

Surrey County Council

Surrey Waste Local Plan

Types of Waste Management Facilities: An
Explanation Note

January 2019 v.2

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January 2019	14.01.2019		
January 2019 v2	21.01.2019	Updated site description of Charlton Lane Ecopark in Appendix 1.	Correction of wording.

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1. Executive Summary

- The National Planning Policy for Waste (NPPW) states “Waste planning authorities should identify, in their Local Plans, sites and/or areas for new or enhanced waste management facilities in appropriate locations”.
- The purpose of this explanation note is to provide a clear, non-technical summary of different types of waste management facilities and the need for suitable land to accommodate waste related development.
- Appendix 1 gives examples and further detail on the types of waste management facilities and the likely impacts from these types of waste management facilities.

2. Introduction

2.1 Policy Context

2.1.1 EU Waste Framework Directive (2008/98/EC)

- 2.1.1.1 The Waste Framework Directive (WFD) requires the council to apply the waste hierarchy when planning for and considering options for waste management. The waste hierarchy promotes the prevention of waste and, where this is not possible, requires that waste materials should be reused, recycled or recovered where possible. Landfill is regarded as the option of last resort. The WFD also advises that the council must have regard to principles of 'self-sufficiency' and proximity. This places responsibility on communities to manage their waste including making provisions for sufficient capacity and ensuring facilities are suitably located.

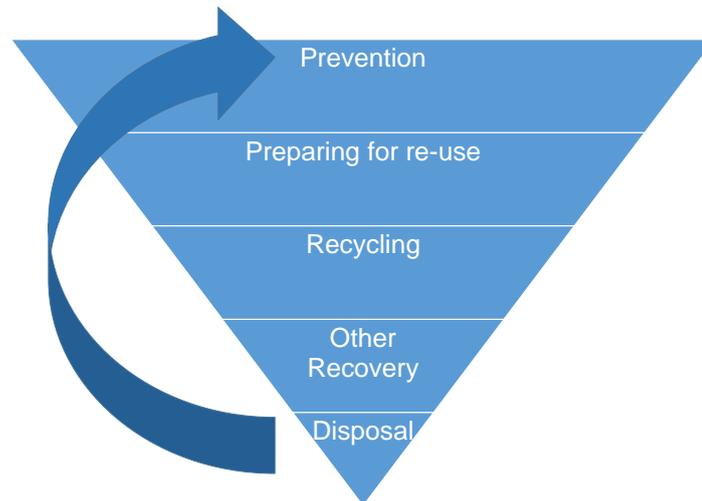


Figure 1 Image of the Waste Hierarchy

- 2.1.1.2 As set out in the Waste Hierarchy, Other Recovery includes Energy from Waste (EfW), anaerobic digestion (AD) and processes including gasification and pyrolysis which can produce energy. As such it has been prioritised according to the waste hierarchy, however, this report has separated to Energy from Waste from Other Recovery to provide more information.

2.1.2 National Planning Policy Framework (NPPF) 2018

- 2.1.2.1 The NPPF includes a presumption in favour of sustainable development, with local planning authorities to 'positively seek opportunities to meet the development needs

in their area whilst ‘minimising waste and pollution’¹. The NPPF encourages local plans to be kept up to date and relevant.

2.1.3 National Planning Policy for Waste (NPPW) 2014

- 2.1.3.1 The NPPW sets out the Government’s ambition to work towards a more sustainable approach to resource use and management. The NPPW provides specific guidance on plan making for an evidence base, identifying specific waste management needs and identifying suitable sites.
- 2.1.3.2 The NPPW advises Waste Planning Authorities (WPAs) to identify the broad types or types of management facilities that would be appropriately located on the allocated site. It advises WPAs to not be overly specific with types of technology when identifying these facilities as new technology may come forward in the future.

2.2 Role of Waste Authorities

2.2.1 Role of the Waste Planning Authority (WPA)

- 2.2.1.1 As the Waste Planning Authority (WPA) for Surrey, Surrey County Council is required to produce a ‘Waste Local Plan’. The new Surrey Waste Local Plan (SWLP) will cover the period from 2018 to 2033. The SWLP will help to ensure that there are enough waste management facilities in Surrey and that waste is managed in a way which is best for the environment, for communities, and for the economy, in other words in the most ‘sustainable’ way, over the period of the plan.

