (thirteen percent) make up the largest components. Methodology and data sources used for this compositional analysis are given below.

Figure 1: Composition London’s waste



### Data Sources and Calculation Methodology

#### Municipal waste - calculation methodology

The published DEFRA Municipal waste arisings reports the total municipal waste arising in 2007 for London. This data however is not material specific.

The National household waste composition survey by Julian Parfitt, outlined in Waste Strategy 2007, was used to calculate the tonnages of different waste materials in London’s municipal waste stream. Further unpublished figures from DEFRA were then applied to estimate the amount of each waste stream that was recycled. It is assumed that the remainder is either sent to landfill or incinerated.

#### Municipal waste – Data Sources

- Household waste composition - Waste Strategy 2007, taken from Dr Julian Parfitt, WRAP. Analysis for 'Waste not, Want not' 2002.
- Table 1: Municipal waste arisings, 2007/8, Municipal Waste Management, DEFRA November 2008, <http://www.defra.gov.uk/environment/statistics/wastats/archive/mwb200708a.xls>
- Unpublished 2007/08 breakdown of recycling by materials type (household waste), DEFRA, 2008.

#### C&I waste – calculation methodology

The Environment Agency 2002/03 C&I waste survey shows the treatment method of each waste stream. It showed that almost half of this waste is identified as ‘mixed waste’ i.e. unclassified waste.

The composition of the mixed waste stream was estimated, using the results of a survey undertaken in Yorkshire and Humber, which looked specifically at the make up of 'mixed waste' sent to landfill. Whilst not being definitive, this at least gives an indication of the potential recyclability of this waste stream. This composition was applied to the 3.5 million tonnes of C&I mixed waste in London to give an indication of the material streams contained within the mixed waste stream.

#### *C&I – Data Sources*

- C&I survey waste survey, Environment Agency 2002/03.
- Commercial & Industrial Waste Research Study, Turner & Townsend Construction and Management Consultants and Peter Brett Associates, August 2008.
- Commercial and industrial waste in the Yorkshire and Humber Region, Yorkshire and Humber Regional Assembly and the Environment Agency, April 2005, page 33. (Reference in the Turner and Townsend Report).

#### *CDEW - calculation methodology*

The London Plan estimate of 7.2 million tonnes of CDEW uses data from the 2003 Capita Symonds survey<sup>20</sup>. This survey was updated in 2005. The revised CDEW projection of 9.8 Million tonnes used in this Business Plan incorporates the updated 2005 survey figures for aggregates. It also includes estimates for 'soft' construction waste<sup>21</sup> derived from the BRE construction survey as well as WRAP estimates for mixed and non-inert C&D waste, which was not previously included in the London Plan projections. These changes accounted for an increase of 2.6 million tonnes of CDEW waste on the London Plan estimates.

#### *CDEW - data sources*

- Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005 - Construction, Demolition and Excavation Waste, Final Report, Capita Symonds Ltd, in association with WRC plc, February 2007.
- Page 4, Appendix C3, Waste Strategy for England 2007, May 2007. Developing a strategic approach to construction waste, 20-year strategy draft for comment, DEFRA, AEA technology and BRE, [www.bre.co.uk](http://www.bre.co.uk).

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<sup>20</sup> Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2003 - Construction, Demolition and Excavation Waste, Final Report, Capita Symonds Ltd, in association with WRC plc.

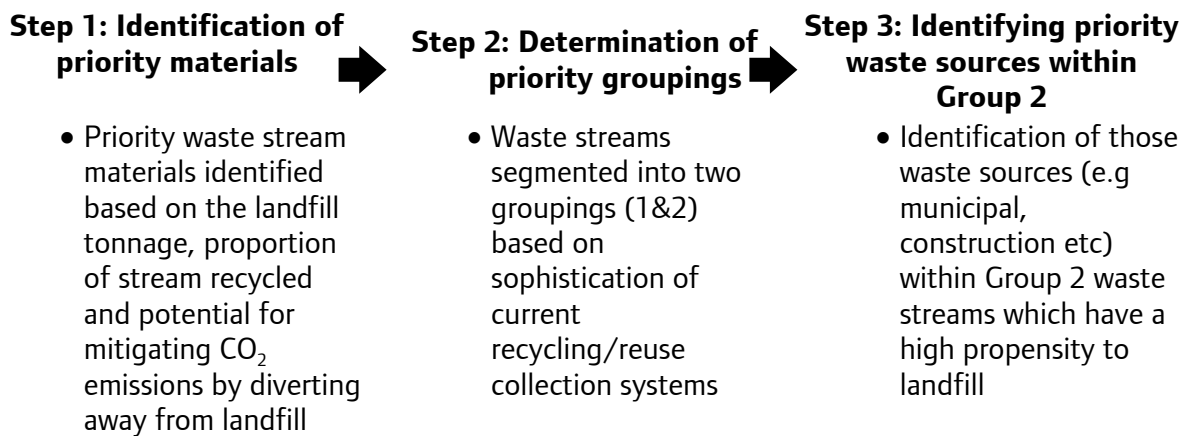
<sup>21</sup> Soft waste refers to non-hardcore waste e.g. wood, plastics etc.

## Appendix 4: Priority materials calculation

### Appendix 4a: Identifying priority materials streams

In order to identify priority materials and the biggest opportunities for the London Waste and Recycling Board to intervene in improving waste management in London, London's waste composition<sup>22</sup> was analysed with regards to maximising diversion from landfill, potential cost and carbon dioxide savings of improving waste minimisation, recycling and energy recovery levels.

In selection of the priority materials, and designating appropriate groupings, the Board has followed the following three steps:



#### *Step 1: Identification of priority materials*

The process of selecting priority materials was based on a combination of factors: maximising diversion from landfill, potential cost and carbon dioxide savings of improving waste minimisation, recycling and energy recovery levels.

Table 4a 1 (below) lists all the key material waste streams and highlights (in grey) the ones that have been identified as a priority together with a summary justification. The identification process of these priority streams has considered the following variables:

- total tonnage to landfill – how big is the contribution of the waste stream to landfill;
- percentage of material landfilled – what proportion of the material tonnage goes to landfill;
- overall kg CO<sub>2</sub> equivalent saved based on total landfill avoided (table of these factors and calculation shown in Appendix 4b);
- CO<sub>2</sub> mitigation impact from diverting away from landfill:
  - Minimisation – CO<sub>2</sub> emissions saving from minimising production of waste material, including through reuse;
  - Recycling – CO<sub>2</sub> emissions saving from recycling material back to original form;
  - Energy – CO<sub>2</sub> emissions saving from converting material to energy source.
- Total cost of incineration and landfill – estimate of costs to landfill and incineration (table of these factors and calculation shown in Appendix 4c).

<sup>22</sup> This applies to only 18.7 million of London's total 20.6 million tonnes of waste. Excludes ceramics, chemicals, discarded equipment, mineral waste, mixed waste, rubber, sludge and soil as no CO<sub>2</sub> emissions factors were available in the Waste Strategy 2007 for these materials.

| Table 4a 1: Priority materials selection framework |                      |                                     | Tonnes of CO <sub>2</sub> equivalent savings per annum from diverting away from landfill |  |                             |           |               |  |                                |   |
|--|----------------------|-------------------------------------|--|--|-----------------------------|-----------|---------------|--|--------------------------------|---|
| Category   | Total Tonnage (000s) | Total to tonnage to landfill (000s) | % of material landfilled   | Kg CO <sub>2</sub> saved based on total waste landfilled | Reduction (including reuse) | Recycling | Energy saving | Total cost of incineration and landfill (£million) | Selected as priority material? | Comment and justification   |
| Aggregates   | 9,075                | 1,409                               | 16%  | 14,090   | 157,808                     | 19,726    | -35,225       | 74.7   | No                             | Not selected as priority due to low overall proportion of stream going to landfill (16%).   |
| Paper & Board                                      | 3,068                | 1,400                               | 46%  | 961,800  | 4,540,200                   | 1,960,000 | 1,092,000     | 85.6   | Yes                            | Significant landfill tonnage with just under half of all waste sent to landfill. One of the highest CO <sub>2</sub> equivalent savings for minimisation (second only to plastics), recycling and energy..   |
| Organic  | 2,674                | 1,067                               | 40%  | 210,199  | 1,553,019                   | 0         | 322,234       | 93.3   | Yes                            | High waste arising with 40% of waste to landfill. Highest potential Co <sub>2</sub> equivalent savings via energy recovery.   |
| Plastic  | 1,124                | 610                                 | 54%  | 6,100  | 7,021,100                   | 553,270   | -649,955      | 39.6   | Yes                            | High waste arisings with over half of waste to landfill. High CO <sub>2</sub> equivalent savings from minimisation and recycling.   |
| Wood   | 867                  | 505                                 | 58%  | 150,490  | 279,770                     | 153,015   | 441,875       | 32.3   | Yes                            | Over half of waste arisings to landfill. Significant CO <sub>2</sub> mitigation from energy saving.   |
| Mixed  | 657                  | 447                                 | 68%  | 0  | 0                           | 0         | 0             | 33   | No                             | No CO <sub>2</sub> emissions factors were available in Waste Strategy 2007 for these materials hence CO <sub>2</sub> equivalent savings could not be determined.  |
| Glass  | 898                  | 394                                 | 44%  | 3,940  | 557,904                     | 230,096   | -13,790       | 24.7   | No                             | CO <sub>2</sub> equivalent savings stated in table based on glass being recycled to glass. However a significant proportion of glass is recycled into aggregates that have lower CO <sub>2</sub> benefits than glass to glass. As a result glass has not been selected as a priority material at this stage. It could potentially be added subject to more research on end uses for recycled glass. |
| Metallic   | 753                  | 299                                 | 40%  | 2,990  | 2,696,532                   | 1,851,707 | 117,059       | 20   | Yes                            | 40% of metallic waste to landfill. High CO <sub>2</sub> equivalent saving from recycling.   |

