

**Guildford Borough Council
Labour Group**

Representation to Surrey County Council

concerning

**The Planning Application by Thames Waste Management
00/P/01421**

for

**An Integrated Waste Management Centre
at**

Slyfield, Guildford.

30 September 2000

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1 Introduction

1.1 The Application

The Planning Application is for a 225,000tpa municipal waste incinerator – an Energy from Waste unit [EfW], together with a Materials Recycling Facility [MRF] and Civic Amenity [CA] site. The plant will generate 20MW electricity to be sold into the National Grid, and 67000tpa of Bottom Ash, 13,500tpa of Fly Ash.

The EfW plant will operate 6 days a week, and the CA will operate seven days a week – as it does at present.

The CA will handle 15000tpa [the present one handles 12000tpa], of which 7000tpa will form part of the 225000tpa feed to the incinerator.

The Table below shows the sources of the waste.

Source	Waste, tpa
Charlton Lane	100000
Woking	26000
Guildford	37000
Waverley	19000
Surrey Heath	22000
Camberley *	6000
Farnham *	2400
Witley	1800
Martyrs Lane, Woking	6000
Slyfield CA	7200
Total	227400

Source: TWM Environmental Statement. para 11.2.11, page 164

The site is about 10hectares, at the far end of the Slyfield industrial estate, alongside the river Wey. The site is roughly equidistant from the closest housing on both sides of the A3 – namely about 400metres.

The plant will be enclosed in a building of floor area about 60x40 m, with a roof rising from 12m at the reception bays to 40m at the highest point, and a 70m stack.

1.2 The Labour Group's Comments

The following sections set out our comments and objections to this application, together with our reasons.

2 Proximity Principle

Taking the figures supplied by TWM for the amounts of waste – shown in the Table in the Introduction, together with the distances they will be transported to supply the EfW plant at Slyfield, it is obvious that there is no adherence to the **proximity principle**. This basically requires waste be dealt with as close as possible to the source, thereby minimising transportation

Fairly simple calculations show that Slyfield is not the optimum location to minimise the tonne-miles for waste transportation. By summing up the product of the miles travelled and the waste tonnage carried, it is possible to see which location offers the least ‘tonne-miles per year’ The site at **Charlton Lane, Shepperton** does meet this requirement easily, with over 25% less tonne-miles than for Slyfield, and less than all the other sites in Surrey where waste is generated.

Whatever is the outcome of the enquiry on Surrey’s Waste Plan, smaller incinerators, serving their local community, are a concept with growing acceptability with the general public. There are already many incinerators in operation with capacity well below that proposed by TWM. A case in point is the incinerator under construction just outside Basingstoke, Hants, which has 90,000tonnes/year capacity, and its waste supply comes from no greater range than 6-7 miles.

The **proximity principle** is a key feature of SCC’s Waste Plan. In the ES p55,para 3.6.3 this is stated explicitly in Policy WLP2 ‘In considering proposals the County Council will have regard to the extent to which the location of the development **minimises** the need for lengthy haulage of waste, waste products and residues. The County Council will give preference to the location of waste related facilities **as close as practicable to the origin of waste**’.

This application does not meet that policy – as we show above.

3 Building size

3.1 GBC Planning Brief for Slyfield Industrial Estate

Guildford Borough Council agreed a Planning Development Brief for Slyfield, in 1996. Although non-statutory, its aim was to improve the functioning and appearance of the estate. Inter alia, the brief contained a criterion for building height, namely no building to be more than 10m. In TWM's Planning Application Supporting Statement, they state that buildings are 'utilitarian and poor visual appearance' [p3, para 1.6]. In fact, GBC is making every effort to encourage the very best in architectural design and standards for new premises in this estate. Furthermore much effort has gone into landscaping the street scene.

A building four times the height of any neighbouring premises will not be in keeping, even though TWM have gone to some length to make it attractive. The concept is welcome, but in this context, nevertheless, the building is too large.

The principle of an architecturally attractive and unusual shape for the whole building is welcomed, but there appears to have been no alternatives examined.

3.2 Comment on the EfW building itself.

The proposed main building for the EfW has a roof height rising from 12 m at the Reception doors to 40m at the chimney end. The cross section drawing PA04 [in the application summary book] shows that at the high end, there will be as much as 12m void. And the chimney is not set at grade but has its base 15m above.