2.2.2 Role of the Waste Disposal Authority (WDA)

- 2.2.2.1 The WDA is responsible for the collection and disposal of Surrey’s municipal and kerbside waste as well as recycling from CRCs. Surrey currently has 15 Community Recycling Centres (CRCs) where household waste can be taken. Recycling centres used to be known as rubbish tips or dumps. The WDA manages the CRCs as a service for Surrey residents.

¹ UK Government, National Planning Policy Framework (2018)

2.3 Surrey's Need for New Waste Management Facilities

2.3.1 Overview

- 2.3.1.1 In preparing the new Waste Local Plan, a 'capacity gap' between the quantity of waste that will need to be managed in different ways and ability of existing facilities to do this has been identified. It is estimated that over the period of the plan somewhere between three and six new facilities will be needed to ensure Surrey can manage its own waste. The actual number of facilities will depend on the scale of the new waste management facilities which come forward through planning applications. One larger site may provide more capacity than two smaller ones.
- 2.3.1.2 The current 'capacity gap' is for facilities that manage waste that cannot be recycled. This is called 'other recovery' and can include facilities that process the waste to make fuel or use heat to generate energy from the waste such as through incineration. Most of Surrey's waste that is not recycled is currently sent outside Surrey for treatment to neighbouring authorities or abroad.
- 2.3.1.3 If it is shown that more waste can be recycled instead of managed by 'other recovery' methods, then proposals for recycling development would be supported as this would allow waste to be managed further up the waste hierarchy.
- 2.3.1.4 There is also need for construction, demolition and excavation (CD&E) recycling facilities. In order to meet the gap for CD&E waste the Plan includes a policy that encourages CD&E recycling in suitable locations such as existing minerals sites. Site allocations are included in the Aggregates Recycling Joint Development Plan Document and these will be reviewed as part of the review of the Surrey Minerals Plan and not as part of this Waste Plan.
- 2.3.1.5 No new landfill sites are proposed but depending on how much extra waste and recycling capacity is developed there may be a need for some landfill capacity at the end of the plan period.

2.3.2 How we might meet this need

- 2.3.2.1 **Suitable Sites or Areas:** Areas of Search are identified within which there may be sites where waste treatment would be suitable in principle. These are existing or proposed industrial estates. There may be other suitable sites which unexpectedly become available and have therefore not been specifically identified in the Plan, including previously developed land.
- 2.3.2.2 **Site Allocations:** Identifying specific sites or 'allocating' sites is one way to meet future waste management needs.
- 2.3.2.3 **Facility Extensions:** Some authorised waste management facilities may have the potential to increase capacity by extending or refurbishing current facilities.

3. Types of Waste Management Facilities

3.1 Overview of different waste management facilities

3.1.1.1 A number of different types of waste facilities are required to manage varying types of waste. These facilities have different scales, visual impacts, noise levels, treatment processes and location requirements. Examples of the different types of recycling facilities located in Surrey and wider South-East England are located in Appendix 1.

3.2 Construction, Demolition and Excavation (C, D & E) Waste Recycling

Process Description	
Materials Processed	C, D & E waste mostly comes in the form of bricks, concrete and soils.
Description of process	<p>A number of processes can be used in the aggregates recycling process. Processes vary depending on the nature of material, desired recycled product and quality of recycled product.</p> <p>Screening – materials are separated into different sizes/grades and unwanted/contaminated materials (metals, plastics, paper) can be removed.</p> <p>Crushing – associated with hard inert materials. Once crushed material is then screened to produce secondary aggregates.</p> <p>Washing – used to remove fine cohesive materials. Material produced can be used for asphalt and concrete production.</p>
Siting Criteria & Characteristics	
Site Size	The working area of a C, D & E recycling site is generally around 1.0-1.5 hectares. This would include all site machinery, ancillary buildings and stock piles of aggregates. At former mineral workings C, D & E recycling sites may be part of a much larger site area.
Land Use	<p>In Surrey a large amount of C, D & E recycling facilities are located on former minerals sites.</p> <p>Other acceptable land uses include industrial areas, degraded lane and rail depots.</p>
Site Activity	<ul style="list-style-type: none"> • Sites generally have a throughput of between 50,000-150,000 tpa. • HGV movements are relatively high.