| Table 4a 1: Priority materials selection framework |                      |                                     | Tonnes of CO <sub>2</sub> equivalent savings per annum from diverting away from landfill |  |                             |           |               | Total cost of incineration and landfill (£million) | Selected as priority material? | Comment and justification   |
|--|----------------------|-------------------------------------|--|--|-----------------------------|-----------|---------------|--|--------------------------------|---|
| Category   | Total Tonnage (000s) | Total to tonnage to landfill (000s) | % of material landfilled   | Kg CO <sub>2</sub> saved based on total waste landfilled | Reduction (including reuse) | Recycling | Energy saving |  |                                |   |
| Chemicals  | 579                  | 180                                 | 31%  | 0  | 0                           | 0         | 0             | 14.9   | No                             | No CO <sub>2</sub> emissions factors were available in Waste Strategy 2007 for these materials so working out Co2 equivalent savings could not be determined. Unestablished recycling route.                                    |
| Mineral waste                                      | 364                  | 172                                 | 47%  | 0  | 0                           | 0         | 0             | 9.1  | No                             | No CO <sub>2</sub> emissions factors were available in Waste Strategy 2007 for these materials so working out Co2 equivalent savings could not be determined.   |
| Textiles   | 201                  | 117                                 | 58%  | 27,261   | 2,284,659                   | 177,489   | -1,404        | 9.0  | Yes                            | Despite low waste arising, over half of is sent to landfill. Good CO <sub>2</sub> equivalent savings from minimisation and recycling.   |
| Soil   | 128                  | 85                                  | 66%  | 850  | 1,190                       | -510      | -2,125        | 4.5  | No                             | Lower waste arisings but 2/3 <sup>rd</sup> of this waste stream to landfill (includes landfill engineering, capping and land recovery at exempt landfill sites), Soil is however inert so CO <sub>2</sub> impact is negligible. |
| Ceramic  | 68                   | 17                                  | 25%  | 0  | 0                           | 0         | 0             | 0.9  | No                             | Low waste arisings. No CO <sub>2</sub> emissions factors were available in Waste Strategy 2007 for these materials so working out CO <sub>2</sub> equivalent savings could not be determined.                                   |
| Discarded equipment                                | 94                   | 13                                  | 14%  | 0  | 0                           | 0         | 0             | 0.9  | No                             | Low waste arisings and landfill tonnage. No CO <sub>2</sub> emissions factors were available in Waste Strategy 2007 for these materials so working out CO <sub>2</sub> equivalent savings could not be determined.              |
| Rubber   | 15                   | 7                                   | 47%  | 0  | 0                           | 0         | 0             | 0.4  | No                             | Low landfill tonnage. No CO <sub>2</sub> emissions factors were available in Waste Strategy 2007 for these materials so working out CO <sub>2</sub> equivalent savings could not be determined.                                 |
| Sludge   | 74                   | 7                                   | 9%   | 0  | 0                           | 0         | 0             | 0.4  | No                             | Low landfill tonnage. No CO <sub>2</sub> emissions factors were available in Waste Strategy 2007 for these materials so working out CO <sub>2</sub> equivalent savings could not be determined.                                 |

*Step 2: Determination of priority groupings*

Having selected the six priority materials, we have allocated each one a grouping based on how established the collection system is for the material stream. Table 4a 2 (below) shows the rationale behind how we have allocated priority materials between Group 1 and 2. Group 1 focuses on materials with low capture due to limited collection and reprocessing infrastructure in place as well as high proportion of waste to landfill. Group 2 focuses on materials where there is inadequate capture and high waste to landfill despite having established existing collection systems in place. Please note, due to limitations in data availability, we have only been able to conduct this analysis of availability and coverage of collections systems for the municipal sector.

Table 4a 2: Determination of priority groupings

| Material                                     | Recyclable collection system | Recyclable collection systems in place <sup>23</sup>  | Explanation   | Allocated Grouping | Reason for grouping   |
|--|------------------------------|---|---|--------------------|---|
| Organic (including food) - all waste streams | Patchy                       | 19 of London's 33 boroughs offer either a food waste only or combined food and green waste collection (of which 3 are trial schemes ).<br>10 of the 19 London boroughs who offer an organic collection do a food only collection.<br>The remaining 14 London boroughs offer no organic collection at all. | 40% of food across all waste categories is landfilled, 29% recycled, 19% incinerated and 12% using other methods..    | 1                  | Inadequate service provision for collection of MSW food waste coupled with large percentage of waste to landfill.   |
| Mixed plastic - all waste streams            | Undeveloped                  | <u>Ealing and Southwark are the only two London Boroughs to collect mixed plastics.</u><br><u>Ealing</u> - all plastics except large items (I.e. garden furniture, toys and electrical items)<br><u>Southwark</u> - plastic bottles, food trays, margarine tubs and yoghurt pots                          | 54% of plastics across all waste categories is landfilled, 30% recycled, 9% incinerated and 7% using other methods..  | 1                  | Inadequate service provision for collection of mixed plastics coupled with large percentage of waste to landfill.   |
| Wood - all waste streams                     | Established but low capture  | 28 of London's 33 boroughs offer a wood waste collection from re-use and recycling centres.   | 58% of wood waste across all waste categories is landfilled, 27% recycled, 9% incinerated and 6% using other methods. | 1                  | Despite majority of London boroughs offering a wood waste recycling scheme via their re-use and recycling centres, negligible amounts are captured for recycling with 70 percent of municipal wood waste is currently landfilled. Capture rates for recycling in CDEW and C&I sector are better but |

<sup>23</sup> Borough Service Summary Table, Capital waste facts last updated 26th November 2008.

| Material                         | Recyclable collection system | Recyclable collection systems in place <sup>23</sup>  | Explanation  | Allocated Grouping | Reason for grouping   |
|----------------------------------|------------------------------|---|--|--------------------|---|
|                                  |                              |   |  |                    | over half of this waste stream is sent to landfill.   |
| Metallic – Municipal Solid Waste | Established but low capture  | 28 of London's 33 boroughs offer a metallic waste collection from re-use and recycling centres.   | Capture of metallic waste from the municipal waste stream is low with over 80% of metallic waste sent to landfill. | 2                  | Despite established collection schemes in place for collecting municipal metallic waste 83% of municipal metallic waste ends up in landfill. CDEW and C&I waste both recycle in excess of 90% of all metal waste collected and therefore does not require an intervention from the board. |
| Paper and Board - C&I            | Established                  | All 33 London boroughs provide a collection service for paper and cardboard via kerbside collection (except Brent and Redbridge) and via their re-use and recycling centres (all boroughs) that are open to Businesses at a charge. | Medium capture of paper and board waste from the C&I waste stream with 50% of waste sent to landfill.              | 2                  | Despite established collection schemes in place for C&I paper and board waste from re-use and recycling centres, 50% ends up in landfill. This presents a good opportunity for the board to intervene to improve capture of this material stream.   |
| Textiles - MSW and C&I           | Established but low capture  | 28 of London's 33 boroughs offer a textile collection from re-use and recycling centres.  | Medium to low capture of textiles from MSW and C&I waste stream with over 50% of waste sent to landfill.           | 2                  | Low capture despite established scheme for MSW textiles.  |

*Step 3: Identifying priority waste sources within Group 2*

For those material streams where recycling collection schemes are established, we have identified specific sources that currently have a high proportion of waste sent to landfill.

Table 4a 3 (below) details the percent of tonnage sent to landfill for each of the main sources of London waste. Those waste sources for which fifty percent or more tonnage goes to landfill (highlighted in the table) have been identified as group two priority areas.

