

Croydon & Sutton Green Party



**Green Party**

Draft Response to the  
South London Waste Plan Consultation –  
Round One

**South London  
Waste Plan**

A light green map of South London is overlaid on the green background. The map shows the outline of the region and several internal boundaries, likely representing different council wards or districts.

# Croydon & Sutton Green Party Draft Response to South London Waste Plan Consultation

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The South London Waste Plan initial consultation determined six questions for which comments were sought. It is the purpose of this document to outline the position of the Croydon and Sutton Green Party in response to these questions.

## 1. The Vision and Objectives of the South London Waste Plan

It is our position that waste management plans should be designed to maximise waste reduction, re-use and recycling. The use of emerging and traditional technologies for disposal should be strictly confined to residual waste and any waste management plan must be formulated on the assumption that levels of residual waste will fall over time.

At present, London's record in waste management is shameful; relying on twice the national average for incineration whilst simultaneously sitting second bottom of regional tables for the recycling of municipal waste.

Directives by the European Union on landfill specify three targets to progressively reduce the volume of biodegradable municipal waste (BMW) to be sent to landfill; a reduction to 75% of 1995 levels by 2009/2010, a reduction to 50% of 1995 levels by 2012/2013 and a reduction to 35% of 1995 levels by 2019/2020. Due to the prospect of large fines imposed on national government for failure to meet these targets, local councils have been given the task of reducing the amount of biodegradable waste sent to landfill under the Landfill Allowance Trading Scheme (LATS). Fines will be imposed by national government for failing to remain within mandated levels. The result has been considerable pressure to divert waste from landfill. The question of how this goal should best be achieved remains an open one. It is the position of the Green Party that the question should be framed in terms of "recycle or burn" rather than limited to technical options for managing sustained waste streams. The primary driving force behind the European Union Landfill Directive is the impact of greenhouse emission gases on the environment in terms of climate change. Therefore, it is crucial that any proposed solution keep to these principles and seek to minimise any potential for the release of climate change gases. In these terms alone, waste reduction coupled with schemes and incentives to maximise recycling, reuse and product life, whilst phasing out materials that cannot be either recycled or composted remains the best solution. Any waste plan proposals incompatible with best environmental practice should be rejected.

### Recycle or Burn

The Alterations to the London Plan outline the Mayor's recycling ambitions. The intention is to recycle 35% of municipal waste by 2010 and 45% by 2020 (the Mayor believes that 60% recycling of municipal waste is possible but this is not set as a target), 95% of construction and demolition waste by 2020 and 70% of commercial and industrial waste by 2020. Even assuming London achieves these targets, a significant proportion and volume of residual waste will be left to manage.

The current plan meticulously avoids using the word "incineration" but it is clear that the proposals will include new gasification and pyrolysis facilities. There is some debate as to whether pyrolysis should be classified as incineration. In situations where the resulting gas is subsequently burned, it is usually deemed to fall under the category of incineration, and it should be noted that the European Union Waste Directive considers pyrolysis as a form of incineration. Beyond the question of classification and semantics, the issue of what type of waste is sent to gasification/pyrolysis plants is of primary importance. Whilst exposing source separated organic waste to pyrolysis and/or gasification should not result in the emission of fossil fuel-derived CO<sub>2</sub>, this cannot be said in the case of unseparated residual waste and RDF (refuse derived fuel). It is therefore the opinion and position of the Green Party that such techniques should be expressly limited to source separated organic waste.

Current recycling and composting targets lack ambition and many councils are turning to incineration as a viable alternative to make up the shortfall. Waste industry consultants tend to recommend incineration, often described as "thermal management" as a means of meeting these targets quickly and efficiently as well as providing commercial

opportunities.

The European Union Directive states it aims “to prevent or reduce as far as possible negative effects on the environment, in particular the pollution of surface water, groundwater, soil and air, and on the global environment, including the greenhouse effect, as well as any resulting risk to human health, from the landfilling of waste, during the whole lifecycle of the landfill”. It would seem manifestly obvious that proposals that include incineration, even under the guise of “thermal management”, do not comply with these requirements given the well known negative effects on the environment and human health produced by the air emissions, water table and soil pollution emanating from such facilities.

The Alterations to the London Plan specify 331 new facilities in order to achieve self-sufficiency, with the majority being materials reclamation facilities and the remainder composed of 62 composting facilities, 20 MBT plants, 27 anaerobic digesters and 14 pyrolysis/gasification plants (which the EU defines as incinerators).