	<ul style="list-style-type: none"> Permitted hours for site operations are usually 0800-1730 Monday to Friday.
Benefits	
	<ul style="list-style-type: none"> Reducing demand for primary aggregates and the environmental benefits this brings (less need for new quarries). Reducing the amount of waste that is unnecessarily sent to landfill. Aid mineral site restoration. Provide a local source of aggregates.
Environmental Issues & Mitigation	
Noise	Sites have the potential to cause disturbance. Issues can be mitigated by locating facilities away from communities, using smart site layouts and new quieter machinery.
Traffic Impact	<p>Impacts can be mitigated by placing limits on vehicle movements and locating facilities close main roads.</p> <p>One alternative is rail aggregate depots that recycle C, D & E waste.</p>
Other Issues	Dust has the potential to be an issue but can be easily mitigated.

3.3 Community Recycling Centres (CRC)

Process Description	
Material Processed	Community Recycling Centres (CRCs) receive household waste including garden waste, oversized items, timber and electrical appliances.
Description of Process	CRCs can be single or double levelled with either ramps up to skips or skips below a raised level. Waste is removed by HGVs to be processed elsewhere, with separate access and areas for the public and waste collection vehicles being preferable. CRCs are usually outdoors but some modern facilities are indoors.
Siting Criteria and Characteristics	
Site Size	0.5-1.0 hectare (can be larger with ancillary facilities like waste transfer stations and material recovery facilities).
Land Use	Suited to industrial land use but also areas that are convenient for residents to travel to.
Site Activity	<ul style="list-style-type: none"> • Throughput of 5,000-20,000 tpa (not including transfer or recovery). • At smaller facilities around 150 car movements with 4-6 HGV movements (busier at weekends). • Operational hours usually 0800-1730 – All year round (except certain bank holidays).
Benefits	
	<ul style="list-style-type: none"> • Allows a range of materials to be recovered. • Reduces the amount of waste going to landfill. • Minimal sorting required due to segregation at site. • Provides facility for residents to recycle rather than dispose.
Environmental Issues and Mitigation	
Traffic Impact	<p>Sites attract a large number of cars especially on weekends and bank holidays which have the potential to cause congestion. Sites must be able to accommodate these cars via queuing lanes or maximising parking spaces to avoid queues on public roads.</p> <p>HGV movements do not have a significant impact.</p>

Noise	Noise impact can result from vehicle movements and waste depositing into skips. These can be mitigated by the careful location of sites, noise screening and locating noisy activities away from sensitive receptors where possible.
Other Issues	Litter is a potential impact but can be mitigated through the covering of skips and not letting them overflow.

3.4

3.5 Waste Transfer Station (WTS)

Process Description	
Materials Processed	All types of material.
Description of process	<p>A Waste Transfer Station (WTS) receives waste from producers including industry, commerce and the general public which is then bulked up and transferred on for treatment or disposal.</p> <p>The aim of a WTS is to reduce the cost and environmental impact of transport. This is normally achieved by transferring waste from a large number of smaller vehicles to a small number of larger vehicles.</p> <p>A WTS for Local Authority Collected Waste (LACW) would normally consist of waste being delivered onto the floor of a building or into bays, inert waste may be dealt with outside. Waste will usually only stay at a WTS for a couple of hours. WTS are often co-located with CRCs and Material Recovery Facilities (MRFs).</p> <p>Many skip hire facilities come under this category as they receive waste before sorting and sending it for processing in larger quantities.</p>
Siting Criteria and Characteristics	
Site Size	0.5-1.0 hectares.
Land Use	Suited to industrial land uses and land adjacent to existing waste facilities.
Site Activity	<ul style="list-style-type: none"> Throughput can vary significantly from 300-150,000 tpa (Currently there are WTS at both ends of the scale in Surrey). Vehicle movements are dependent on scale but generally large amount of HGV and other vehicle movements. Operating hours vary.
Benefits	
	<ul style="list-style-type: none"> Reduces transport impacts of waste management, for example by reducing emissions. Improves viability of strategic waste imports and exports.
Environmental Issues and Mitigation	
Traffic Impacts	Larger facilities have significant impacts from HGVs and other vehicle movements. To mitigate these impacts limits on vehicles can be

	<p>imposed, facilities can be located close to main roads and routing options can be used.</p> <p>Ultimately WTS result in fewer vehicle movements.</p>
Noise	Noise issues mostly come from delivery vehicles and machinery inside WTS. Impacts can be mitigated by using noise bunds and reduced working capacity/hours on weekends.
Visual Intrusion	WTS buildings are tall due to the nature of activities. Visual impacts shouldn't be an issue in industrial locations but in other areas building design and tree planting can help mitigate impacts.
Other Issues	Litter, dust and odour aren't significant issues due to facilities being indoors.