Table 4a 3: Summary of Potential Carbon Dioxide (CO<sub>2</sub>) savings

| Group Two Material Streams | CDEW to landfill |            | C&I to landfill |            | MSW to landfill |            | Total waste to landfill per year<br>tonnes (000) | Total proportion to landfill per year<br>% |
|----------------------------|------------------|------------|-----------------|------------|-----------------|------------|--|--|
|                            | tonnes (000)     | % of total | tonnes (000)    | % of total | tonnes (000)    | % of total |  |  |
| Metallic                   | 3                | 6          | 13              | 4          | 283             | 83         | 299  | 40   |
| Paper & Board              | 11               | 39         | 1,141           | 50         | 248             | 32         | 1,400  | 46   |
| Textiles                   | 0                | 0          | 37              | 51         | 80              | 63         | 117  | 58   |

## Appendix 4b: Analysis of calculations of CO<sub>2</sub> savings

Set out below is the methodology use to calculate CO<sub>2</sub> savings from diverting waste streams away from landfill.

### *Waste reduction*

The potential impact of waste reduction was calculated by applying the embodied energy<sup>24</sup> of each material in the waste stream using London's waste composition. This analysis suggests that London's waste stream could potentially offset a maximum of 19 million tonnes of CO<sub>2</sub> per annum if virgin material production is reduced/prevented. However whilst waste reduction would provide the best results for all material streams with regards to diversion from landfill, CO<sub>2</sub> and cost savings, it is very unlikely that one hundred percent waste reduction could ever be achieved.

### *Reuse*

London disposes of an estimated 1.7 million reusable items per year<sup>25</sup> comprising most of the Board's priority materials. By its very nature, reuse offers significant potential for diversion up the waste hierarchy.

### *Recycling*

The impact of recycling is calculated by applying the emission factors<sup>26</sup> for calculating kilograms of carbon dioxide (kg CO<sub>2</sub>) saved per tonne of waste recycled to the total tonnes of materials sent to landfill. This analysis suggests that London could potentially offset a maximum of 4.9 million tonnes of CO<sub>2</sub> if all the materials currently sent to landfill are recycled.

### *Energy*

The impact of energy recovery is calculated by applying the emission factors<sup>27</sup> for calculating kg CO<sub>2</sub> saved per tonne of waste incinerated in power only mode. This is then applied to the total tones of materials sent for landfill. This analysis suggests that London's waste stream could potentially offset 1.2 million tonnes of CO<sub>2</sub> if all the materials currently sent to landfill was used for energy recovery.

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<sup>24</sup> Embodied energy refers to the quantity of energy required to manufacture, and supply to the point of use, a product, material or service.

<sup>25</sup> 'Third Sector Reuse Capacity in London', GLA 2008

<sup>26</sup> Table A.28: Emission factors for waste treatment processes (kg carbon dioxide equivalent/tonne of waste processed), Pg. 71, Annex A, waste Strategy 2007.

<sup>27</sup> Table A.28: Emission factors for waste treatment processes (kg carbon dioxide equivalent/tonne of waste processed), Pg. 71, Annex A, waste Strategy 2007.

Table 4b 1: Calculations of Potential Carbon Dioxide (CO<sub>2</sub>) savings

| Waste stream             | Tonnage ('000 tonnes) |                |                   |                   | CO <sub>2</sub> impact of landfill                     |  |  | CO <sub>2</sub> mitigation impact                   |   |                                     |  |                                  | CO <sub>2</sub> mitigation impact + CO <sub>2</sub> impact of landfill |                                     |                                  |
|--------------------------|-----------------------|----------------|-------------------|-------------------|--|--|--|---|---|-------------------------------------|--|----------------------------------|--|-------------------------------------|----------------------------------|
|                          | Total                 | Total recycled | Total incinerated | Total to landfill | Kg CO <sub>2</sub> saved per tonne of waste landfilled | Kg CO <sub>2</sub> saved based on total waste landfilled | Embodied fossil energy (kg CO <sub>2</sub> saved per tonne waste prevented - WS2007) | Reduction including reuse (tonnes CO <sub>2</sub> ) | Kg CO <sub>2</sub> saved per tonne of waste recycled- Table A.28 WS2007 | Recycling (tonnes CO <sub>2</sub> ) | Kg CO <sub>2</sub> saved per tonne of waste incinerated- Table A.28 WS2007 | Energy (tonnes CO <sub>2</sub> ) | Reduction including reuse (tonnes CO <sub>2</sub> )                    | Recycling (tonnes CO <sub>2</sub> ) | Energy (tonnes CO <sub>2</sub> ) |
| Aggregates               | 9,075                 | 5,626          | 0                 | 1,409             | 10   | 14,090   | 102  | 143,718   | 4   | 5,636                               | -35  | -49,315                          | 157,808  | 19,726                              | -35,225                          |
| Organic (including food) | 2,674                 | 763            | 517               | 1,067             | 197  | 210,199  | 2,517  | 1,342,820   | 0   | 0                                   | 210  | 112,035                          | 1,553,019  | 0                                   | 322,234                          |
| Ceramic*                 | 68                    | 51             | 0                 | 17                | N/A  | N/A  | N/A  | N/A   | N/A   | N/A                                 | N/A  | N/A                              | N/A  | N/A                                 | N/A                              |
| Chemicals*               | 579                   | 117            | 76                | 180               | N/A  | N/A  | N/A  | N/A   | N/A   | N/A                                 | N/A  | N/A                              | N/A  | N/A                                 | N/A                              |
| Discarded equip          | 94                    | 57             | 3                 | 13                | N/A  | N/A  | N/A  | N/A   | N/A   | N/A                                 | N/A  | N/A                              | N/A  | N/A                                 | N/A                              |
| Glass                    | 898                   | 398            | 54                | 394               | 10   | 3,940  | 2,812  | 553,964   | 1,148   | 226,156                             | -90  | -17,730                          | 557,904  | 230,096                             | -13,790                          |
| Metallic                 | 753                   | 375            | 59                | 299               | 10   | 2,990  | 27,026   | 2,693,542   | 18,549  | 1,848,717                           | 1,145  | 114,069                          | 2,696,532  | 1,851,707                           | 117,059                          |
| Mineral waste*           | 364                   | 178            | 0                 | 172               | N/A  | N/A  | N/A  | N/A   | N/A   | N/A                                 | N/A  | N/A                              | N/A  | N/A                                 | N/A                              |
| Mixed*                   | 657                   | 65             | 131               | 447               | N/A  | N/A  | N/A  | N/A   | N/A   | N/A                                 | N/A  | N/A                              | N/A  | N/A                                 | N/A                              |
| Paper & board            | 3,068                 | 1,311          | 160               | 1,400             | 687  | 961,800  | 7,668  | 3,578,400   | 2,139   | 998,200                             | 279  | 130,200                          | 4,540,200  | 1,960,000                           | 1,092,000                        |
| Plastic                  | 1,124                 | 341            | 103               | 610               | 10   | 6,100  | 34,500   | 7,015,000   | 2,691   | 547,170                             | -3,227   | -656,055                         | 7,021,100  | 553,270                             | -649,955                         |
| Rubber*                  | 15                    | 6              | 0                 | 7                 | N/A  | N/A  | N/A  | N/A   | N/A   | N/A                                 | N/A  | N/A                              | N/A  | N/A                                 | N/A                              |
| Sludge*                  | 74                    | 18             | 1                 | 7                 | N/A  | N/A  | N/A  | N/A   | N/A   | N/A                                 | N/A  | N/A                              | N/A  | N/A                                 | N/A                              |
| Soil                     | 128                   | 0              | 0                 | 85                | 10   | 850  | 4  | 340   | -16   | -1,360                              | -35  | -2,975                           | 1,190  | -510                                | -2,125                           |
| Textiles                 | 201                   | 39             | 39                | 117               | 233  | 27,261   | 38,588   | 2,257,398   | 2,568   | 150,228                             | -490   | -28,665                          | 2,284,659  | 177,489                             | -1,404                           |
| Wood                     | 867                   | 236            | 78                | 505               | 298  | 150,490  | 768  | 129,280   | 15  | 2,525                               | 1,731  | 291,385                          | 279,770  | 153,015                             | 441,875                          |
| <b>Total</b>             | <b>20,639</b>         | <b>9,581</b>   | <b>1,221</b>      | <b>6,729</b>      |  | <b>1,377,720</b>   |  | <b>17,714,461</b>                                   |   | <b>3,777,272</b>                    |  | <b>-107,052</b>                  | <b>19,092,181</b>  | <b>4,944,793</b>                    | <b>1,270,669</b>                 |

\* No CO<sub>2</sub> emissions factors were available in Waste Strategy 2007 for these materials and therefore total tonnes of CO<sub>2</sub> diverted could not be calculate

Note: this is an indicative analysis and these numbers may be subject to revision



## Appendix 4c: Landfill and incineration cost analysis

Landfill and incineration cost across all waste streams is estimated at £443 million (includes landfill and incineration cost of £53 per tonne and £71 per tonne respectively<sup>28</sup>). This represents a significant cost saving opportunity for London if higher end uses for each material can be achieved via waste minimisation, high recycling and energy recovery from materials that cannot be recycled. A breakdown of landfill and incineration cost by material stream is summarised in Table 3 below.