It is not obvious why the bag filter units are to be above the turbine house. Some more lateral thinking on layout, together with the use of computer-aided design techniques to minimise the volume of plant layout and cost alternatives would show which design had the lowest headroom.

It should be noted that the EfW plant now under construction for HantsCC , at Basingstoke, has a roof height of 32m.

This building height far exceeds the Planning Brief recommendation of 10m, and more thought could almost certainly go into reducing its height by a long way.

4 Sustainable supply of the waste stream

4.1 Effects of recycling targets on supply of domestic waste

Data now being published all over the UK show that the volume of waste is growing at about 3% per annum. At the same time, however, there are now Government targets for recycling, which rise from 25% by 2005 to about 40% by 2010.

Currently GBC recycles less than 10% . This recycling activity covers paper, glass, green waste, kerbside collection covering about half the households in Guildford takes paper, glass and cans.

The proposed EfW has a turn down ratio of +/- 10%. This means that it will not operate at less than 202500tonnes/year which is the lower limit for economic operation. Essentially this means the limit for electricity generation – which is what makes this plant viable.

If the total waste collected grows at 3% a year, and at the same time recycling targets are met, then the TWM plant will be running below capacity within 10 years of start-up.

Considering two cases – one where waste continues to grow at 3% per annum, and the second at zero growth, together with recycling percentages rising annually to meet Government targets, we can show that for the EfW plant to run at design capacity, 225000tpa, waste must be imported from year 2006 [or year 3 after start-up]. By year 2010 [year 7] 10% of its feed capacity will have to imported into Surrey.

In the case of the zero growth scenario for waste generation in Surrey, the results are worse; by year 7, a third of the feed capacity must be imported.

4.2 Plant viability

These two simple scenarios show that the EfW will be very vulnerable to market forces in the waste trade. Other large incinerators will also be competing in the same way in the same market as recycling target are met and combustible waste diminishes. This will lead to closures. The result of that will be waste being trucked even longer distances. This vulnerability shows that small incinerators are a far more attractive option. To quote the Basingstoke case again, this 90,000 tonne/year plant has a turn-down ratio to as low as 66% - and thus will be better able to accommodate the impact of recycling on waste supply volumes.

This means the **proximity principle** is even further violated.

5 Traffic impact

5.1 Increase in vehicle movements

The traffic projections provided by TWM show that vehicle movements associated with the proposed plant will increase by '11 more vehicles visiting the site' [Planning Application Supporting Statement, p32, para 7.11]. However, these will all be 20tonne bulkers, and these 11 additional vehicles actually represent an approximate **50% increase** in this type of vehicle.

5.2 Environmental impact

The further the supply vehicles have to travel, and the more there are of them, it is obvious they will use more fuel. In addition they will create more noise, more road wear, more hazard to cyclists and pedestrians.

The latest data from DETR show that the average HGV uses about 35 litres of Diesel for 100km journey. Every tonne of diesel produces about 3tonnes of carbon dioxide. Worldwide, Governments are committed to reducing CO₂ emissions. We have here a proposal which will add to the CO₂ load in Surrey. By locating the plant in Slyfield, and not in the optimum location at Charlton Lane, CO₂ emissions are unnecessarily increased by a third.

The legally binding target for the UK, agreed in Kyoto 1997, for carbon dioxide emissions, is that they be reduced to 12.5% below 1990 levels. Locating this EfW plant in a non-optimal position, generating unnecessary traffic contributes nothing towards meeting this target.

5.3 Access roads

5.3.1 A320 – Woking Road

Access to the Slyfield Industrial Site is via the sole entrance on the A320. Traffic projections for vehicles to the plant, supplied by TWM [Technical Appendix Vol2 part F, tables 1 and 2] show that roughly two-thirds of the traffic will approach from the south – namely off the A3 via Stoke residential area, and one third from the north. This latter route is a fairly narrow road, and leads right through the centre of Woking.

The newly installed traffic lights system does not seem to have helped to reduce peak hour congestion. Additional heavy lorries will simply add to the congestion, noise and pollution.

We disagree with TWM's conclusion [ES p42 para 2.11.34] that 'traffic conditions on the existing highway network will not worsen materially'. We maintain that every additional vehicle affects the environment to some degree, and there is no point above or below which anyone can say road vehicle loading is/ is not acceptable. The overloaded roads of Surrey must not be required to carry heavy lorries on what we claim are unnecessary journeys.