3.6

3.7 Materials Recovery Facility (MRFs)

Process Description	
Material Processed	Material Recovery Facilities (MRFs) process both household and commercial waste.
Description of Process	<p>MRFs are designed to recover value from waste either by separating and sorting materials that can be recycled or by sorting, shredding and baling waste that can then be used as a fuel.</p> <p>Waste can be processed in a number of ways involving hand picking, screening, sieving, magnetic separation, mechanical sorting and shredding. MRFs recover valuable materials to be recycled like metals, glass and plastics to be reprocessed with fuel sent to EfW and cement works. Only material with low value is sent for landfill.</p>
Siting Criteria and Characteristics	
Site Size	1.0-2.0 hectares.
Land Use	Facilities are suited to industrial land.
Site Activity	<ul style="list-style-type: none"> • Throughput can range from 20,000-150,000 tpa. • Around 50-80 HGV movements per day at larger facilities. • Waste reception & processing hours usually 0800-1730 Monday to Friday (can include night working depending on the requirements of the facility).
Benefits	
	<ul style="list-style-type: none"> • Reduces the amount of waste sent to landfill. • Materials are easily recycled once in separate streams. • Ensures as much as possible is being recycled or recovered.
Environmental Issues and Mitigation	
Traffic Impacts	Due to amount of waste handled HGV movements are high. To mitigate impacts facilities should be located less than 5km away from main roads and be provided with specific routing for vehicle movements.
Noise	The sorting of waste can generate noise issues. Issues can be mitigated through the enclosure of facilities, along with noise insulation and screening.
Other Issues	MRFs are generally fairly clean sites and do not have dust, odour or other issues.

3.8 Metal Recycling and End of Life Vehicles (ELVs)

Process Description	
Material Processed	Metals and ELVs.
Description of Process	Metal waste is sorted and stored ready for reprocessing. ELVs can be stored and then crushed ready for reprocessing.
Siting Criteria and Characteristics	
Site Size	Smaller sites for metals may be under a hectare (scrap yards) larger sites can be 2+ hectares depending on storage space required.
Land Use	Facilities are suited to industrial land use. Traditional scrap yards can accommodate facilities.
Site Activity	<ul style="list-style-type: none"> Throughput in the region of 2,000-20,000 tpa depending on size and nature of facility. HGV movements are relatively low due to the small scale of sites. Reception and processes of waste generally from 0800-1730 Monday to Friday.
Benefits	
	<ul style="list-style-type: none"> Reduces the need for metals to be sent to landfill. Provides source of recycled metals reducing demand on new metal extraction. Important for dealing with larger materials like ELVs.
Environmental Issues and Mitigation	
Noise	Due to activities generally being outdoors noise can be an issue, especially the operation of crushers. Careful location of facilities away from sensitive receptors and conditions on operating hours can help mitigate these issues.
Visual Intrusion	The outdoor nature of sites can lead to a visual impact. Correct locating of facilities, screening and storage of materials indoors can help mitigate these impacts.
Other Issues	Dust and odour aren't a significant issue with metal recycling. Due to relatively low throughputs there aren't significant travel impacts associated with facilities.

3.9 Composting

Process Description	
Materials Processed	Organic waste, green waste (grass cuttings, leaves and pruning), cardboard, certain food waste and biodegradable industrial waste. In-vessel composting can process kitchen and catering waste but must comply with regulation.
Description of Process	There are two composting processes Windrow and In-vessel composting. Windrow – Waste is shredded and mixed before being placed in long elongated mounds known as windrows. The windrows are usually 1.5-3.0 metres tall, their oxygen supply and temperature is controlled by frequent turning with moisture controlled by frequent watering. After 10-12 weeks the process is finished and the resultant compost is graded and sold as soil improver. The windrow process can take place indoors and outdoors. In-vessel – The process is similar to windrow but takes place inside a vessel. Shredded waste is fed into the vessel along a series of trays. Temperature, oxygen and moisture are carefully controlled and after around a week the material is removed and put into windrows for 2-3 more weeks. The resultant compost is again graded and sold as soil improver.
Siting Criteria and Characteristics	
Site Size	Windrow – Around 1.0 hectare. In-vessel – 1.0-1.5 hectares.
Land Use	Windrow – Open windrows can blend in with rural development with their low profile and require an open setting. Indoor windrows are suited to rural industrial settings. In-vessel – Facilities are suited to industrial areas, these are usually close to the source of waste.
Proximity to Sensitive Receptors	Facilities should be located at least 250m away from sensitive receptors.
Site Activity	Windrow – Average throughput of 5,000- 15,000 tpa and require a relatively low number of HGV movements. Waste received 0800-1730 Monday to Friday, composting process is constant. In-vessel – Higher throughput of 20,000 to 50,000 tpa. This requires more HGV movements. Operating hours are similar to windrow.