Table 4c 1: Summary of landfill and incineration costs

| Category                 | Total waste stream (million tonnes) | % incinerated | % landfilled | Incineration cost (£million) | Landfill cost (£million) | Total cost* of incineration and landfill (£million) |
|--------------------------|-------------------------------------|---------------|--------------|------------------------------|--------------------------|---|
| Aggregates               | 9.08                                | 0%            | 16%          | 0                            | 74.7                     | 74.7  |
| Ceramic                  | 0.07                                | 0%            | 25%          | 0                            | 0.9                      | 0.9   |
| Chemicals                | 0.58                                | 13%           | 31%          | 5.4                          | 9.5                      | 14.9  |
| Discarded equip          | 0.09                                | 3%            | 14%          | 0.2                          | 0.7                      | 0.9   |
| Glass                    | 0.9                                 | 6%            | 44%          | 3.8                          | 20.9                     | 24.7  |
| Metallic                 | 0.75                                | 8%            | 40%          | 4.2                          | 15.8                     | 20  |
| Mineral waste            | 0.36                                | 0%            | 47%          | 0                            | 9.1                      | 9.1   |
| Mixed                    | 0.66                                | 20%           | 68%          | 9.3                          | 23.7                     | 33  |
| Organic (including food) | 2.67                                | 19%           | 40%          | 36.7                         | 56.6                     | 93.3  |
| Paper & board            | 3.07                                | 5%            | 46%          | 11.4                         | 74.2                     | 85.6  |
| Plastic                  | 1.12                                | 9%            | 54%          | 7.3                          | 32.3                     | 39.6  |
| Rubber                   | 0.02                                | 0%            | 47%          | 0                            | 0.4                      | 0.4   |
| Sludge                   | 0.07                                | 1%            | 9%           | 0.1                          | 0.4                      | 0.4   |
| Soil                     | 0.13                                | 0%            | 66%          | 0                            | 4.5                      | 4.5   |
| Textiles                 | 0.2                                 | 19%           | 58%          | 2.8                          | 6.2                      | 9   |
| Wood                     | 0.87                                | 9%            | 58%          | 5.5                          | 26.8                     | 32.3  |
| <b>Total</b>             | <b>20.64</b>                        | <b>-</b>      | <b>-</b>     | <b>86.7</b>                  | <b>356.6</b>             | <b>443.3</b>  |

\* Total cost excludes logistics costs

<sup>28</sup> WRAP Gate Fees Report, 2008 - Comparing the cost of alternative waste treatment options:

## Appendix 5: Funding distribution options

There are a number of options for distribution of funding; there are advantages and disadvantages to each method which have been summarised below:

| Method                           | Pros   | Cons  |
|----------------------------------|--|---|
| <b>Grant</b>                     | <ul style="list-style-type: none"> <li>• a public and private sector solution</li> <li>• standard form documentation can be developed for Board grants and should require little negotiation</li> <li>• could fill a perceived funding gap and encourage further research &amp; development into waste and recycling technologies potentially benefits all interested parties</li> <li>• could be initiated reasonably quickly and provide funding not only for projects but also preparatory work</li> </ul>  | <ul style="list-style-type: none"> <li>• State aid considerations need to be considered carefully where the amount of the grant exceeds the de-minimis amount, especially for any non-recourse funding to the private sector; also procurement issues</li> <li>• grant funding will not generate any income/a return on investment for the Board</li> <li>• does not necessarily encourage collaboration between the Board and the public and private sector or (unless appropriately focused) meet the Board's objectives</li> </ul> |
| Method                           | Pros   | Cons  |
| <b>Loans (secured/unsecured)</b> | <ul style="list-style-type: none"> <li>• a loan scheme could be initiated within a relatively short time-frame, could be offered to all who fit a defined list of criteria and is unlikely to fall within any procurement legislation</li> <li>• a public and private sector solution</li> <li>• Standard form documentation can be produced for all Board loans and would not require separate negotiation</li> <li>• State aid will not apply to most public sector loans and will not apply to private sector loans if they are provided on a commercial basis, do not exceed 50% and are on an equal risk basis</li> <li>• may be able to take advantage of State aid de-minimis funding rules enabling 'interest free' loans to be offered</li> </ul> | <ul style="list-style-type: none"> <li>• works well for smaller-scale investments and within the boundaries of State aid de-minimis thresholds but larger loans (exceeding Euro 500,000 or sterling equivalent) may require more bespoke paperwork and additional legal considerations</li> <li>• pre-loan due diligence, monitoring and repayment collections need to be managed</li> <li>• risk of default, especially with unsecured loans</li> <li>• secured loans will require additional paperwork</li> </ul>                   |

|                   |   |  |
|-------------------|---|--|
| <b>Equity</b>     | <ul style="list-style-type: none"> <li>• offers the potential for the Board to achieve a return on its investment, which could be recycled and used to supplement future funding</li> <li>• would open up the potential for the Board to collaborate with other public and private sector organisations working with start-up and spin-out businesses (e.g. Universities, business incubators as well as wider industry) via joint ventures</li> <li>• offers the opportunity for higher profile 'cornerstone' investments</li> </ul> | <ul style="list-style-type: none"> <li>• higher risk strategy: subject to market conditions</li> <li>• Pre-investment due diligence and bespoke legal documentation is likely to be required for most equity/joint venture investments, depending on the nature and stage of development of the investee</li> <li>• State aid considerations need to be considered carefully to ensure that any investment is made on 'commercial terms' which will not constitute State Aid</li> <li>• needs careful consideration of the types of business/projects which the Board wants to target and promote</li> </ul> |
| <b>Guarantees</b> | <ul style="list-style-type: none"> <li>• no cash outlay upfront and all the same 'pros' as loans (bar State aid)</li> </ul>   | <ul style="list-style-type: none"> <li>• no perceived additional advantage over loans and all the same 'cons'</li> </ul>   |

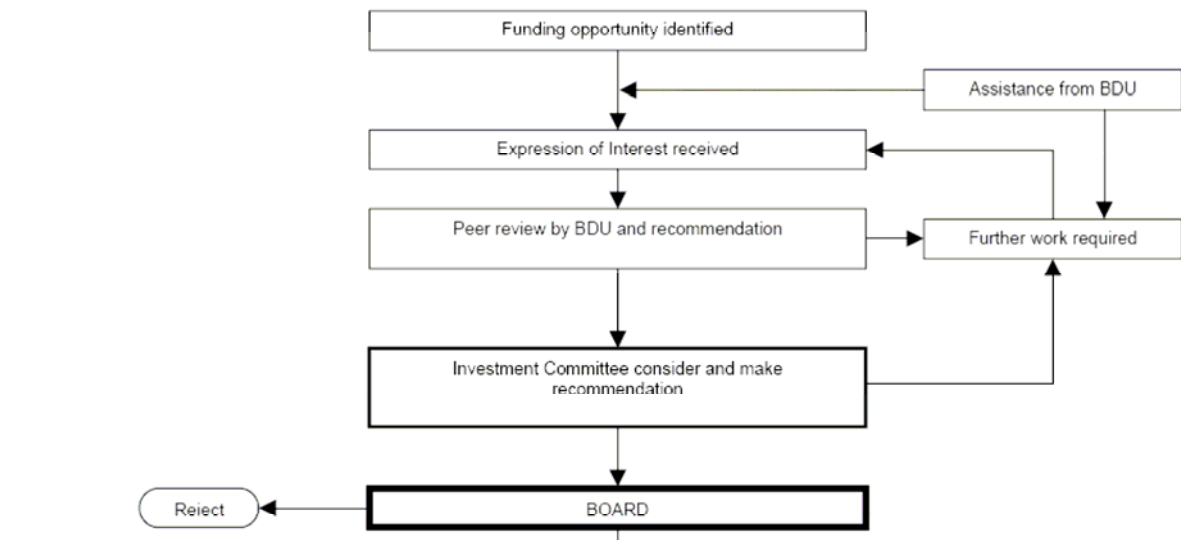
## Barriers

**Legal issues:** two key considerations are whether the assistance provided by the Board can be viewed as State Aid, and whether it in fact constitutes a procurement exercise. In both cases the process of allocation of support must be carefully managed.