The Green Party has grave concerns at the prospect of the construction of pyrolysis/gasification incinerators, especially in proximity to densely populated areas and instead favours a policy of waste minimization, reuse and recycling.

Incineration literally sends resources up in smoke and implicitly accepts that there is no need to reduce waste. Building incinerators involves a high capital cost and as a result operating companies typically require contracts with local authorities to supply a minimum quantity of waste to burn over a protracted period, usually 25 to 30 years, though sometimes as long as 60 years. In many cases, these contracts stipulate that if the local authority fails to supply the full amount of waste for incineration, it is required to pay compensation to the operating company to offset the fall in profits. This assurance of a guaranteed return on investment is immensely attractive to commercial interests, but also provides a powerful motivation to maintain a steady stream of waste in direct opposition to the impetus to reduce waste through recycling and reuse. Incinerators actively compete with recycling for materials and are a significant barrier to waste prevention. Indeed, it is reasonable to postulate that if paper and plastic waste were minimised and recycling maximised, it is doubtful there would be enough remaining to make incineration financially viable. Both pyrolysis and gasification rely on a feedstock rich in paper, kitchen and garden waste and plastics. Any significant improvements in rates of reuse, recycling and composting would dramatically alter the level of these waste streams in residual waste and would most likely compromise the ability of pyrolysis and gasification plants to operate profitably.

The prohibitively high level of penalty clauses imposed on local councils in the provisions of the long term contracts typically entered into with incinerator operators have led the Assistant Director of Environmental Services at Stockton Borough Council to observe that penalty clauses “mean that fundamentally we are into waste maximisation”. The Assistant Director also stated that councils “are already constrained by the contracts from doing even a modest amount of recycling”. The future of two materials reclamation facilities was put in jeopardy by the drive to satisfy the demands of the incinerator for a sustained waste stream.

The new Waste Strategy for England emphasises the need for “flexible” contracts. Contracts that lock local authorities into providing fixed amounts of waste for treatment over long periods clearly do not meet this requirement. Inflexible contracts also present a barrier to innovation and encourage the use of obsolete technologies.

As far back as the Waste Strategy 2000 document it was also stated that “care must be taken to ensure that contracts are sensitively designed to avoid ‘crowding out’ recycling”. There are examples of incinerator applications being denied on this basis alone.

### **Economic Imperatives and Energy Efficiency**

High landfill costs and the structure of Private Finance Initiatives (PFIs) would seem to encourage incineration as a viable option in economic terms, however there is the distinct danger that short sightedness might blind councils to the longer term economic risks. Mainly as a result of energy policy, the present situation is that incineration benefits greatly from subsidies and tax breaks. The Climate Levy provides the option of tax breaks on the electricity sold, business rates and on the purchase of some components. The Renewables Obligation excludes incineration, but does allow subsidies for the biodegradable fraction of waste dealt with by pyrolysis and gasification plants. Unfortunately, recycling receives no tax breaks or support for the energy it saves in spite of the fact this greatly exceeds the amount recovered by incineration. That said, it should not be assumed that the present situation will endure ad infinitum and it remains a very real threat that incinerators could end up being revealed as expensive white elephants. As emissions standards continue to improve, costs will increase. Waste Strategy 2000 warned that “around 30 per cent of the capital costs of a conventional incineration facility is attributable to the flue gas clean-up system. This is likely to increase significantly as tighter discharge limits require the installation of additional treatments.”

It is also noteworthy that in the scramble to sign contracts for incinerators in the face of the prospect of large fines, councils might find themselves liable for fines for failing to meet statutory recycling targets. This is the other side of

the incineration coin. The demonstrable link between poor recycling rates and long term incineration contracts makes recycling and incineration uncomfortable bed fellows at best. It might be reasonable to conclude they are in fact practically incompatible.