Benefits	
	<ul style="list-style-type: none"> • Reduces the amount of waste going to landfill. • Produces products that can be used as compost/soil conditioner for uses in numerous sectors. • Reduces the need for fertiliser production and water use in agriculture.
Environmental Issues and Mitigation	
Air Emissions	<p>Bioaerosols can be carried in the air as spores or as microbes on fine dust particles.</p> <p>This is mitigated by indoor windrow and in-vessel facilities through monitoring and air treatment.</p> <p>The Environment Agency found that bioaerosol levels were no higher 250m away from open windrow facilities than in other areas.</p>
Odour	<p>Odour cannot be completely avoided when composting, odour from waste delivered, in the treating process and by products can all be an issue. Indoor facilities can mitigate impacts easily due to the containment of waste indoors, outdoor facilities can mitigate impacts with a large buffer zone, soil bunds and planting vegetation.</p>
Traffic Impact	<p>Traffic impacts depend on the throughput of a facility. Issues can be mitigated by locating facilities close to main roads and routing waste deliveries away from sensitive areas.</p>
Other Issues	<p>Dust from waste can be an issue.</p> <p>Visual impacts may be associated with facilities, this can be mitigated by locating facilities in industrial areas.</p>

3.10 Energy from Waste (EfW)

Process Description	
Materials Processed	Mixed municipal, commercial, industrial and refuse derived fuel (RDF).
Description of Process	<p>Energy from Waste (EfW) involves the burning of waste to produce energy in the form of electricity. Waste is burnt in the most efficient way possible and modern technology at facilities means that harmful emissions are reduced.</p> <p>Some EfW facilities capture heat as well as generate electricity, these are called combined heat and power facilities (CHP) the heat captured can be used for domestic or industrial heating in areas close to the facility.</p>
	<p>Energy can also be generated from waste by the process of gasification. This process is known as advanced thermal treatment (ATT). Gasification involves heating waste without it combusting to produces gas (syngas) which is used to generate electricity as well as solid and liquid residues. Gasification facilities have similar criteria to EfW facilities just with a different process.</p>
Siting Criteria and Characteristics	
Site Size	Smaller EfW facilities can be 1.0-3.0 hectares in size, larger facilities can be 3.0-5.0 hectares. The site size includes all landscaping, parking and ancillary uses.
Land Use	Facilities are suited to land allocated for business and general industrial land. Industrial land in proximity to waste sources is preferable.
Site Activity	<ul style="list-style-type: none"> • Typically have a throughput of 60,000-250,000 tpa for most EfW facilities. Some new larger facilities have a throughput of around 500,000 tpa. • Around 150 lorry movements per day delivering and collecting material. • Permitted hours for receiving material typically 0800-1730 Monday to Friday. Waste processing within the facility can take place 24 hours per day.
Benefits	
	<ul style="list-style-type: none"> • Reduces the amount waste going to landfill. • Deals with materials that might not easily be recycled. • Emissions and performance can be easily monitored. • Resultant bottom ash can be recycled for beneficial use.

Environmental Issues and Mitigation	
Air Emissions	The burning of waste does result in the release of emissions, these are mostly acid gases, CO ₂ , heavy metals and particulates. Modern technology in facilities has helped reduce harmful emissions and facilities actively control their air pollution. There is also EU regulation to limit emissions.
Traffic Impact	Due to the large throughput of EfW facilities HGV movements are high. To help mitigate these impacts, limits on HGV movements can be put in place, vehicle routes can be specified and facilities can be located close to major roads.
Noise	Cooling systems within facilities can generate noise. Mitigation in the form of cladding and site layout can help reduce the impacts of noise.
Visual Impact	Due to the scale of EfW sites there can be a visual impact on the landscape. Correct site location and design can reduce this impact, for example screening and partial bunkering of sites.
Other Issues	Dust and odour can be an issue when dealing with municipal waste. The impacts can be mitigated through correct storage and careful running of the site.