5.3.2 A3

TWM propose two alternative routes into the site from the A3. In the same section of their Appendices [on p 11, para 3.7] TWM quote Regional and National Transport policy to support the argument against a new access road to the site directly from the A3. On the face of it, such an access road would have considerable merit, by taking a considerable volume of the plant traffic away from the residential areas.

They also argue [in para 3.9] that ‘ the A3 southbound slip road [existing] also passes through the *residential area of Burpham, which would not represent an ideal route for large vehicles*’ (our italics).

It must be emphasised that *Stoke is equally a residential area, and is not an ideal route for large vehicles.*

A purpose-built access road [TWM’s third option – para 2.11.38] coming into the site from the north has some merits.

5.3.3 Other options

A fourth option is to build an access road from the A320 through the current GBC depot, and round the side of the sewage works. The difficult left turn for heavy vehicles from the north is offered as an objection, but in fact vehicles could proceed just 50 yards or so to the roundabout outside Stoke Mill and enter the site easily from the other direction.

This modification makes this option much more attractive, except that two houses flank this depot entrance. Some form of compensation could be offered to these residents.

5.4 Guildford Local Plan

The Plan states in Policy 18M [1993 version] and Policy G1 [under review] that ‘ The Council will not normally grant planning permission for developments which are likely to generate or attract significant lorry traffic’. This development is exactly one such development.

It therefore does not conform with GBC policy, and we uphold the principle in the Guildford Borough Plan, and recommend to SCC that Planning permission is not granted on this basis.

5.5 Surrey Waste Plan and proximity to housing

This too, inter alia, and quoted at length in the ES, p174, para 11.4.5 claims that ‘the site is not located in close proximity to any residential property’. This is not true. Homes in Slyfield Green, the end of Waterside Road, many small Closes in Weylea Farm estate are within 250m of the site. Any reasonable person would say that 250m is ‘*close*’.

5.6 One-way traffic system and Emergency Planning

This same extract from the Surrey Waste Plan quotes ‘ One way traffic system [*to the site – our italics*] would be required to prevent obstructions.....Routing of traffic to avoid HGVs through Jacobs Well and residential parts of Guildford would be required’. No consideration is given to how a oneway traffic system might be included in the development of this site for the EfW plant.

A one-way system would facilitate, and indeed could be essential for, the Emergency Plan management. In particular, fire-fighting vehicles could face serious congestion problems for rapid access to the site.

6 Economic viability

6.1 'Economy of scale' – fallacy

The argument to justify the size of any utilities or chemical plant based solely on 'economy of scale' to support it, is fallacious in one key aspect. If twice as big is better than half as big, then four times is better than twice and eight times better than four etc. Economy of scale has diminishing returns, and growth in size and capacity generate new costs.

More importantly, large plants have large feed rates. A major shut-down could be a real calamity for waste disposal. A policy change could render a large plant redundant.

There are already many waste incinerators built and in operation both in UK and in Europe. They are all varying sizes, and size has been principally determined by policy and by need, and not by speculative opportunity.

The table below shows a selection of operating incinerators which also generate electricity :

Location	Waste incinerated tpa	Electricity generated, MW	MW/10000 tonnes waste
Orkneys	25000	na	na
Basingstoke, Hants	90000	7	0.78
Slyfield, Guildford, Surrey	225000	20	0.89
Tyseley, Birmingham	350000	25	0.71
SELCHP, London	400000	32	0.80

6.2 Electricity generation

The table above shows electricity generation and the ratio of MW/10000tonnes of waste incinerated. The Slyfield ratio stands out at about 10% higher than the others. The electricity generated is what will make this plant economically viable. So if 20MW is an over estimate, then either the plant will need additional waste – and will need to operate over design capacity – or it is at risk financially.

How the electricity will enter the Grid is not included in the application. We believe this aspect should be, as there could be a need for additional substations and pylons.

6.3 Consequence of installation of a very large plant

We have shown that recycling targets will mean falling tonnages of waste in the not-too-distant future [less than 10 years operation]. The planned life of this plant, based on the investment economics, is 25 years. It is very difficult to see how this plant can stay viable for 25 years. Should it close, will it stay there? Another Battersea Power Station?

Should the market tighten, aggressive price wars for waste supplies will mean some incinerators will have to cease to operate. A public service such as this should be able to show a sustainable

25-year operating plan, with various alternative scenarios to accommodate likely trends in waste supply. This is not shown in the supporting documents.