Incinerators are a waste of energy. It is often simplistically claimed that burning waste reduces greenhouse gas emissions. In reality, most incinerators are not very efficient at capturing energy from waste as they are primarily designed as a method of reducing the volume of waste and require the installation of expensive air pollution abatement equipment. The Government has admitted this shortcoming in the new Waste Strategy for England: "Where fossil fuel based products are incinerated (e.g. plastics) they tend to generate energy less efficiently than using fossil fuel directly, hence are associated with an overall carbon cost". Electricity-only incinerators emit 33 per cent more fossil CO<sub>2</sub> than gas power stations, but 40 per cent less than a coal power station. The situation will have changed by 2020. There will be improvements in technology, particularly for fossil-fuel power stations (including re-fitting of existing coal power stations with more efficient equipment). Assuming the Government's proposed recycling rate of 50 per cent, it is expected that fossil-fuel derived plastics will make up a higher percentage of residual waste. In 2020 it is predicted that electricity only incinerators will emit 78 per cent more fossil CO<sub>2</sub> than gas power stations, and only around 5 per cent less than a coal power station. Incinerators release a large amount of CO<sub>2</sub> to produce a small amount of energy. On this basis, they fail the test alluded to earlier; namely, that the driving force behind the European Union Landfill Directive was the desire to reduce the emission of greenhouse gases. Waste materials have two values. There is the quantity of energy that was expended in their manufacture, and which would have to be expended again should that material need to be replaced, and there is the quantity of energy released should that material be burnt. For the majority of materials the amount of energy reclaimed through burning is dwarfed by the amount of energy required in their manufacture. There is also the simple truth that materials are finite. It is irresponsible to assume that there will be an endless and inexhaustible supply of natural resources. In this context, it becomes clear that recycling and reuse is far more energy efficient and sustainable than attempts to reclaim energy from waste. Descriptions of "renewable energy from waste management" fail to recognise this simple reality.

The waste hierarchy requires opportunities for recycling and composting to be considered before energy recovery. The Green Party views any proposal that includes refuse derived fuel (RDF) with great scepticism as it subverts the waste hierarchy, relying on a feedstock of recyclables such as plastics.

### **Public Health Concerns**

Above and beyond questions of efficiency and the barrier to waste prevention presented by incineration, the greatest concerns centre on pollution and the inherent health risks. Incinerator chimneys emit organic substances such as dioxins (associated with cancer, hormonal effects such as endometriosis in women, reduced sperm counts in men, reduced immune system capacity, and possible effects on foetal development), heavy metals such as cadmium and mercury (cadmium may cause lung and kidney disease whereas mercury can affect the nervous system), dust particles (exacerbating lung diseases such as asthma or chronic bronchitis, and heart disease) and acid gases such as sulphur dioxide and hydrochloric acid (also shown to exacerbate lung disease). A DEFRA report from May 2004 on the environmental and health effects of waste management compared figures for emissions of various substances by the various types of waste management operations and found that incineration resulted in the highest emissions of nearly all of the substances including CO<sub>2</sub>, nitrous oxides, particulate matter, arsenic, hydrogen chloride dioxins and furans as compared with other waste management options. The Environment Agency has already admitted to Parliament that they do not know what danger modern incinerators present to human health.

It is often claimed that modern facilities meet newer and more stringent emissions standards but this fails to recognise that the Environment Agency has been unable to find a single incinerator in England and Wales that has not breached its emissions targets. In addition, it is vital to observe that emission controls are suspended during the frequent start up and shut down procedures.

Purely in terms of delivering the aim of diverting waste from landfill, incineration offers a poor solution. It is often overlooked that a significant amount of ash (both bottom ash and fly ash) results from the incineration process and this material still has to be landfilled. Frequently, the ash produced occupies as much as one third by weight of the original waste.

Of course, the resulting ash waste also contains toxins and heavy metals (especially true of the fly ash collected from pollution abatement equipment). Bottom ash is often falsely classified as "inert" forgetting that once wet it has the potential to leach pollutants such as heavy metals. Fly ash is so toxic that is classed as "special waste" and has to be landfilled at specialist facilities. The SELCHP plan in London, often considered the flagship incinerator, was forced to send its fly ash to a site near Cheltenham due to the paucity of sites willing and able to deal with such large quantities of special waste. The company running the incinerator facility at Byker near Newcastle was found to have been illegally mixing toxic ash with other waste. This material was then spread across parks and public walkways in a

truly shocking display of negligence and apathy. Contaminated ash has long been used as aggregate for building materials in Japan. Anyone exposed to the toxins contained in these materials would be at a greatly increased risk of cancer and other health problems. The time lag makes the cause and effect less apparent and difficult to prove, but it is our position that deliberately and knowingly exposing the public to such potentially harmful conditions is deeply irresponsible.