3.11 Anaerobic Digestion

Process Description	
Materials Processed	Organic waste (industrial food waste, household food waste). Sewage sludge treated at sludge treatment facilities.
Description of Process	Anaerobic Digestion (AD) is the biological treatment of organic waste in the absence of oxygen. The process takes place in a digester which is a large, warm, sealed, airless container. AD most commonly produces Biogas, it also produces Fibre and Liquor that can be used as fertilisers. AD is one of a number of processes that takes place when treating sewage sludge.
Siting Criteria and Characteristics	
Site Size	1.0-1.5 hectares.
Land Use	Small scale AD facilities can blend in with rural development due to their low profile. Larger facilities are suited to more intensive industrial areas, facilities can also be extensions to existing waste facilities.
Proximity to Sensitive Receptors	Facilities should be located at least 250m away from sensitive receptors.
Site Activity	<ul style="list-style-type: none"> • Average throughput of 20,000-50,000 tpa but can be much lower at smaller facilities. • Sludge treatment facilities can vary. The sludge treatment facility currently operating in Surrey can handle up to 60,000 tpa. • Relatively high number of HGV movements, depends on throughput of site. • Waste reception typically 0800-1730 Monday to Friday.
Benefits	
	<ul style="list-style-type: none"> • Production of Biogas can be used in the form of heat or electricity and fed to the national grid or used as vehicle fuel. • Avoidance of biodegradable waste going to landfill. • Outputs can be used as fertiliser.

	<ul style="list-style-type: none"> • Significantly better than other ways of managing food waste.
Environmental Issues and Mitigation	
Traffic Impact	<p>Impacts depend on the scale of a facility. Small scale AD plants are unlikely to have a significant transport impact.</p> <p>Larger facilities can mitigate impacts through limiting HGV movements and routing deliveries away from sensitive areas.</p>
Noise	AD facilities aren't inherently noisy. Noise from deliveries and vibrations must however be mitigated by fitting silencers to machinery and the use of noise bunds.
Visual Impact	Larger facilities have the potential to create visual intrusion. This can be mitigated by locating facilities within industrial areas and using screening.
Other Issues	Dust, odour and air emissions can be mitigated by the enclosed nature of operations.

3.12 Disposal

Process Description	
Materials Processed	Non-hazardous waste, stable non-reactive hazardous waste, Asbestos.
Description of Process	<p>Any operation which is not recovery (including incineration without energy recovery).</p> <p>Landfill is the process of deposit of waste onto or into land. Biochemical processes act on and degrade the landfilled waste. A monitoring and aftercare protocol is required after closure of landfill.</p>
Siting Criteria and Characteristics	
Site Size	Landfill sizes are highly variable and dependant on multiple factors. As landfill sites are often located on previous mineral workings, the site size can be dependent on the size, type and location of the mineral workings. An example of a landfill site in Surrey is Patteson Court Landfill which extends approximately 66 hectares.
Land Use	Landfill sites are often located at voids created by mineral workings.
Site Activity	<ul style="list-style-type: none"> Waste movements depend on the size and throughput of the site. Patteson Court Landfill is restricted to 400 HGV movements per day. Waste reception typically 0800-1730 Monday to Friday.
Benefits	
	<ul style="list-style-type: none"> Once filled, land can be recovered for other purposes, such as conservation or recreational area. Landfill gas can be used to produce energy. Disposal method for non-recoverable waste.
Environmental Issues and Mitigation	
Traffic Impact	Impacts depend on the scale of the facility. HGV movements and routing deliveries can be reduced or mitigated to certain hours. However, there will still be significant movements.
Noise	Noise from deliveries and dumping occur. Mitigation by placing disposal facilities away from noise sensitive areas.

Visual Impact	Large visual impact, mitigation through placement in remote areas or by creating buns to reduce visual impacts.
Other Issues	<ul style="list-style-type: none"> • Long period of use and restoration. • Smells resulting from chemical process of waste breaking down. Odour impact assessment must be regularly undertaken. • Discharge of leachate (contaminated tip water) results in pollution in the surrounding soil, ground or surface water. Leachate collection and treatment systems can be built. • Production of landfill gas (methane) which is flammable and has a high Greenhouse gas potential. This gas requires careful management.

