

Surrey County Council Eco Park Public Meeting Thursday 13 June

Welcome and Introductions

Richard Hewitt (RH) opened the meeting by welcoming attendees and introducing himself as chair of the Shepperton Residents' Association, who had previously chaired a meeting in November 2010 where the principles of the Eco Park were explained. He further explained that a lot had happened since that meeting and he had been asked to chair this meeting to provide an opportunity for residents to pose questions about the latest proposals for the Eco Park.

RH introduced the Panel:

John Furey (JF), Cabinet member for Environment and Transport and **Ian Boast** (IB), Assistant Director for Environment, Surrey County Council

Simon Martin (SM), Director Waste and Contaminated Land and **Hannah Forbes** (HF), Principal Waste Consultant, Mott MacDonald, waste management technical advisors to Surrey County Council

Gareth Phillips (GP), Planning Manager and **Jorge Hau** (JH), Construction Manager, SITA UK

Neil Bennett (NB), Sector Lead Waste to Energy, **Mike Branch** (MB), Process Engineer – Anaerobic Digestion, and **Sarah Jordan** (SJ), Project Manager, M+W Group, the lead contractors for the Eco Park

He introduced the others present from Surrey County Council, SITA Surrey and Spelthorne Borough Council:

Geraldine Mateu, Environments Project Manager, Surrey County Council

Emma Jordan, Communications Manager, and **Gareth Swain**, Regional Manager, SITA Surrey

John Brookes, Head of Planning, and **Sandy Muirhead**, Head of Sustainability & Leisure, Spelthorne Borough Council

RH explained that a technical meeting attended by a number of those present had been held before and that a due diligence report prepared by Mott MacDonald had been provided to those attending this meeting. He hoped that this meeting had addressed technical questions but would understand if questions this evening touched on technical matters.

RH outlined the ground rules for the meeting. It would finish at 9.30pm and there were forms to complete if not all questions were answered during the meeting. IB and GP had guaranteed that any written questions submitted after the meeting would be answered. Lastly, he asked those speaking to give their name and organisation, if appropriate before asking a question.

Presentations

RH invited to IB to give a presentation outlining the progress to date on the Eco Park and the proposed changes.

IB opened by extending his thanks to people for coming, to Spelthorne Borough Council for hosting the meeting and to RH for agreeing to act as an independent chair.

Conscious that those present would have different levels of knowledge and understanding of the proposals and that people have specific and different interests, he explained his presentation would be brief and the meeting would then move on to questions. The presentation would cover:

- A brief explanation of the Eco Park for those unfamiliar
- What has happened so far and what is to come
- Some changes to the proposals since planning permission was granted in 2012 and why these were proposed
- Next steps for the project

The Eco Park will comprise a gasification facility within the main building to treat 55,000tonnes of mainly household waste per year, an anaerobic digestion facility to process 40,000tonnes per year of food waste from households and a facility to collect and bulk recyclables. There would also be further improvements to the community recycling centre, including the addition of a re-use centre, the first and most significant in Surrey. Lastly, the Eco Park would provide a visitor and education centre.

There are no changes to the specified purpose of Eco Park. The Eco Park is one of a number of facilities that Surrey County Council has for household waste and that SITA Surrey manages on behalf of the Council. These facilities manage in excess of 500,000 tonnes per year of waste from the population.

The Eco Park is therefore part of an overall integrated waste management strategy for Surrey. It is part of a solution that supports the waste strategy for the county. This strategy has been adopted by the 12 local authorities of Surrey, including the districts and boroughs, and is aimed at reducing waste, recycling as much as possible, with an ambitious target of 70% recycling for all household waste, and diverting the remainder away from landfill.

The Eco Park will assist in recycling and deliver one third of the residual treatment capacity required for the county. It is sized for the northern area of Surrey, which is home to approximately one third of the population of Surrey. People ask why build the Eco Park if you want to recycle, however, even if Surrey achieves 70% recycling, it will still need to dispose of 150,000 tonnes per year of residual waste, therefore 55,000 tonnes per year is roughly one third of the county's requirement.

Since 2011, much has happened and the important steps will be explained, some of these will have been visible to all and others not.

March 2012 – planning permission was granted for the Eco Park and is now in place. It has a considerable number of pre-commencement conditions attached to it and the process of satisfying these has commenced and is in process now.

May 2012 – the provider of the gasification technology ceased trading, and it was therefore necessary to review the solution. A detailed re-tendering exercise was undertaken to ensure the technology is as cost effective, efficient and environmentally sound as possible. This took until the middle of this year, and M+W Group has been selected as the EPC (engineer, procure, construct) contractor to deliver the

Eco Park if a decision is made to proceed. M+W Group would supply gasification technology from Outotec and anaerobic digestion technology from Monsal.

An environmental permit was granted during that period, and this will have to be reconsidered and varied with the Environment Agency in the near future.

As part of the process, and a condition of the planning permission, there is a requirement to divert a footpath to the north of site. A public inquiry was held in early April into objections to the diversion of the footpath and the process remains outstanding and will require permission from a planning inspector in the next few months.