The Green Party maintains serious concerns that despite the recognised improvements in incineration techniques (specifically the reduced level of oxygen exposure and the subsequent reduction in emissions) and the resulting mitigation of health risks, pyrolysis and gasification both still present unknown levels of risk to public health in the form of dangerous particulate emissions and toxic residue. In addition, the treated water used to wash the waste in the pre-treatment stage and clean the gas also presents a significant potential risk and should not be ignored. There is a great deal of uncertainty surrounding new applications of pyrolysis (traditionally used with more defined fuel streams such as industrial waste) since the use of such technology with a mixed municipal waste stream fuel source is largely unproven. It is our position that the precautionary principle should be adopted especially in the light of growing evidence as to the significant negative impact on public health from incineration in general and in view of that fact that toxicity is notoriously difficult to measure. It should also be noted that most of the current information on the efficacy and safety of these processes comes from the companies themselves and is therefore subject to an obvious conflict of interest. The principle of caveat emptor should apply.

### **Alternative approaches**

It is entirely feasible to meet targets for diversion from landfill without the need for incineration. Our position would prioritise waste prevention in the first instance, maximise reuse and recycling before treating the residual waste with MBT (Mechanical Biological Treatment) and Anaerobic Digesters. Once organic waste has been treated to halt biological processes and thereby prevent the release of methane, it can be safely returned to the earth via landfill. Anaerobic Digesters also have the added benefit of providing a rich soil improver. National policies such as taxation on excess packaging and product life cycle legislation would make a significant contribution.

Source separation of recyclable materials is far superior as a recycling and reclamation technique because it produces a higher quality of recyclables and also serves to reinforce waste education in the public mind. To this end, it is our recommendation that policies such as weekly food waste collections, garden waste collections and improved recycling schemes (source separated collection of recyclables) be followed. Some technologies such as mechanical and biological treatment (MBT) and anaerobic digesters (ADs) are seen by growing numbers of local authorities as a way of meeting recycling targets without source separation. Some local authorities in London are considering large MBT plants with long contracts. These will draw waste in from larger areas and could tie authorities into supplying vast tonnages of waste (undermining source recycling and waste minimisation).

The current draft of the European Biowaste Directive would require separate collection of household biodegradable waste for composting or recycling. This would effectively supersede any non commercial impetus toward incineration by achieving Landfill Directive targets for reducing biodegradable waste going to landfill.

## **2. How much of our waste should we deal with?**

We are in favour of 100% local management of waste, subject to important and necessary caveats in regard to hazardous waste streams.

The Green Party has grave concerns that commercial imperatives and commercial confidentiality will permit and even encourage the importing of waste from outside our boundaries. The legally enforceable onus on directors to maximise profits alone makes this a very real possibility and commercial confidentiality will effectively neuter any public oversight and accountability. Commercial partnerships such as between tyre recyclers and the incineration companies would be a nightmare scenario.

As is already the case with the global trade in nuclear waste, there is the prospect that exceeding 100% capacity invites the temptation to profit at the expense of public health. The more "modern" the incinerator, the more it attracts imports. It should be observed that the Dutch export their hazardous waste to Germany for incineration. With this in mind, we would urge that a clear and binding prohibition against the import and treatment of waste from outside our borders be written into the plan from the outset.

### **3. Distribution of waste management sites**

Small incinerators are not economic primarily because the costs of pollution abatement equipment tend to be identical irrespective of the size of the plant where they are fitted.

Given that the majority of waste management projects are being funded by Private Finance Initiatives, themselves subject to commercial imperatives such as economies of scale and profitability, the Green Party has serious and growing concerns that local authorities are being effectively rail-roped into endorsing large, inflexible facilities such as incinerators rather than implementing schemes to maximise recycling and provide small scale, flexible technologies to deal with the residual waste left over after recycling and composting.

The government has already assigned more than £2 billion in PFI credits to subsidise waste projects and this provides a powerful incentive to use Private Finance Initiative as a source of primary funding. Of course, PFI funding does not have to be spent on incinerators. Anaerobic digestion plants, recycling facilities and waste transfer stations are all candidates to receive PFI money.

It is the position of the Green Party that the proximity principle be applied rigorously. Unnecessary waste transportation adds to the emission of climate change gases and presents a number of additional health risks, in particular when volatile materials are involved.

The recently passed Planning Act 2008 has streamlined planning permission for large scale facilities such as incineration plants. The Green Party is concerned that this development will serve to encourage a centralised approach and smaller number of larger projects.

### **4. Where should the new facilities go?**

Question of what type of facilities must be addressed before any meaningful response to the question of location. It is worth noting John Prescott's words in 2000, "We should not lose sight of the fact that it is the poor who suffer most from pollution". Given the claims that incinerators present little risk to public health, it is important to note the evident reluctance to site them in more affluent areas. In Altrincham a public outcry over health problems in the area immediately surrounding the plant led to its closure and subsequent demolition.