4. Appendix 1

Table 1 Summary of types of waste management facilities based on examples in Surrey and the wider South East of England

Construction, Demolition and Excavation (C, D & E) Waste Recycling Facilities		
Hithermoor Quarry Aggregate Recycling Facility, Leylands Lane, Spelthorne		
Site Description	Located on a small area within the mineral workings. Bordered by the M25 and Stanwell Moor.	 <p>(Image of Hithermoor Quarry Aggregate Recycling Facility)</p>
Site Details	<ul style="list-style-type: none"> Capacity approximately 250,000 tpa Temporary permission until 2022 	
Why it's a good example	The majority of C, D & E recycling facilities are temporary permissions on sites of minerals workings.	
Little Orchard Farm Aggregate Recycling Facility, Reigate Road, Reigate and Banstead		
Site Description	Located in a rural area away from sensitive receptors.	 <p>(Image of Little Orchard Farm)</p>
Site Details	<ul style="list-style-type: none"> Capacity approximately 200,000 tpa in total (includes other recycling and recovery) Permanent permission 	
Why it's a good example	While temporary permission are important it is necessary for Surrey to have permanent sites for C, D & E recycling as well.	

Community Recycling Centres (CRCs)		
Witley Community Recycling Centre, Petworth Road, Witley		
Site Description	Located on the edge of Witley and mostly surrounded by open green space.	 <p>(Image of Witley CRC)</p>
Site Details	<ul style="list-style-type: none"> Allocated in 2008 Surrey Waste Plan Redeveloped in 2008 Capacity of around 7,500 tpa 	
Why it's a good example	CRCs provide residents with the opportunity to recycle household material. Witley shows how modern design can mitigate negative impacts.	
Martyrs Lane CRC, Woking		
Site Description	Provides CRC facilities for Woking.	 <p>(Image of Martyrs Lane CRC)</p>
Site Details	<ul style="list-style-type: none"> Capacity of around 14,000 tpa 	
Why it's a good example	CRCs provide residents with the opportunity to recycle household material. Martyrs Lane shows a larger scale of CRC.	

Material Recovery Facility (MRF)		
Oakleaf Farm MRF, Horton Road, Stanwell Moor, Spelthorne		
Site Description	Located on a former minerals working and adjacent to Heathrow Airport.	 <p>(Image of Oakleaf Farm MRF)</p>
Site Details	<ul style="list-style-type: none"> Allocated in 2008 Surrey Waste Plan Capacity of 150,000 tpa Advanced technology used to produce a high quality fuel. 	
Why it's a good example	This facility adds important recovery capacity for commercial waste. The technology used means that the process is highly efficient and reduces impacts on the surrounding area.	
Normans Corner, Chapel road, Tandridge		
Site Description	Facility services commercial tipping, recycling and waste collection.	 <p>(Image of Normans Corner MRF)</p>
Site Details	<ul style="list-style-type: none"> Capacity of 33,000 tpa 	
Why it's a good example	This facility is of a smaller scale but provides necessary facilities for MRF.	

Waste Transfer Station (WTS)		
Ash Vale Waste Transfer Station (WTS), Station Road, Guildford		
Site Description	Located on industrial land and surrounded by industrial uses.	 <p>(Image of Ash Vale WTS)</p>
Site Details	<ul style="list-style-type: none"> Capacity of 75,000 tpa 	
Why it's a good example	WTS are part of the network which enable materials to be sorted and organised before being sent on for final processing. Ash Vale is a large scale WTS operation.	
Unit 10 Wintersells, Road, Elmbridge		
Site Description	WTS site. Provides skip hire for the collection of waste.	 <p>(Image of Unit 10 WTS)</p>
Site Details	<ul style="list-style-type: none"> Capacity of 17,400 tpa 	
Why it's a good example	Unit 10 is a smaller scale facility but links with other facilities in the network to provide necessary sorting and organisation of materials before final processing.	