With regard to the next steps, Surrey County Council's Cabinet is meeting on 25 June to consider a report that explains the changes to the Eco Park and recommends the adoption of the technologies that will be described tonight. The process by which Surrey County Council will demonstrate value for money and the effect of that on the budgetary position will also be outlined. The latter points will come back to a July meeting of the Cabinet and at that point, if appropriate, the Council will proceed with the Eco Park development. In which case the relevant parties would sign contracts and the existing planning permission and Environmental Permit requirement would need to be varied. The planning and permitting processes are separate and carried out by the county planning authority and the Environment Agency. The footpath diversion application will also need to be approved by the Planning Inspectorate.

If the necessary approvals are granted, then, and only then, can construction work begin on the Eco Park. Planning and Permitting approvals could be in late 2013, therefore construction would commence in 2014 and first phases of waste treatment with the Eco Park developed throughout 2014 and in place by 2015.

In terms of what has changed, artist's impressions of the approved design and the updated design as it will be proposed to cabinet were shown. At first glance, not a lot has changed – the height, footprint and shape are consistent with the consented proposal. The stack height is the same as previously proposed at 49m.

There has been a small reduction in waste volumes going in to the Eco Park and the gasification solution has changed as a result of Ascot's commercial position. It has moved from a batch process to the proposed fluidised bed process.

The headline differences between the two gasification technologies are:

- smaller capacity (reduced from 60,000 tonnes per year to 55,000 tonnes per year)
- The inclusion of pre-treatment, so 45,000 tonnes per year will go through the gasification process - pre-treatment will take out materials to improve the efficiency of the gasification process and remove further recyclables.
- It is a continuous feed process
- There is a single chamber

IB invited GP to give a brief explanation of the fluidised bed gasification process. GP explained that there is a single chamber as opposed to the previous two stage process. Inside this chamber is a bed of sand through which oxygen reduced air is blown creating a suspended bed of sand. Pre-treated waste in the form of refuse derived fuel (RDF) is fed into the chamber. RDF is waste that has been shredded, gone through a trommel, and had metals, fine materials, over-sized items and non-combustible items removed to achieve a more homogenous, uniform fuel. The RDF is heated in the bed to 700 degrees to create syngas. This syngas rises within chamber and air is added to combust the gas. This takes place in a single chamber, with the syngas produced at the bed and further air introduced higher up the chamber to oxidise the gas. The flue gases from this process are extracted, and ash materials fall through bottom of the bed and are collected.

GP also outlined the changes to the anaerobic digestion process, explaining that these are of a more minor nature. The technology provider remains the same, Monsal, wrapped by the M+W Group contract. The changes comprise:

- The addition of an ammonia removal scrubber within the maturation building to remove ammonia in the air in this building. This building receives the digestate, a nutrient rich material, and odorous air will pass through a scrubber, then carbon filters as part of the odour control system.
- The two CHP engines will be the same size rather than one small and one large
- The bund wall around the anaerobic digestions tanks will increase by 1.4m
- A separate transformer compound is being created to control the bunded area, which needs to be 110% the size of the largest tank, so the engines have been removed from the bunded area

With regard to the site layout, the buildings remain the same in terms of size and floor plan. The changes which are the subject of the variation of the planning permission and environmental permit are primarily to the internal arrangements within the gasification building. The waste reception area and vehicle access are the same. Waste will be stored, fed into the pre-treatment area to produce RDF, then gasified. There is space to store up to four days of RDF. The consented air cooled condensers have also changed from 9 small condensers to 2 large condensers, in the same position as before.

With regard to HGV traffic, there is a small impact on trucks to that previously considered and consented in the planning permission. There is a slight increase of four vehicles per day on weekdays and a slight reduction at weekends of six on Saturdays and seven on Sundays. There will still be a large and significant reduction in HGV traffic compared to the site continuing to operate as it does today.

Other changes:

- SITA Surrey is looking at continuing to handle road sweepings at the site.
- An additional sub-station is proposed for a connection to the national grid, so that each facility (anaerobic digestion and gasification) has its own dedicated sub station and if either goes off line, electricity supply can continue from the other sub-station.
- A new workshop facility within the gasification building

IB thanked GP and resumed his presentation. Some of those present may have attended the recent drop in sessions which received 121 visitors over two days. IB thanked those who came and explained that the most common questions at drop in sessions related to:

- Emissions and air quality
- The fluidised bed gasification technology
- HGV movements

Each of these areas was looked at in turn:

Emissions and air quality – Surrey County Council wouldn't seek to develop something that wasn't safe. A permit is required before the facility can be built and operate and recent studies have shown no discernible link between modern waste management facilities and health impacts. Spelthorne is an Air Quality Management Area so emissions levels, particularly for NOX, will be regulated through the Waste Incineration Directive (WID) and NOX emissions will be half the levels allowed for within WID standards. Regulation of facilities is tight and carried out through the Environment Agency, emissions will need to comply with the permitted levels and this will need to be proven through a mixture of continuous monitoring and regular sample audit monitoring, depending on the substance being monitored.