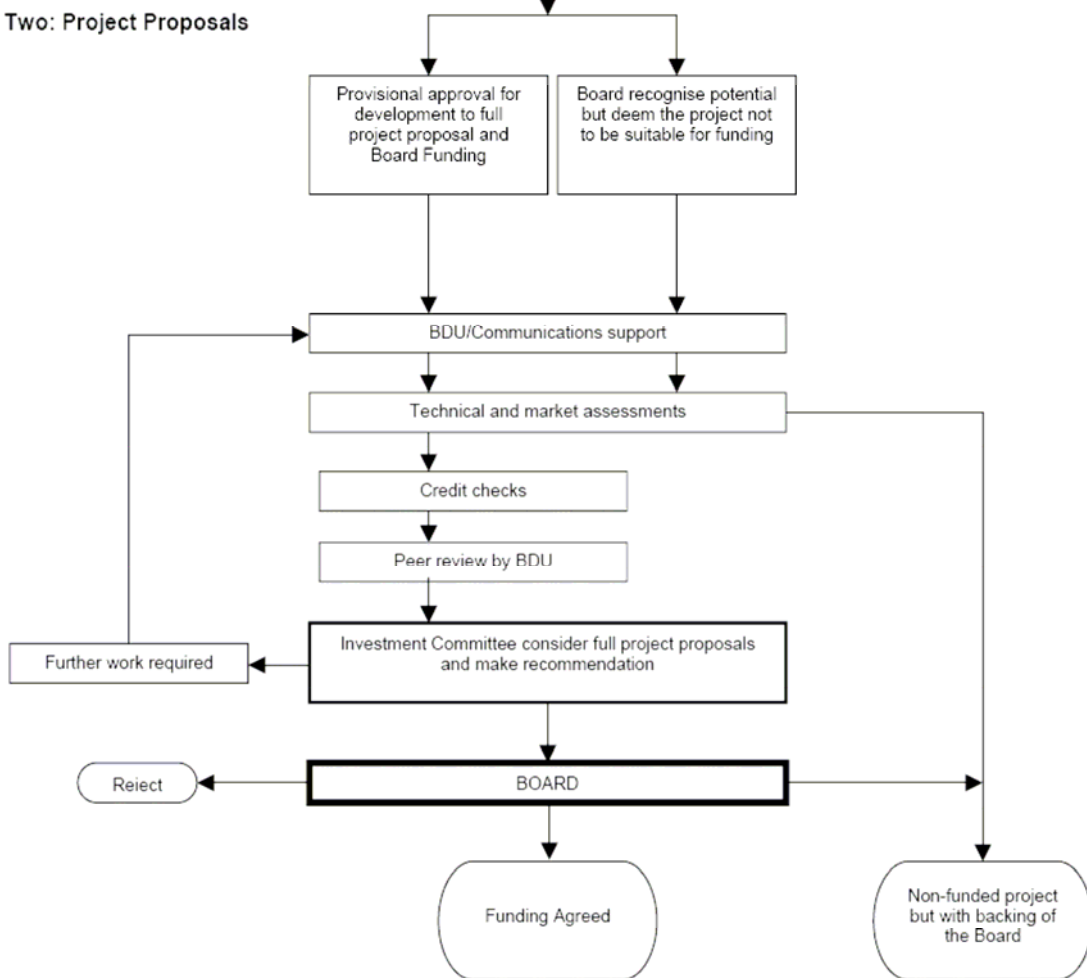
- State Aid: this occurs when public monies are used to give financial assistance or subsidy to an organisation which is carrying out economic (commercial) activities and that financial assistance gives, or could potentially give, that organisation a financial or commercial advantage in the commercial sector in which it is operating.
- Procurement: where the assistance can be interpreted as the purchase of goods or services the appropriate procurement rules must be followed.
- A detailed paper on State Aid by Berwin Leighton Paisner LLP is attached at Appendix 7.

### Appendix 6: Expressions of interest flowchart

#### Stage One: Expressions of Interest



#### Stage Two: Project Proposals



## Appendix 7: State Aid (source: Berwin Leighton Paisner LLP)

### What is State Aid?

State Aid occurs where public monies are used to give financial assistance or subsidy to an organisation which is carrying out economic (commercial) activities and that financial assistance gives, or could potentially give, that organisation a competitive or financial advantage in the commercial sector in which it is operating. Any such aid is illegal under EU law unless exempted or approved and the relevant EU Member State must notify the European Commission (the "Commission") of any such aid.

Why is it relevant to the Board's work?

- The London Waste & Recycling Board (the "**Board**") is established to achieve the objectives set out at section 356A(2) of the Greater London Authority Act 2007. One of the ways in which it will deliver its objectives is to allocate by way of "financial assistance" £84 million of funding (the "**Fund**") for the purposes set out in section 356A(3) of the Act. Therefore, State Aid will become a key legal consideration in the evaluation of the projects the Board chooses to fund - particularly where the recipient of the Board's assistance is undertaking commercial activities for which there are potential competitors.
- There is undoubtedly significant private commercial activity, investment and competition in the waste sector. EU targets have put a growing pressure on local waste authorities to procure private sector partners who are capable of helping them meet these targets. Consequently the number of service providers competing in the market has increased as the commercial opportunities have increased. The sector is proving lucrative for some and waste companies such as Veolia, Virador, BIFFA and many others are arguably "cash rich". They are investing in their technologies and have the potential to generate large additional profits from public contracts by maximising third party income from their technologies, equipment and facilities.
- While there is obviously still much that can be done in the sector, going forward the Board will therefore need to be cautious when making any financial intervention into this market. Given the increasing number of competitors in the market it will be difficult to argue, in a particular case, that giving financial assistance to one organisation as opposed to another could not possibly have an impact on competition. As the number of operators in the market increases further, so too will the number of potential challengers to any selective funding decision of the Board.

### Likely impact on the Board's activities?

- Despite the cautionary tone above, having regard to the list of mechanisms by which the Board intends to provide "financial assistance", with which we have been provided (see Annex 3), in many cases State Aid should not apply and/or the projects can be structured so as to avoid State Aid risk e.g. by including a "challenge" or tender process where possible.
- For any given project, the first question should be whether the "financial assistance" given by the Board would fall within the definition of "State Aid" (see below). If the answer is "yes", one must then ask whether there are any exemptions or pre-approvals which can be relied upon. The Commission has produced a small number of "Block Exemptions" to the general ban. The UK Government has also obtained approval for certain schemes which, while they do fall within the definition of "State Aid", the Commission has approved because of the minimal impact on EU trade or for reasons of public interest. Therefore where the "financial assistance" meets the criteria set out in a block exemption or an

approved scheme, there is no need for the UK to notify the Commission and any risk of challenge is removed.

- In the minority of cases where there would be State Aid we have identified a number of exemptions and approvals, which it may be possible to rely upon depending upon the particular circumstances. For example:
  - *the recent "Community Guidance on Environmental Protection" (2008/C 82/01), and the accompanying block exemption (Regulation No 800/2008) which permits State Aid to waste operators in certain circumstances;*
  - *the block exemption in relation to research, development and innovation aid;*
  - *the block exemptions allowing the taking of risk capital in Small and Medium Size Enterprises and also for general SME assistance;*
  - *the "de minimis" threshold block exemption allowing aid below 200,000 Euros;*
  - *the exemption in respect of Services of General Economic Interest.*