Metal Recycling		
Repairable Vehicles Ltd., Chapel Farm, Normandy, Guildford		
Site Description	Land used as an end-of-life vehicle scrapyards.	
Site Details	<ul style="list-style-type: none"> Capacity of 30,000 tpa 	

<p>Why it's a good example</p>	<p>High capacity for a metal recycling facility with limited environmental impacts due to its industrial estate location.</p>	 <p>(Image of Repairable Vehicles Ltd.)</p>
<p>West View Works, Brighton Road, Reigate and Banstead</p>		
<p>Site Description</p>	<p>Located on land used as a scrapyard.</p>	 <p>(Image of West View metal recycling)</p>
<p>Site Details</p>	<ul style="list-style-type: none"> Capacity of around 1,000 tpa 	
<p>Why it's a good example</p>	<p>Sites like this are important to deal with ELVs and are slowly on the decline.</p>	

Composting		
Mid Surrey Farm, 133 Reigate Road, Ewell		
Site Description	Located on agricultural land.	 <p>(Image of Mid Surrey Farm)</p>
Site Details	<ul style="list-style-type: none"> Capacity of 12,000 tpa 	
Why it's a good example	A capacity gap for composting facilities has been identified. Sites similar to this will be important to meet future demand.	
Elm Nursery, Woking		
Site Description	Located on agricultural land.	 <p>(Image of Elm Nursery)</p>
Site Details	<ul style="list-style-type: none"> Capacity of 1,000 tpa 	
Why it's a good example	A capacity gap for composting facilities has been identified. Many smaller sites can provide for future demand instead of a large site.	

Energy from Waste		
Charlton Lane Ecopark, Shepperton, Spelthorne		
Site Description	Built on the site of an existing waste management facility and adjoining open land comprising former mineral workings. Operation by 2019.	 <p>(Image of Charlton Lane Ecopark, Picture courtesy of SUEZ)</p>
Site Details	<ul style="list-style-type: none"> • Capacity of 55,000 tpa • Potential to generate 3.5 MW of energy, the equivalent of 8,000 homes 	
Why it's a good example	We have a gap for managing residual waste. One way we can manage this type of waste is through energy recovery.	
Lakeside Energy from Waste Facility, Slough		
Site Description	Located on industrial land and is surrounded by industrial uses.	 <p>(Image of Lakeside Energy from Waste Facility, Picture courtesy of LakesideEfW)</p>
Site Details	<ul style="list-style-type: none"> • Capacity of 450,000 tpa • Can generate 37MW the equivalent of 56,000 homes • Received 23,957 of waste from Surrey in 2016 	
Why it's a good example	We have a gap for managing residual waste. Due to lack of Surrey facilities, waste is sent to other counties.	

Anaerobic Digestion (AD)		
West London AD Facility, Kitsmead Lane, Runnymede		
Site Description	Located on a former landfill site surrounded by agricultural and other waste uses.	 <p>(Image of West London AD Facility, courtesy of Agrivert)</p>
Site Details	<ul style="list-style-type: none"> • Capacity of around 68,500 tpa • Generates around 2.4 MW the equivalent of 4,500 homes • Produces significant amount of bio-fertiliser • End year 2045 	
Why it's a good example	Deals with a large amount of solid and liquid food waste.	
Camberley Treatment Works, 30 Doman Road, Camberley		
Site Description	Located on industrial land surrounded by industrial uses and a sewage treatment works.	 <p>(Image of Camberley Treatment Works, Picture courtesy of waterprojectsonline)</p>
Site Details	<ul style="list-style-type: none"> • Capacity of around 70,000 tpa • Generates 0.9 MW equivalent of 1,000 homes 	
Why it's a good example	The only anaerobic digestion facility treating sewage sludge in Surrey.	

Disposal		
Patteson Court Landfill, Cormongers Lane, Redhill, Surrey		
Site Description	Non-hazardous landfill. The site extends approximately 66 hectares and is comprised of two sections; the South West (which has been filled and restored) and the North East.	 <p>(Image of Patteson Court Landfill courtesy of Letsrecycle.com)</p>
Site Details	<ul style="list-style-type: none"> • Capacity until 2030. • Accepts up to 700,000 tpa of waste. 	
Why it's a good example	Patteson court is Surrey's last allocated landfill site, with no new allocations proposed. It is nearing capacity and other types of waste management will have to manage the waste flow.	
Norwood Quarry and Landfill, Lower Road, Minister-on-Sea, Kent		
Site Description	Operational hazardous landfill.	 <p>(Image of Norwood Quarry 1998, courtesy of KentOnline)</p>
Site Details	<ul style="list-style-type: none"> • Hazardous landfill covers 5 ha of the 18 ha landfill area. • Accepts up to 40,000 tpa of waste. • End date December 2025. 	
Why it's a good example	The site was granted a 10 year extension for waste disposal in 2016. This fulfils some of Kents requirements of waste without the allocation of a new site.	