7 Environmental issues

7.1 Atmospheric dispersion modelling

The use of the modelling program ADMS-3 preferred by The Environment Agency is mentioned in para 9.2.8, page 137 of the Environmental Statement. However the supporting paragraphs in the Appendix D, vol2 do not elaborate on how local topography in the vicinity of the site has actually been used. Wind data for Heathrow 1994 is also quoted.

Although The Met. Office do collect weather data all over Britain for forecasting purposes, they use it to produce general weather-forecast models for the whole of the UK. 6-year old data for a location 20miles away, in the Thames Valley plain, is not representative of Guildford. Local wind observations, must surely be essential to generate an accurate Atmospheric Dispersion Model for this site.

7.2 Noise

Whilst it is accepted that the Environmental Statement has a comprehensive section on current Noise levels in the vicinity of the site, reassurances are needed that the plant and building design will effectively eliminate nuisance noises, often at the threshold of hearing, such a high-pitched whines and very low frequencies.

7.3 Emissions

Residents living in the Slyfield and Burpham areas, some of them a few hundred metres from the site, have real concern about obnoxious and toxic emissions. The increasing incidence of asthma in children is associated with increasing levels of dust particles in the atmosphere and it is believed that the incinerator will exacerbate the problem. The dangers from continuous low level emissions of toxic pollutants are also of great concern.

7.3.1 Plant Operation & Waste Control

The proposed incinerator is designed to limit emissions to currently recommended levels. The standards to be achieved are based on average values over extended periods of operation. There are some situations where considerable deviations from the average may occur.

It is assumed that the plant is working perfectly at all times. During periods of start up, plant upsets and shut down, there is the possibility of incomplete combustion and the release of pollutants that would not normally escape. Malfunctioning of the flue gas cleaning system could also give rise to periods of excessive emissions. Routine cleaning of the bag filters will result in a continuing increase of dust in the exhaust route. These problems will increase as the plant ages.

Municipal solid waste is an unknown mixture of materials. There will be times when a specific load of waste (such as chlorinated plastics) that gives rise to a high concentration of dangerous pollutants will be incinerated. Because the waste will be collected from a wide area of north-

west Surrey and it is inconceivable that higher risk trade and industrial waste will not be incinerated. There is no indication in the planning application, nor is it believable, that there will be thorough checks of the waste stream for potentially dangerous materials. It is therefore possible for high levels of toxic materials to be released for a limited periods without the operators' knowledge.

7.3.2 Respirable Dust

The fly ash particles are capable of adsorbing on their surface volatile pollutants during the combustion process. The bag filters are designed to remove this dust. Respirable size particles (PM10s and PM2.5s) are of special concern because they are inhaled into the deepest regions of the lungs. It is assumed in the planning application that the filtration plant will operate with very high efficiency, but respirable size particles are at the limit of its capability. The respirable particles carry a higher burden of pollutants than the larger particles (mass for mass). TWM have not addressed this problem adequately and have given no indication of the size distribution and number density per unit volume of particulate material that will be emitted. These particles are a health hazard especially to children and elderly people with respiratory problems.

7.3.3 Exposure to Pollutants

Further information is needed as to whether dioxins accumulate in the body. The background exposure level of dioxins is estimated to be 1-3 pg per kg body mass per day which is the maximum safe exposure level set by the World Health Organisation in 1998. Any dioxin emissions from the incinerator would be added to this. The heavy metals are known to be cumulative poisons. A good example is lead. In the 1960s petrol companies assured the public that lead in petrol was safe. Toxic limits have a tendency to be reduced as experience is gained and medical science advances. There is every reason to believe that this trend will continue.

7.3.4 Monitoring

TWM proposes to analyse for dioxins in air once every 3 months in the first year, and then twice each year (Table 10.1 page B59). The reason for not carrying out more frequent or continuous analyses is because of expense and difficulty. Considering that dioxins may be emitted in bursts depending on the contents of a particular load of waste, 2-4 isolated analyses each year are completely inadequate. To reassure the public living near the plant, continuous dioxins analysis would have to be carried out by independent analysts. The WHO safe limits must be met, and if these levels are revised downwards in the future, the plant would have to be modified to comply or be shut down. The planning application should not be considered until adequate analytical procedures have been developed. The proposed monitoring of heavy metal releases to air of twice each year is equally inadequate and similar conditions should be imposed.