Fluidised bed gasification technology - a considerable discussion had taken place the previous day with a number of those present. It is a solution from very experienced technology providers. The technologies are understood and established across the world. The solution has been the subject of and will continue to be subject to detailed technical assessments.

HGV movements – there will be a substantial reduction from the current operation. The small changes from what has been approved are as a result of design changes. The waste will primarily come from households in Elmbridge, Runnymede and Spelthorne and there will be some access to traders in Spelthorne.

IB confirmed that the footpath will still need to be diverted as the building is on the same footprint. The diversion will be part of the landscaping and creation of an amenity area to the east and north of the site.

RH thanked IB and GP and invited questions from the audience. He asked people not to shout or interrupt speakers and to put up their hands if they had a question. He recognised that it is an emotive subject and said that this would allow people to explain what is happening and the audience to hear what is said.

An audience member introduced himself as a Shepperton resident with a four year old child. He asked why Councillor Furey had opposed thermal treatment in Runnymede but was in favour of it in Spelthorne.

JF explained that the Eco Park was an entirely different operation, whereas the operation proposed for Runnymede and Capel was incineration. This is entirely different, it is here to benefit the operations of Surrey (RH repeated his request not to interrupt speakers) and to reduce costs to residents including

those present. Landfill costs £400,000 per month and it makes sense to return value from waste rather than landfill it.

Councillor Webb, the representative for Sunbury East ward asked speakers not to use acronyms and speak clearly and stated that she didn't know why Spelthorne was lumbered with this.

RH said he was sure the experts understood the need to avoid using acronyms.

An audience member introduced himself as a chartered mechanical engineer with plant design experience, who lived two miles downwind of any poisonous gases, which was his concern. He stated that the Mott MacDonald website referred to a plant described as a waste treatment world beater, which was an autoclave facility in Gateshead that combined equipment in an innovative way. No part of it was proven or robust. Two years later, the plant closed. It stated there were no issues to address to improve operational reliability. He stated that he had queries regarding proveness as no plant has been configured in this way, and that it was when things were combined that things go wrong, and that was his concern.

SM explained that Mott MacDonald had undertaken work for a client in Gateshead for the development of an autoclave facility for 325,000 tonnes per year. This was referred to within the company's website, all parts of the technology involved are proven – autoclave, conveyors, boilers. They worked independently and when put together. There were some odour issues when the plant was commissioned. The plant was mothballed in 2012, and the main reason for this was that it couldn't attract enough waste. It was a merchant plant that had nothing to do with local authority contracts, and was built without guaranteed waste inputs. He was unaware of its current status, Mott MacDonald's work on the project finished when contracts drawn up and it is no longer involved. In terms of a comparison with the Eco Park, there is none and the facility stopped working due to lack of waste.

The audience member queried if this could happen in Surrey as Spelthorne Borough Council was aiming for 100% recycling and there would be little waste left for RDF. He added that changes in demand and regulations needed to be considered.

SM explained that comprehensive waste modelling had been undertaken over 25 years, adding that it was in no ones interest to over produce waste infrastructure, which is expensive to design, build and operate.

IB added that he was not aware of the Borough Council's 100% recycling target, although he would be pleased if they achieved this. Its recycling rate is currently at 40% and the average for Surrey is around 55%. 70% recycling is an ambitious target, and if this is achieved it would make Surrey one of most effective authorities in the country and the world. Even if 70% recycling is achieved, there will still be 150,000 tonnes per annum of waste to be dealt with. It is therefore responsible to consider how to manage the residual waste left after recycling.

An audience member queried how often the carbon filters would be changed and if the area would be monitored as he understood that any dioxins were likely to kill, adding that there were three schools in the area and he considered any dioxins were a danger.

GP explained that emissions from the Eco Park are subject to a technical assessment, air quality

dispersion modelling. This is sent to the Environment Agency and reviewed by them and other statutory bodies. It has to comply with air quality and health regulations. The air quality modelling for the Eco Park is in draft format so SITA know it can progress the proposal further. When finalised, this will be submitted to the Environment Agency who will check the model and they are likely to run their own to check its veracity. The draft model shows that dioxin emissions are 0.19% of the tolerable daily intake so well within acceptable levels.

The audience member replied that he had asked if dioxins were poisonous, he considered them to be, therefore felt his question hadn't been answered.

GP apologised if his answer had been unclear and explained that the figure he had given was specific to dioxins, which are naturally occurring materials. The Eco Park will not be the sole source of dioxins, and will be well within permitted levels. This will be independently verified by the Environment Agency and the Health Protection Agency.

The modelling will be made available when the applications to vary the planning permission and environmental permit are made. The assessment looks at tolerable daily intakes to address the build up issue and that is an established method of assessing dioxin levels.

An audience member introduced himself as a Shepperton resident of 15 years with three young children who will drink water from the reservoir. He complained that in the introductory presentation, the top part of the chamber and the chimney had not been not shown. He claimed that at dose rate, the facility would be over the 100% limit in under two years. He was concerned about the build up of dioxins and water pollution that would affect south and west London. He also asked if any modelling on fume plumes had been undertaken as he worked for the emergency service and dealt with toxins on daily basis and suggested plume planning was needed for environmental and life protection.