There is good evidence that house prices and the housing market in the area surrounding an incineration facility suffer significantly. Given the fact that these facilities tend to be built exclusively in less affluent areas, the poorer elements of society will again find themselves footing the bill.

It is important to place the potential extra pollution in context. The Plan assumes a proposed population growth of 800,000. This will generate 13% more traffic and 61% more jams, according to Transport for London figures. There is a distinct danger that the addition of any extra pollutants to this already damaging cocktail of nitrogen oxides and other toxins will push air quality measurements outside permissible parameters.

### **5. Should the South London Waste Plan specify technologies to be used at each site?**

Not only should the plan specify technologies at each site at the earliest possible juncture, but failing to do so would make a mockery of the process. In the absence of specific information on the proposals, informed assessment of potential risks and other impacts are rendered effectively impossible.

The principle of "Best Practicable Environmental Option" (BPEO) should be applied rigorously. It is not sufficient to identify a location as suitable for waste management without specifically nominating it a candidate for an "energy from waste" plant. Site specific assessments are a material consideration.

In addition to specifying technologies, it is vital that the plan also specify complete monitoring provisions. Base line measurements before installation and operation would need to be carried out to provide a reference for assessing future impact against a defined standard. In the case of airborne pollution, robust measures of actual levels of particulates, ozone and NOX would be required as well as a greater number of monitoring stations and a less periodic testing regime than presently exist. In the case of soil and ground water monitoring, control measurements for dioxins, heavy metals, etc should be taken before any facility is built and then pursued continuously for the next 20 years. These costs would have to be factored into the final economic analysis of the viability of the plant. The health effects on the population in terms of epidemiology of cancers, stillbirths and neonatal mortality in particular should be measured carefully by controlled studies including pre and post change levels.

"Thermal management" is a vague and imprecise term. Covering a range of techniques and technologies from mass burn incineration to plasma arc pyrolysis, it is vitally important that commercial imperatives outside public control not be permitted to select the cheaper and more profitable solution over the more expensive but immeasurably

safer one. The temptation to choose the cheap and dirty option simply because it is the most profitable means that it would be both immensely foolish and dangerous to trust the integrity of big business to put the interests of the population over profit motivations.

Anaerobic digestion is the most environmentally sound practice and produces no fossil fuel derived CO<sub>2</sub>. This technique works on both source separated organic waste (kitchen scraps and garden waste) and residual mixed waste (left over after recycling and composting household waste).

Gasification/pyrolysis should be limited to source separated organic waste since it is only under these restricted circumstances that it does not present unacceptable health and environmental risks.

Hydrogen fuel cells, derived from the export of syngas for conversion to H<sub>2</sub> for use in vehicles and plastics reprocessing, offer interesting potential. Studies show that they perform better than Combined Heat and Power in terms of greenhouse gas impact due to the greater conversion efficiencies of fuel cells compared to other energy generation technologies. The negative side is that very little research has been carried out on syngas derived from mixed municipal waste in hydrogen applications and as such it is unlikely to attract commercial finance.

## **6. How should we monitor the success of the Plan?**

It is our position that the success or failure of the Plan should be monitored against criteria such as an overall reduction of waste, an increase in recycling, improvements in air quality, improvements in soil quality, improvements in water quality and an increase in public awareness of recycling benefits. A simple mechanism for determining the success of a waste management system would be to measure what goes in versus what comes out. Since incineration creates toxins that do not exist in the original waste stream, it is the worst performer in this context.

A positivist approach implicitly accepts that toxic emissions are inevitable and acceptable in moderation. Our position is that this attitude is fundamentally flawed. The Plan should be deemed to have failed if it cannot identify a system to not only mitigate but rather completely eliminate any unnecessary additional toxic pollutants. Since it is perfectly feasible to achieve the targets set by the Landfill Directive without resorting to incineration, it would be a deliberate and unacceptable choice to release toxins into the food chain and environment.

The original impetus of the European Union Directive was the reduction of the emission of greenhouse gases. Therefore it seems reasonable to measure the relative success or failure of this Plan on the basis of its impact on climate change gas emissions.

Another valid measure of relative success would be job creation. Studies prove that the majority of jobs created by incineration plants disappear once construction has concluded. Recycling not only generates more jobs but these jobs are long term.

Success could also legitimately be measured against resource conservation. Incineration sends finite resources up in smoke whereas recycling and reuse is the responsible long term choice, in keeping with our role as custodians and not owners of our planet.

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