8 Viable alternatives

8.1 Slyfield

TWM claims that the site at Slyfield is the most suitable location[refs]. However the comparisons of the merits of the listed alternatives is neither clear nor convincing. In Volume 1 of the Appendices, a page of attributes is included for each alternative site **except Slyfield** [Vol 1 AppendixA]. This made fair comparison impossible. A comparable sheet had to be requested from TWM, and was received at a later date[mid September 2000].

TWM, in the ES[p52, para 3.4.4] , argues that Slyfield is the **only** suitable site in Surrey (on offer); Policy PE2 of the Surrey Structure Plan on the circumstances under which industrial plant would be permitted on Green Belt land says that planning permission on the Green Belt **would be** considered in very special circumstances where no equally suitable site exists. The decision would hinge on whether an **equally suitable** site existed not in the Green Belt. TWM claim such a site is a Slyfield, but it can just as strongly be argued that Slyfield is NOT equally suitable. The site at Charleton Lane, Shepperton, is in the Green Belt, but is also already and established and very large waste transfer station. In addition, it generates very nearly half of the waste stream proposed for the EfW plant – namely 100000tpa out of 225000tpa.

8.2 Waste disposal policies in the future

SCC's current Waste Plan (1999) does not name sites for waste incinerators, despite having a policy for two large incinerators to deal with Surrey's domestic waste. The Plan itself is currently under review. Should this policy for two large incinerators become irrelevant, and possibly the idea of much smaller plant be adopted, this operation will be redundant.

It is likely that Government Policy on incinerator size and location is about to change – towards smaller incinerators to meet local needs only, and only to be constructed where recycling targets are being met. Should come to pass, huge incinerators [as proposed here] will no longer be acceptable.

We believe it would be prudent for both SCC and the applicant to wait until these policies are in place. There is plenty of scope for Surrey to improve its recycling rate.

9. Recycling

The proposal includes a MRF and a CA, and recycling targets are quoted in several places. However, there is absolutely no mention of what will be collected, how often it will be trucked away, where to, what the markets for each commodity are, and any contingency plans for disposal should market prices fall. For example, would waste paper become incinerator feedstock?

The fate of this plant depends on recycling rates. Public attitudes to recycling will be consolidated when they see a well-operated and successful MRF. They have to feel confident that their efforts are being taken seriously.

10 Conclusions and Recommendations

10.1 Conclusions

- The Slyfield site in Guildford is not the optimum position in Surrey for an incinerator of this size, generating unnecessary traffic, with accompanying pollution, noise and congestion.
- An incinerator of this size totally contravenes the **proximity principle**
- We do not accept ‘economy of scale’ as an argument to justify a large incinerator.
- No decision should be taken until SCC’s waste plan is settled
- there is inadequate attention given to recycling activities in the Planning application
- as recycling targets are met, over the next 5-10 years, this plant could become unviable
- projections for electricity generation appear ambitious, and out of line with similar plants, which could lead to waste importation to meet power generation targets
- Insufficient weight has been given, in consideration of the access roads, to the fact that Stoke Ward is as much residential area as Burpham
- an access road through the Thames Water sewage works has not been thoroughly investigated
- the application does not take into account GBC’s planning brief for the Slyfield Industrial Estate
- there appear to be no safeguards to prevent any non-domestic waste entering the feed stream to the incinerator
- flue gas monitoring regime and equipment may not be adequate to immediately identify emission levels which transgress statutory requirements.
- The plant building is far too big for its purpose, particularly its roof height
- the Atmospheric Dispersion Model does not inspire confidence, being based on old data taken at Heathrow.

10.2 Recommendations

The proposed EfW plant for Slyfield Industrial Estate should not be given planning permission.

Reasons:

- flouting of proximity principle
- inadequate road system
- non-optimal location
- non conformity to GBC’s planning brief
- non-conformity to Surrey Waste Plan
- non-conformity to Surrey Structure Plan
- unreasonably large building
- other sites are more suitable – eg Charlton Lane
- imminent changes to Surrey Waste Plan, and Government policy for incineration

11 Sources

TWM Application documents
DETR web site
SCC Waste Plan
GBC Waste Plan
Hants CC waste incinerator publications
SELCHP documents
Birwelco documents