GP explained that there are three aspects to air quality assessments – background air quality levels, process emissions and weather modelling. This provides information on current air quality, trends in recent years, what's proposed and what happens to emissions when they come out of the stack, to produce a pollutant model. This is part of the air quality assessment and will need to be independently verified when the applications are made.

With regard to concentrations and uptakes, a human health assessment is also undertaken. The tolerable daily intake relates to gradual build up and potential accumulation and assumes a level of exposure to ensure it can be demonstrated that there is no level of unsafe build up. This assessment shows all emissions are well within the legislative guidelines, which are independently set and the emissions will be monitored for compliance.

An audience member explained that he supported the previous statement on future recycling levels. He stated that there are many energy from waste facility in European countries that have 95% recycling and these import fuel from us. He therefore considered 70% to be easily achievable with reasonable effort.

SM replied that in much of his work in Europe, 70% is still the maximum for kerbside recycling, including

in the Flemish part of Belgium, that is one of the best performing areas and here there is still residual and commercial waste that needs to be disposed of. He didn't anticipate any likelihood of lack of waste in this instance based on his experience.

An audience member introduced himself as a parent of two children living within a short distance of the plant. He had three questions. He considered that the Eco Park was ground breaking, the first of its kind, with no facility like this to treat household waste and in the context of this and the fact it was dealing with a relatively large number unknowns, he asked which entity carries legal liability in the event of unforeseen consequences in 10 – 15 years time. He asked if there were any insurances against this liability and stated that history shows large liabilities of many millions are needed if something goes wrong. He asked how much money was available for this and considered that the history of gasification and small energy from waste plants was poor, citing the environmental problems of the previous technology at the Isle of Wight and at Dargavel.

JF commented that he had spoken at length with him on this subject at the drop in session on Saturday and had given him his contact details so that the audience member could send his details and receive a written reply. He was still awaiting contact details for the audience member and will give full, transparent, written answers to his questions if these are received.

GP explained that he had no information with him on insurance he could provide today. He further explained that the Eco Park will deal with known inputs, known and established processes, and known emissions treatment and monitoring techniques, underpinned by independent monitoring. It will need sign off from the Environment Agency before it can operate. Waste management is regulated by the Environment Agency and the facility needs a permit in order to operate. SITA is liable under the permit for the operation of the facility and in terms of what comes out of the stack.

The audience member stated that monitoring emissions was a challenging science and asked if SITA would allow a qualified independent body to carry out spot inspections without warning.

GP explained that the Environment Agency will do this and that its checks are a matter of public record.

The audience member asked if it were practical to provide real time emissions monitoring data and if so, if this could be provided so that if there were an abnormal event, which he considered would probably happen, there would be a real time warning.

GP explained that he was not an IT expert and couldn't comment on the practicalities of making this information available in real time. SITA will publish the CEMS reports (continuous emissions monitoring) online but he was not sure how soon this is made available and undertook to take the question away.

An audience member commented that the Mott MacDonald report stated many times that information was not available or couldn't be tested. With regard to syngas monitoring, it commented that this was expensive and was not sure if it will be done. She concluded that the due diligence was a whole pile of holes and didn't understand how it could be the basis of a cabinet report. She added that it was worse than the report for the previous gasifier.

SM replied that he found the comment somewhat disingenuous. A large amount of due diligence had been done by SITA and by M+W Group. The Mott MacDonald report was high level and based on

proposals submitted by SITA. It was wrong to say that a decision would be taken on the basis of this review. Site visits were undertaken and available documentation reviewed to compile the report. The report also said where some information wasn't available and therefore Mott MacDonald didn't comment as it won't comment on something it has not seen, witnessed or observed.

If Mott MacDonald were asked to follow up on anything, it would do so and it would undertake additional work if asked to do so.

An audience member introduced himself as a resident and CLG member, he commented that IB's opening comments has said it was all proven technology. At the technical meeting it was agreed that this combination of technologies hadn't been used on household waste. He therefore considered that the mix of technologies was not proven and it didn't matter if the Environment Agency or the Health and Safety Executive said it was safe. The aviation and nuclear industries all had serious disasters involving equipment passed as safe by regulators. These were catastrophic accidents involving big names. He questioned how an untried and untested incinerator could be built in a residential area.

NB explained that M+W Group go through series of scrutiny panels before offering a substantial financial guarantee for the performance of plant. The process is commercially confidential but M+W had independently verified the information provided, employing a professor of power engineering in Stuttgart. He added that the Eco Park would be built to a specification and would need to comply with planning and permitting conditions. M+W Group would not be prepared to place the amount of financial risk proposed under the contract unless it was satisfied with the technology.

Under the proposed contract testing methodology, before the facility is handed over from M+W Group to SITA, M+W must prove it can meet the emissions limits discussed this evening, and if it doesn't, it fails and won't progress from that point.

The audience member asked if M+W would be responsible for installing all of the equipment and ensuring it works.

NB confirmed that is M+W's role, and it could be described as integrator, as it is there to ensure all elements of the facility work together.