### Recommendations

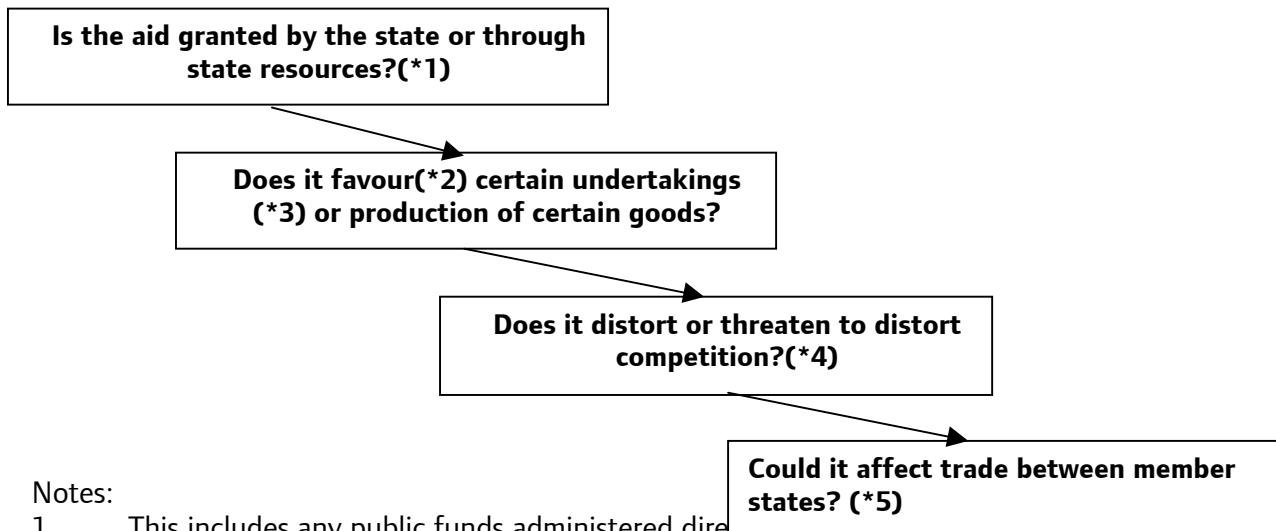
- We would advise that the Board puts in place a process to ensure state aid risk is considered when a project is first evaluated and full use can be made of all exemptions which may be applicable. It is very difficult to reverse engineer a project to avoid State Aid at a late stage. At Annex 2 to this report we have included a basic flow-diagram which can be used as a checklist as to whether detailed legal advice will be required in respect of any given funding request.
  - *As a general rule too, transparency and openness in the Board's funding decisions will be vital and wherever possible opportunities to obtain the Board's funding should be advertised and competitions held to remove the risk of disgruntled operators claiming a competitor has been given unfair advantage. This does not necessarily have to mean undertaking complex procurement procedures by advertising in OJEU (though for some high value or high risk projects this may be appropriate).*
  - *The Board should consider whether making a financial investment for a commercial return is a more appropriate method of market intervention i.e. share the risk and reward with the private sector. Provided the terms are genuinely commercial, this will not be State Aid.*
- The following report sets out in more detail how state aid is defined and the exemptions and approvals which might assist the Board in meeting its statutory objectives. However an initial "high level" view on the State Aid implications in respect of specific activities the Board may wish to carry out is set out at Annex 3.

## State Aid definition

The Treaty definition is as follows (Article 87(1) of the EC Treaty):

- *“Save as otherwise provided by the Treaty, any aid granted by a Member State through state resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, insofar as it affects trade between Members States, be incompatible with the Common Market.”*

A checklist for establishing whether State Aid exists (see notes below to assist):



Notes:

1. This includes any public funds administered directly by the state, regional authorities or public or private bodies controlled by the state. This therefore includes the Board so test one will always be met.
2. The State aid needs to “favour” them by conferring a financial advantage on them. An advantage may be direct or indirect e.g. grants, favourable loan terms or the award of a contract without competition where the procurement rules should apply. A non-exhaustive list of examples of state aid is attached at Annex 1. See section 3 below for examples of what would not fall within this criteria.  
Therefore:
  - any private sector organisation receiving grant, loan or other sort of financial assistance from the Board will almost certainly be an “undertaking” for these purposes.
  - It is likely that the Board will be providing aid to other public sector bodies such as local authorities. In most cases these bodies would not be deemed to be “undertakings” however it will depend upon what they are to do with the aid or grant. If they are to use the money to compete with private sector waste companies in any way then they could be caught (even if they are not seeking to make a profit). However it is more likely that these public bodies will use the funds provided to them from the Board to procure waste services or capital works. In which case State Aid is unlikely to apply.
3. “Undertakings” can include voluntary aided bodies, charities and universities if they are engaged in economic activities. Economic activity is activity for which there is a market in comparable (but not necessarily the same) goods or services. Therefore in deciding what is an undertaking it is important to focus on the activity being funded rather than the legal status of the organisation receiving the aid. It is a common misconception that State Aid does not exist if the recipient is non-profit making.

4. Does it potentially or actually strengthen the position of the recipient in relation to competitors? If yes, then this test is met. Almost all selective aid (i.e. given without competition) will have potential to distort competition regardless of the scale of the potential distortion or market share of the aid recipient. The Board should also note the "pool" from which one might identify potential competitors is drawn extremely widely. In this case, particularly because of the buoyant waste market, it will be all operators capable of providing waste services of any kind. The Board can therefore assume there will always be competitors. In practice, the Commission applies a very low threshold to the test of whether competition may be distorted and it is only in rare cases that no distortion of competition will be found.
5. This also includes the potential effects. As most products and services of trade is within Europe almost all economic activity is capable of affecting trade between member states, even if the aided business itself does not directly trade with other member states. Given many waste companies in the UK are European, this test will undoubtedly be met as it would be almost impossible to show a company from outside of the UK could not provide waste services within it.

## What is *not* State Aid?

### Consideration for works, goods or services:

The State Aid rules are not intended to prevent public bodies purchasing goods, works or services from private sector operators and paying proper consideration for those goods, works or services. As the Board Members will no doubt be aware, the procurement regulations govern how public bodies may go about purchasing works, goods and services and provided that the procurement rules are followed, State aid is not normally an issue.

### Market Economy Investor Principle ("MEIP")

Neither are the State aid rules in place to prevent public bodies undertaking commercial activities themselves if they have the power to do so under their constitution. Public bodies such as local authorities and others can now trade on an equal footing with private sector companies, take equity interests in private companies and invest in innovative public private partnership arrangements. Where a public body does invest in a private body or establishes a joint venture with a private sector body, it is generally considered that there will be no State aid provided that the public and private investors share exactly the same upside and downside risks and rewards as well as the same level of subordination and at least 50% of the investment comes from the private sector.

The onus will be on the Board, if challenged, to demonstrate that the investment is on genuinely commercial arm's length terms and that the public sector investment is on at least the same terms as those obtained by private investors. It is not essential in such projects, but it is desirable, if the opportunity for the investment has been tendered for on an open and transparent basis. The procurement regulations do not necessarily apply to such commercial arrangements. However a procurement process of some form is useful evidence that the commercial terms are on an arm's length basis and no one undertaking was unfairly chosen over others.

If a tender process is not possible because, for example, the recipient of the investment has an exclusive right to intellectual property in technology or land, then it is generally appropriate to evidence the commerciality of the deal by appointing an independent valuer to establish that the investment is at "market value". When transferring land, public bodies must either hold an open, unconditional tender process or obtain an independent expert's valuation in order to establish the market value of the land. It is clearly envisaged that the Board will be considering providing equity investment into private businesses and this will be acceptable from a State Aid perspective provided the pre-requisite evidence of a fair market return in the circumstances can be established.

## Exceptions to the general rule on State Aid

Article 87(1) acts as a general ban on the giving of State Aid, but the EC Treaty then does go on to state that certain types of aid *may* be permitted under Article 87(3). That is aid to:

- *facilitate development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions and competition to an extent contrary to the common interest;*
- *promote economic development of areas of abnormally low standard of living or serious unemployment;*
- *promote an important project of common European interest or to remedy a serious disturbance in the economy at the member state;*
- *promote culture and heritage conservation;*

The Treaty also allows for further possibilities for approval of State Aid, under specific rules:

- *aid necessary for the operation of the common agricultural policy;*
- *aid for public transport services;*
- *aid necessary for undertakings to provide services of general economic interest.*

However if aid falls into one of the above categories, this does not remove the UK's obligation to notify the commission for approval unless a "block exemption" or a pre-approved scheme is in place.

## When is State Aid permitted without notification to the Commission?

Block exemptions are Commission regulations that set out the circumstances where certain aid can be granted without prior commission notification and approval. In August 2008, several existing block exemptions were consolidated into a new General Block Exemption Regulation (or "GBER"), together with new exemptions that were not previously covered. Some exemptions that may be of relevance to the Board are set out below:

### De Minimis exemption

The de minimis block exemption allows small amounts of aid to be given, based on the assumption that the amounts are too small to distort or threaten to distort competition. It is possible to grant up to €200,000 (around £130,000) of aid to a firm over a rolling three-year period as long as all of the terms of the exemption are met. This aid can be granted regardless of the size of the firm and for a range of purposes. The rolling three-year period counts from when the de minimis aid is first offered.

### SME Block Exemption Regulation

This block exemption is now contained within the GBER. It allows State Aid to be awarded under certain conditions to small and medium size undertakings (SMEs). The aid can be provided in relation to tangible investment i.e. land, buildings, plant, machinery; intangible investment i.e. expend and related to technology transfer; consultancy services; research and development; and cost of the first participation of an enterprise in a particular trade, fair or exhibition.

A small enterprise is an enterprise that has fewer than 50 employees; and has either an annual turnover or annual balance sheet not exceeding €10,000,000 and is independent. A medium size enterprise is an enterprise that has fewer than 250 employees; and has either an annual turnover not exceeding €50,000,000 or a balance sheet total not exceeding €43,000,000 and is also independent.

The criteria must be applied to the company as a whole (including subsidiaries located in other EU Member States and outside the EU). There are caps applicable to this aid.