JF added that all elements of the proposals operate elsewhere, but not together in one location. There are more than 100 facilities using fluidised bed technology and several similar facilities that operate in the same way as the one proposed but that use different types of fuel. These are in the US and Canada and use wood residue and waste products from the paper industry. He accepted that the three items were being brought together for the first time, but was confident they would work.

An audience member asked for the names of other fluidised bed facilities used to treat RDF and which of these were close to homes (within 800m).

An audience member introduced herself as a resident of Lower Sunbury. She couldn't tell the difference between the artist's impressions. She thought that the Eco Park appeared to be hidden by trees and a duck pond, and suggested that was the reason for its name. She asked where the technology is proven to work safely and the proximity of these facilities to homes and she thought it

would be inappropriate to build something untried close to homes.

GP explained that fluidised bed gasification is used for a variety of waste fuels mainly from industrial sources – some of these are not very burnable, some are very burnable. The Eco Park introduces RDF, which is a known element of UK waste. A lot of RDF is produced in the UK now and combusted. Fluidised bed gasification has been used for a number of years. So the Eco Park will introduce a different fuel source, and is doing so now as it was previously not economic to do so as without tax landfill was always a cheaper option. There are facilities elsewhere in Europe that treat RDF using fluidised bed combustion, which is a similar process to that proposed, with different oxygen levels.

A number of these facilities operate within 1km of residential housing. It is not a unique situation to build facilities in close proximity to housing. SITA operates a large energy from waste plant in Kirklees, similar to the one at Colnbrook, within half a mile of the city centre,

The audience member asked if GP lived close to one of these facilities.

GP explained that he didn't but that he had lobbied his local councillor to introduce a similar plant in his area as he considered it to be a good solution.

The audience member considered that the artist's impressions made it look as though the Eco Park was in the countryside, which is where she thought it should be built. Not in Surrey and not in Middlesex. She was concerned that undesirable materials could get through the pre-treatment process and asked for reassurance.

GP explained the pre-treatment will include an eddy current separator to remove non ferrous metals, and a magnet to remove ferrous metals. He added that the aim of pre-treatment is to remove materials that are not combustible like glass particles, stone and concrete that end up in household waste. This is to protect the gasifier and create a more uniform material to ensure it flows through fluidised bed more freely and easily.

RH asked if of the 55,000 tonnes per year of waste delivered to the gasification facility, 10,000 tonnes would be removed by pre-treatment.

GP confirmed this was correct.

An audience member asked if the quality of the pre-treatment formed part of M+W's guarantee.

NB confirmed that it did and clarified that the whole facility is part of their guarantee.

Councillor Robert Watts asked for the level of the parent company guarantee.

NB explained that it would be 100% of the contract value, which he could not confirm as this was being finalised. GP added that the contract value has yet to go before Surrey County Council's cabinet for an initial decision and remains commercially confidential.

Councillor Watts disagreed, he queried why pay for something that doesn't work, and did not consider the information confidential or his request unreasonable.

IB explained that the contract details have yet to come before the cabinet but that the basic position of who pays and when is that, until the facility has been commissioned, Surrey County Council as purchaser through its contract with SITA, would not be liable for the cost of plant.

NB added that he couldn't confirm the contract value at this stage, this is a matter for SITA Surrey and Surrey County Council. SITA and Surrey County Council have carried out due diligence to confirm that M+W have the financial credibility to stand behind its guarantee. He explained that at the company's last accounting date, M+W Group had a 2.6bn euro turnover a 350m euro cash position and, significantly, no debt.

An audience member asked for an explanation of a high level review and if there were other categories of review.

SM explained that there are different levels of reviews that can be carried out. A fatal flaw review or high level review aims to ascertain if there is any significant reason that any plant would be fatally flawed. A detailed technical due diligence review is often the next stage, which looks at waste feedstock guarantees etc. Mott MacDonald did not carry out a full scale, detailed review, for this project and was not asked to do so. It carried out a high level review based on site visits and a review of documentation

HF gave further detail, explaining that it was a review of the documentation provided by SITA UK and a site visit to a reference facility using fluidised bed combustion on residual waste with a relatively similar gas clean up system, but with fewer stages. This was the quickest way to obtain the most information about the technology. Mott MacDonald visited a fluidised bed combustion facility in Bergamo and a pre-treatment plant in the UK.

The audience member asked if Mott MacDonald would be prepared to carry out a further review if asked by Surrey County Council and if the current review was adequate for the council's cabinet to make fully informed decisions at its next two meetings.

SM explained that the report carried out for Surrey County Council by Mott MacDonald was not the only report, and that a lot of due diligence had been done by SITA and M+W Group prior to it.

JF explained that the first report would be before the cabinet on 25 June and that it would be available the following afternoon. He added that it laid the ground for the cabinet to understand where the Eco Park had come from, where it was at and where it was going and that cabinet members could request more information if they wished. A further decision would be taken at the July meeting, which would consider the financial aspects known to all at that point.

An audience member asked what the feedstock for the facility would be and what it would consist of apart from nappies. She added that she'd listened to a Dash for Cash programme on Radio 4 in February where she'd heard about a technology promoted by Advanced Plasma Power that has zero emissions. This was a combination of a gasifier and a plasma convertor that creates a clean gas and vitrified particulate and does not produce any dioxins as no oxygen is involved in the process. She queried why this wasn't being employed at the Eco Park.

HF stated that Advanced Plasma Power's design capacity was far larger than Surrey's requirements and that it was not interested in facilities accepting less than 150,000 – 170,000tonnes per year. Also, plasma has yet to be financially viable as a technology for residual waste due to the high power requirements and high temperatures involved.

GP added that SITA had spoken to Advanced Plasma Power and had chosen not to bring its technology forward at Charlton Lane.

The audience member suggested that Advanced Plasma Power had said its plant was more compact.

SM cautioned not to always believe radio broadcasts, adding that some technologies were regarded as blue sky thinking. With regard to the plasma technology, it was not commercially viable at low tonnages, was not proven with the plant working in Swindon since 2006 still only a reference plant, and there were no contracts for this technology. He added that he had been to Canada to carry out due diligence on a plasma plant, from desk research it had looked viable but on visiting it he discovered that it was only processing 4,000 tonnes per year. He concluded that if people were concerned about gasification, he thought it likely that they would be more so about plasma technology.

The audience member asked what's left after recyclables have been removed and what happened to sofas and mattresses.

GP explained that a significant proportion of organic and food waste has moved out of the residual waste stream already so RDF consists of the remainder of what is left in a wheelie bin or black bag. This is shredded, over sized materials, fines and metals are removed and what remains is a lighter material containing a small amount of organic material. RDF is what you would see if you were to look inside bin, chop up the contents, and remove any plastic and metals.

GP further explained that bulky items are dealt with separately, with some of parts of them shredded down. So you still end up with cardboard, paper, plastic film and textiles in the bin.

GP used pizza packaging as an example, explaining that although cardboard can be recycled, due to contamination from the pizza, the cardboard would be not readily recyclable, nor the plastic film.

A local resident introduced herself as from Lower Sunbury. She asked if the Environment Agency had experience of monitoring a similar facility and commented that it couldn't operate its flood line facility that had been in place for years.

GP explained that he couldn't answer for the Environment Agency but explained that it regulates environmental permits relating to all waste facilities and industrial processes and that it is the statutory regulator for industrial emissions and waste management facilities.

RH asked if the changes to the Eco Park would need to obtain a permit from the Agency. GP confirmed that the Agency would need to approve variations to the permit for the Eco Park to operate.

The audience member said she would like to know what department of the agency to contact if there are concerns as she lacked confidence in it due to poor experiences with the Agency's flood line.

GP explained that initial contact would be through the area office, and the Agency has a separate national centre for permitting activities and air dispersion modelling.

An audience member introduced himself as a Wootton resident. He expressed concern that there would be two items of equipment in the building, with one that burns at high temperatures next door to an anaerobic digestion plant that produces methane gas. He queried how this would be addressed and what would happen if there was a gas leak next to the plant burning at high temperatures.

MB couldn't confirm the precise distance between the anaerobic digestion facility and the gasifier but could confirm that it was substantial. He added that the gas wouldn't be compressed, and would be produced at a rate of 800m³ per hour. There would be some buffering capacity, and it would be scrubbed then fed into the two CHP engines. M+W Group will look at the potential for leakage and deal with this in same way as they do at other plants.

The audience member asked if MB was sure that methane wouldn't get into contact with the high temperature gasification.

MB confirmed that he was.

The audience member asked if ammonia was an issue.

MB explained that the ammonia issue had been taken out of context, adding that ammonia was a by product of the digestion of any protein material and that food contains some ammonia. It is present in small quantities in biogas (200 parts per million), this will be scrubbed out and turned into ammonium sulphate. The air from the facility will also be scrubbed before it is released. The amount of ammonia would be very small, there would be no liquid ammonia or high concentrations of ammonia. In conclusion he confirmed that he was not concerned by the proximity of the anaerobic digestion process to the gasification facility.

GP added that in terms of safety reviews, there was a staged process of reviews from concept design through to detailed design prior to construction. Some of these reviews have already taken place, others would follow. The whole series of safety reviews was allied to this in terms of HAZOP and HAZAN. He emphasised that the audience shouldn't assume that the process of safety reviews was finished, adding that reviews would continue up to construction to ensure that concerns, which are concerns for SITA which will have personnel on site, would be addressed.

An audience member introduced himself as a member of the community liaison group and Lower Sunbury Residents Association and a chartered chemical engineer with experience in the oil industry as a HAZOP co-ordinator and part of team looking at accidents. He said that he was amazed at how human ingenuity could get around safety standards and design and that human failure was the greatest danger factor in plants and could not be designed out. He had learnt over the years that the only thing that would guarantee safety was to put distance between yourself and the idiots running the plant. He commented that the Eco Park was a unique situation as a combination of anaerobic digestion and gasification, next to a community recycling centre with men women and children running around, and suggested that they would be exposed to high temperatures, steam, gases and only separated from these by a thin layer of aluminium shutters. He added that there was nothing worse than seeing someone who had lost 60% of their skin or lying in a ditch gassed by hydrogen sulphide. He commented that the gold standard for gasification plants had been drawn up by an intelligent European organisation; this emphasised safety and insisted on distance, with the

administration building a minimum of 200m away from the plant. He questioned why the Eco Park design persisted in having offices and an education centre in the same building as a gasification plant.