### **Aid for Environmental Protection Matters**

These new guidelines<sup>29</sup> (Community Guidelines on State Aid for Environmental Protection (1 April 2008)) have been recently updated and introduced to cover aid for “environmental protection” i.e. “*any action designed to remedy or prevent damage to physical surroundings or natural resources by the beneficiaries own activities, to reduce risk of such damage or to lead a more efficient use of natural resources, including energy-saving measures and the use of renewable sources of energy*”. Together with the provisions of the GBER concerning environmental protection, they are likely to be extremely useful to the Board.

Paragraph 1.5.8 of the Guidelines allow that aid may be granted to the producer of waste (under section 3.1.1) as well as to undertakings managing or recycling waste created by other undertakings (under section 3.1.9). However, the positive effects on the environment must be ensured, the “polluter pays principle” must not be circumvented and the normal functioning of “secondary materials markets” should not be distorted.

The GBER (at section 4) provides an exemption for investment aid enabling undertakings to go beyond Community standards for environmental protection or increase the level of environmental protection in the absence of Community standards. There are restrictions however e.g. aid must not exceed 35% of the eligible costs for large enterprises, 45% for medium size enterprises and 55% for small enterprises. It is specific that “aid for investments relating to the management of waste of other undertakings [i.e. commercial waste managers]” shall not be exempted under the GBER. This is consistent with the “polluter pays principle”. The GBER also allows for exemption in respect of aid for the promotion of energy from renewable energy sources which may be applicable for a energy from waste project. Aid which is for purposes covered by the Guidelines but not by the GBER (for example, aid to commercial waste management companies) will generally be permitted but must be notified to the Commission for approval.

### **Aid for Research and Development and Innovation**

The Community Framework for State aid for Research and Development and Innovation 30.12.06 and the GBER set out the conditions under which public bodies can fund business research and innovation projects, high tech start up companies and research infrastructure and services. They enable R&D Project Aid, industrial research, experimental development and technical feasibility studies.

### **Aid in the form of Risk Capital**

Risk capital aid schemes in favour of SMEs are also exempt under the GBER. The risk capital measure must take the form of participation in a profit driven private equity investment fund, managed on a commercial basis. Other forms of risk capital investment are permitted but require approval from the Commission.

### **Regional aid**

Aid can be granted to businesses in particular areas (known as “assisted areas”), including some London wards. Transparent regional aid schemes can be implemented without requiring approval from the Commission.

### **Services of General Economic Interest**

Another possible relevant exemption is the SGEI exemption. A SGEI is usually a service that is delivered to the public at large and not to specific sectors of industry but unfortunately there is no EU definition. The service must be capable of being carried out on a commercial basis but is a service that the market does not provide or does not provide to the extent or at the quality that the state requires AND is in the general and not a particular interest. Examples include public service broadcasting, public transport, postal services and the provision of gas, electricity and

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<sup>29</sup> The full text of the guidelines is available at:  
[http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52008XC0401\(03\):EN:NOT](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52008XC0401(03):EN:NOT)

telecoms. The SGEI block exemption sets out the conditions under which compensation will be regarded as compatible with the common market and does not need to be notified to the Commission.

The block exemption applies to:

- Annual compensation of less than €30 million given to undertakings whose annual turnover in the last two financial years was less than €100 million;
- Compensation of any amount given for hospitals and social housing, provided they are carrying out SGEI;
- Compensation for air or maritime links to islands with annual traffic in the last two years of less than 300,000 passengers; and
- Compensation for ports and airports where annual traffic in the last two financial years does not exceed one million passengers in the case of airports and 300,000 passengers in the case of ports.

It should be noted, however, that the block exemption applies to compensation given to service providers providing a public service. It does not, for example, apply to capital investment aid to those service providers. A member state must ensure that there is no over-compensation and that they are only paying the amount needed to discharge the service while allowing the service provider to make a reasonable profit.

One must also remember that this sort of arrangement is likely to fall within the procurement rules and therefore the service provider should be publicly procured in accordance with the Public Contracts Regulations 2006 in any event. If a public tender exercise has not been undertaken for whatever reason, the level of compensation should be benchmarked against similar undertakings.

### Existing approvals given to the UK Government

In addition to the block exemptions, the UK Government has obtained approvals for a number of existing types of scheme. The Board must consider whether the project in hand falls within any of the existing UK approvals. A summary of potentially relevant approvals follows, but the Board must carefully read the approvals themselves to ensure the project in question has the same characteristics as these pre-approved schemes. If it does not, further approval may be required from the Commission:

- **Speculative and bespoke gap funding.** This is aid used to support private sector initial investment in land and property regeneration projects in assisted areas that would not be able to proceed without public sector support.
- **Direct development.** Allows the undertaking of direct development where the public sector acquires a site and undertakes reclamation and remediation works directly or in partnership with any other public body.
- **Environmental regeneration.** Used to improve the environment by reclaiming and landscaping derelict or potential derelict land but only where the land is then made available as a public amenity.
- **Community regeneration.** Used to support community and voluntary organisations so that they can take forward small regeneration projects. The projects must contribute to the organisation through regeneration strategy and contribute towards other local regeneration strategies and must also produce economic and social benefits from the local community

### Implications if illegal state aid is found

The Commission has established powers to recover aid granted in breach of the Treaty. If un-notified aid is found to be incompatible with the common market it must be repaid with interest by the recipient firm. The Member State in question will be issued with a decision directing it to recover the aid together with interest at a commercial rate running from the point at which the aid was granted. The State must then take all steps possible for recovery under national law. Furthermore, aggrieved third parties may be able to claim damages for losses caused by the illegal aid.

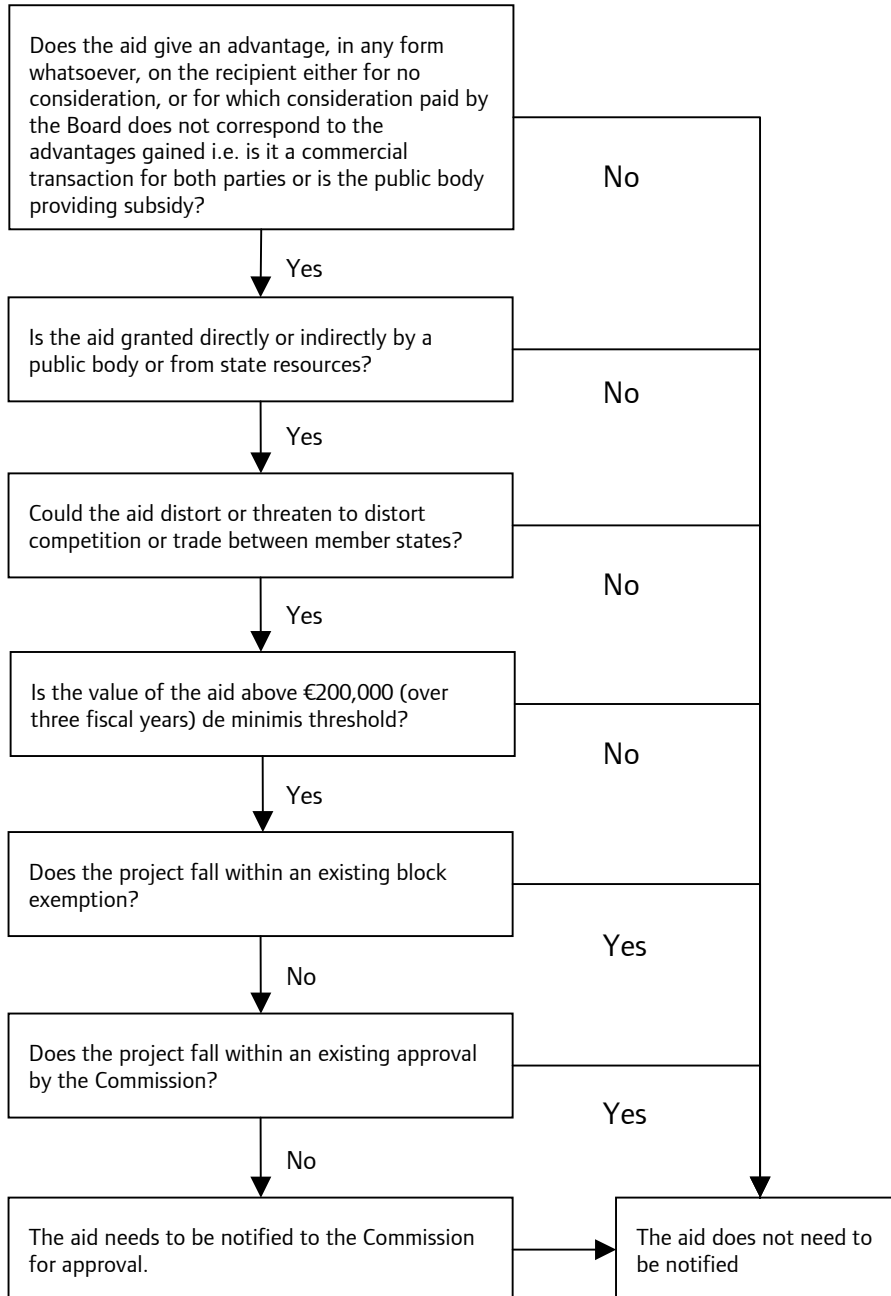
## Appendix 7 Annex 1

### Examples of State Aid

- Direct state grants or subsidies (for example Rescue Aid).
- Tax or the Social Security exemptions.
- Loans and preferential interest rates.
- Guarantees or indemnities on favourable terms.
- Preferential grants or loans to selected organisations.
- Disposal of land or buildings at less than full market value.
- Debt right off.
- Waiving of profits where there are returns on public funds.
- Export assistance.
- “Sweeteners” to attract investment into a region or sector.
- “Forgiveness” of liabilities (for example, employer social security payments or licence fees).
- Free consultancy advice
- Assistance to help companies invest in environmental projects
- Contracts awarded without a competitive tendering procedure
- Infrastructure projects which only benefit specific users.