GP explained that SITA was in discussion with the Health and Safety Executive on this precise aspect of the plans and that reviews to date had taken into account the safety of site staff and members of the public, both inside and outside of the site, including at the community recycling centre and visitor centre. These reviews have not concluded and will continue, working through the 'what if' scenarios, and discussions with the Executive will continue.

An audience member introduced himself as a resident from the south coast who was concerned about the future of his grandchildren who lived locally. He gave an example from 2004 of an incinerator at Karlsruhe in Germany that had suffered an explosion resulting in cyanide contaminated waste water and the use of its emergency gas release vent. He asked what evacuation procedures were in place, how fly ash from explosion would be dealt with and if there was any real emergency plan to deal with a disaster that many feared was inevitable.

GP repeated that safety reviews were ongoing and that whilst there was no emergency evacuation plan at this point, there would need to be one, and that its production was part of this review process.

Councillor Richard Smith-Ainsley stated that he shared residents' concerns about a combination of technologies that he considered was not tried and tested. He stated that in March 2012 Surrey County Council wanted to treat 60,000 tonnes per year and a year later that had reduced to 45,000, representing a 23% reduction. He added that 6% would be trade waste, which hadn't been mentioned in the leaflet and should've been. He asked why a reduced amount of waste would be diverted from landfill, how widely advertised the original initiation to tender had been, if Outotec had the opportunity to participate in this and if it had, why it had been rejected.

IB explained that the County Council had asked SITA to provide solutions that met its specification, that were consistent with the waste strategy, requiring gasification to be sized at a particular level.

Proposals were submitted to SITA, M+W Group proposed Outotec technology and its design was based on a 55,000 tonnes per year model which included pre-treatment. The proposal was therefore within the upper limit of 60,000 tonnes per year. He added that it was specifying a solution for part of the waste from a part of Surrey and was considered a favourable solution.

GP explained that the original invitation to tender had been promoted within the waste management industry and in *The Surveyor* magazine. Outotec had not been part of the bid process in round one and at that time Outotec had not purchased Energy Products of Idaho. NB added that he couldn't account for the original procurement as he had not been involved, nor had M+W Group, nor Outotec as the owner of the long established Energy Products of Idaho.

NB offered to explain how M+W Group had approached the tender as an opportunity. There were limits within which it had to work, one was an upper limit of 60,000 tonnes per year, and another was a specification for the type of waste. It looked at these limits and matched them with technologies that it considered to be proven, reliable, that it was prepared to guarantee and was the best fit. In M+W Group's view, it thought pre-treatment was needed to remove non-combustible items. The best fit was 55,000 tonnes per year as opposed to 60,000 tonnes.

Councillor Smith-Ainsley asked if the site had not been the right size for 60,000 tonnes per year, adding that he had been led to understand that Surrey had only looked within the UK for the first procurement but would think it should have looked more widely.

GP explained that the adopted Surrey Waste local plan, the strategic plan for the County, was not technology specific nor did it allocate specific amounts of waste to each site. The Joint Municipal Waste Management Strategy was a different document that indicated how Surrey will achieve 70% recycling and mentions Charlton lane and a capacity of 60,000 tonnes a year. The purpose of Charlton Lane was to deal with residual waste from three boroughs; it had been sized that way before and was now. The 5,000 tonnes per year reduction in capacity means that less locally sourced trade waste will be treated at the Eco Park but it still meets the needs of the three boroughs at 70% recycling.

He added that SITA's parent company is French and operates world wide, giving it global experience and knowledge.

Councillor Webb stated that the borough feels poorly represented at county level and asked how it can ensure that intelligent and articulate questions will be treated in a meaningful consultation. She added that the cabinet report published the following day would ignore the evening's discussion and asked how the panel would reflect what it had heard and how that would make a difference.

JF commented that the county level representation for Spelthorne is entirely down to the residents. If residents felt badly represented, they should contact their county councillors, adding that anyone could come to a cabinet meeting and speak. He explained that the purpose of the initial report was to detail the project's history, its current status and what was proposed, adding that the process had been going on for 3 ½ years, and that many councillors were not residents or representatives of Spelthorne. He assured the audience that people's comments had been noted, as had the comments received the previous evening and that responses would be provided to questions. Where comments were deemed viable, they would be included in the report.

He concluded that residents' comments would and had been recorded by Spelthorne Borough Council, Surrey County Council and SITA officers giving three accounts of the discussion. Residents were being listened to. The county council had a concern and a legal duty to ensure that due diligence is carried out and was convinced it was safe to move forward.

Councillor Webb replied that the borough was well represented by its county representatives but that they represented a minority at votes. She concluded that the county council didn't represent Spelthorne.

RH invited Councillor Richard Walsh, the local division member to speak. Councillor Walsh explained that he hadn't been intending to speak, but wanted to reassure residents that he and Councillor Tim Evans would be at the cabinet meeting and would ensure the views expressed were taken into account at the meeting. He undertook to put residents' view point and try to convince other county councillors that there shouldn't be a gasification facility here in Spelthorne.

RH added that the meeting was being recorded by EJ from SITA and that the note would be made available and that JF would ensure questions were noted and responded to.

GP added that local members had been very active in conveying messages of public concern to SITA regarding the Eco Park and the operation of the existing site. With regard to public consultation, there will need to be an application to vary the planning permission that would be subject to statutory public consultation; similarly the application to vary the permit or for a new permit would be subject to consultation.

An audience member asked if Surrey County Council had used statutory powers to carry out any surveillance on Shepperton residents as part of the Eco Park. He added that he had never heard of the project until the previous week. He was concerned about security and the potential for a public backlash when more people find out about the project.

JF confirmed that the county council had not been spying on people. He added that the project had been going on for three and a half years, and from the evening's attendance, the council knew that people have been informed.

An audience member said that she had heard about the project in the Surrey Herald for the first time that day and lived in Lower Sunbury.

RH commented that people hadn't received the leaflet and that he didn't know where the 11,000 leaflets had gone, adding that there were 100,000 residents in Spelthorne.

An audience member commented that the proximity of the community recycling centre to the gasification facility had been raised multiple times by a resident adding that he considered it unacceptable to say now that safety was subject to review. He asked if ongoing safety reviews would inform future debates. He queried the use of the word modelling, asking if computers were used in place of common sense. He asked if modelling was going to be installed or worked through and if it would be a neutral modelling system or one that took into account the Air Quality Management Area.

GP explained that the model would take into account existing background air quality across the borough and at points close to the site. It would use air quality data from Spelthorne Borough Council and would take into account the Air Quality Management Area. It would also take into account all developments that have permission in the local area that could have an impact. The Environment Agency would scrutinise the model and run its own model.

JF confirmed that the July cabinet report would include a summary of the feedback from the technical meeting and public meeting and would incorporate comments where required to do so.

An audience member suggested the report to the June meeting should wait another few days to include the comments.

JF explained that the council had to put into the report into the public domain the following day by law. The report would therefore not take into account the drop in sessions or that week's meetings.

Councillor Watts asked if JF could make a verbal report at the meeting so the cabinet would be fully versed in the feelings of local residents.

JF said that whilst he was pleased that Councillor Watts trusted him to give a verbal report, he would prefer to be fully transparent and give written report at the July meeting.

An audience member introduced himself as a Shepperton resident for over 50 years and asked why this was proposed for the area. He claimed to have kept Energy from Waste out of Charlton Lane for 16 years and asked why it was the dustbin of Surrey. He said that he still didn't know where a fluidised bed gasification plant was and what problems had been associated with it. He described it as an unproven technology with huge problems associated with it, adding that toxins and PM2.5s had not yet been addressed, nor the Air Quality Management Area, nor the huge amount of housing nearby. He added that there were no Spelthorne members on the county council's planning committee, and that it needed to get members on that committee or get a Spelthorne member to speak at committee.

RW explained that a local division member, Ian Beardsmore, was on the planning committee and would speak at the meeting.

An audience member questioned the credibility of the process and the people involved. He suggested that Surrey county councillors had said that the previous design for the Eco Park was safe and proven, but that we were here because it wasn't and it isn't. He said that there was no waste gasification plant in world and that residents didn't need novel, they needed proven and safe. He claimed that it was untrue the Eco Park would save money and that gasification gate fees were higher than landfill. He said that this was no different and that as there would be no syngas process output, it would not be a real gasification plant, rather it would be an energy from waste plant pretending to be gasification. He added that it was less well understood than energy from waste. He suggested that the council could produce fuel at Charlton Lane to send to under fuelled energy from waste plants around the country. He said that the Eco Park was experimental, and therefore may not work or be safe. He asked how he could trust the panel and what detailed evidence the county council would provide to demonstrate that the Eco Park was the best and safest waste treatment for Surrey and the environment, before a plant was built.

JF commented that the audience member was implying that all of the panel members were wrong.

The audience member claimed to have been told things in the past that were untrue so queried why he should believe the panel now.

An audience member referred to burning and discharge through stack. He claimed that there was no description of the risk of poisons of acute toxicity if the plant should fail. He asked how this would be handled and detailed and how far downwind it would be necessary to evacuate if there were a massive discharge of unfiltered gases.

GP explained that this 'what if' scenario, would have to be taken into account in the permit and that SITA were still processing this information so it wasn't available yet.

The audience member claimed that the Department of Health had recently commissioned a study to review evidence on the health impacts of energy from waste that was due to report in 2014. He queried what would happen if this showed a higher rate of birth defects around such facilities.

GP thought that this was a part of an ongoing 5 yearly review of previous research as opposed to new research.

RH closed the meeting. He asked if those present thought it has been a good opportunity to answer questions and if any would like another meeting. On a show of hands he said that many felt it hadn't been a good opportunity and wanted another meeting. RH explained that any questions submitted on the forms provided would be answered.