## Appendix 7 Annex 2

### When should State Aid be notified to the Commission?



## Appendix 7 Annex 3

### Specific Board Activities

#### Activity

##### **Grants to Local Authorities**

**Grants to organisations which trade commercially in waste services e.g. to buy new equipment or to invest in new technologies.**

**Acquire capital assets e.g. land with the intention of running challenge schemes to operate facilities on them.**

**Equity stakes, guarantees or loans in qualifying projects**

**Match funding to a Unitary Development Fund such as JESSICA to promote environmental infrastructure.**

#### **Will State Aid need to be notified to the Commission?**

Unlikely to be an issue provided that local authorities use the grant to deliver services in order to meet their own statutory functions. May be an issue if the local authorities are carrying out commercial activities.

State Aid risk high as any financial assistance may be seen as a distortion of competition and the technologies may give a commercial edge to the recipient. Ascertain whether any exemptions or pre-approvals will permit the aid. See list at pages 5-8.

The purchase of assets is not in itself State Aid. The terms upon which the assets are then offered to a private company to exploit may be State Aid if not offered on commercial arm's length terms e.g. land sold below market value has a presumption of State Aid (and specific State Aid rules apply). This risk is minimised, if not eliminated, however if the Board runs an open and fair tender process for the appointment of the operator. The opportunity should be widely advertised and may fall under the procurement regulations in any event.

If the terms of such investment are in accordance with the current market rates, unlikely to be State Aid. If the investment is on preferential terms however then State Aid is a risk and therefore if it is possible to advertise the opportunity for the investment to reduce risk of challenge, the Board should do so. Exemptions or pre-approvals may assist.

In most cases the conditions imposed for the use of EU Structural Funding excludes the possibility of State Aid however this is not always the case and the onus is on the managing public authority (in JESSICA's case the LDA) to ensure the use of the funds complies with State Aid rules. The Board therefore would be free to contribute to the LDA's Fund but the LDA will need to ensure a State Aid review is undertaken when it administers the Fund.

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## Appendix 8: The Board's approach to risk and financial markets

### The Board's risk appetite

The waste sector has historically suffered from a lack of financial appetite from banks and investors who have regarded the industry as high-risk. It is generally accepted that there is an 'equity gap' in the supply of risk capital to the waste industry, a problem magnified in London due to:

- The complexity of the market place;
- The planning risk;
- Fierce competition for sites;
- The perceived uncertainty surrounding new waste technologies and the clean-technology sector;
- The reluctance of investors to back regulatory-driven markets;
- The lack of incentives to provide enabling infrastructure; and
- The capital-intensive nature of waste infrastructure.

To address this the Board wants to create a stable environment for public/private investment in London's waste management to accelerate the adoption of new technology solutions. The Board, through its interventions and investments, will seek to improve confidence and make the long-term prospects of the waste industry in London more attractive to investors. The Board will seek to achieve this by creating attractive and stable investment opportunities through the:

- Provision of finance to catalyse the market place;
- Allocation of its Fund, which will provide assured co-investment public sector capital finance; and
- Sharing risk by promotion and development of cross-sectoral partnerships.

The continued expansion and health of the waste sector is vital to the Board realising this business opportunity. To facilitate this growth the Board may be open to taking a higher risk position in order to achieve its stated outcomes.

The current downturn in our economy – whilst a challenge – should also be viewed as a driver for positive change, with the ever-greater need to reduce London's wastage and maximise its resource efficiency to create a more closed loop that is less dependent on natural resource and energy imports. The heightened imperative to curb costs will make the need for the Board's activities even more relevant i.e. the promotion of reuse and the production of cheap energy and heat.

The Board will invest in selective technology innovation (which by its nature is associated with risk), encouraging projects or programmes that might otherwise have not gone ahead on risk assessment grounds or by acting as an underwriter to projects which, whilst appealing on strategic grounds, are perceived as being unduly risky (i.e. the potential provision by the Board of properly structured performance guarantees).

### The Board's approach to financial markets

Due to the 'credit crunch', the financial and economic downturn in the UK and worldwide economy, there is currently limited availability/appetite from the banking sector to provide senior debt facilities, which is estimated to continue for the medium term.

As a result any bank funding is likely to be at lower more conservative leverage and debt/equity ratios than in the past. Lenders are seeking loans to be fully secured against tangible assets, and supported by contracts for waste supply and off-take agreements for energy supply. Banks' traditional aversion to the risks of speculative/unproven technologies has strengthened and they will now support only tried and tested technology that can be certified by their Technical Advisors.

The limited availability of bank finance reinforces the need for flexibility in the Board's approach, which will also incorporate alternative sources of funding via Grants, Private Equity Houses and Venture Capital Trusts.

Private Equity and Venture Capital Trust finance do not have the same liquidity issues that the banking sector is currently experiencing and they continue to have a strong appetite to finance transactions in the recycling and renewable energy sectors. Funding is structured via equity, preference shares and subordinated loan stock, amongst others, which by their very nature are more expensive than bank loans because of the underlying risk profile.

However, this finance route offers the potential to move forward now and de-risk a project; once the banking sector recovers, projects could then seek a partial refinancing of the Private Equity and Venture Capital Trust finance with senior debt facilities.

## **Appendix 9: Joint European Support for Sustainable Investment in City Areas**

JESSICA is an initiative being developed by the European Commission and the European Investment Bank (EIB) in collaboration with the Council of Europe Development Bank.

The JESSICA programme gives Member States the option of using some of their EU grant funding, to make repayable investments in projects forming part of an integrated plan for sustainable urban development. Working on behalf of the Mayor, the LDA is responsible for the administration of this programme in London, with circa €50 million allocated to the programme up to 2015. The Board estimates that circa €20 million of this will be apportioned to waste related projects.

JESSICA funding needs to be locally matched for it to be unlocked. There are synergies between the objectives of the Board and the JESSICA programme and the LDA has identified the Board as a potential co-investor partner to secure the waste element. The Board believe there is an exciting opportunity through JESSICA for match funding to increase its available funding for waste projects. The Board will investigate this co-investment opportunity further and has included match funding provision in its 2009/10 Business Plan.

### **Milestones**

- Board support for commitment to Programme – 5 May 2009
- Signature of Funding Agreement – 31 July 2009
- Selection and procurement of investment partners (Urban Delivery Funds) – 31 March 2010

## **Appendix 10: Benefits to stakeholders**

### **Benefits to Boroughs**

- long term legacy benefits as opposed to short term support;
- diversified and credible outlet choices;
- Lower financial costs (direct and indirect) through avoided landfill tax and gate fees;
- resilience to future market shocks and market prices;
- active participation in projects plus financial upside through public/private sector involvement;
- assists with regulatory compliance (e.g. LATS, LAA's) and potential to increase recycling rates;
- reduction in carbon footprint (NI 85 & 86);
- creating positive public perception in response to public demand; and
- local economic development and new jobs.

### **Benefits to Business Community**

- market stability for price, supply and costs leading to lower financial costs leading to potential uplift in bottom line;
- shared Risk exposure;
- business planning certainty creating an investment opportunity;
- energy security;
- simplified logistics leading to less administration;
- closed loop supply chains providing security;
- mitigates regulatory impacts (i.e. landfill tax, CRC, packaging).
- opportunity for social enterprises; and
- enhanced corporate social responsibility.

### **Benefits to Londoners**

- value uplift in London's environmental economy;
- job creation;
- greater resource transparency, understanding and environmental 'feel good' factor;
- market led convenience to increase re-use and recycling;
- local heat and power plants providing cheap energy;
- shared participation and benefits; and
- increased confidence in local authorities and community leadership.