

Haulage of Waste from Devon County Council areas to the South West Devon Energy from Waste Plant – August 2011

Methods of waste delivery

Waste from the Devon administrative area will be delivered to the proposed Energy from Waste facility in the following manner.

Municipal residual waste collected in areas of West Devon, Teignbridge and part of South Hams will initially be delivered to waste transfer stations in these respective districts. It will then be loaded into articulated bulk haulers for onward transport to the Energy from Waste facility.

Municipal residual waste from the remainder of South Hams will be delivered directly to the facility in refuse collection vehicles.

Residual waste from Household Waste Recycling Centres will be delivered using rigid chassis LGVs carrying 40 cubic yard demountable containers. Some of the larger recycling centres will use bulk haulers to transport residual waste to the facility.

Although these vehicles come from a number of different locations they will all approach the facility from the A38 St Budeaux by-pass junction.

Vehicle Emissions

Refuse collection vehicles delivering waste directly from South Hams will be owned and operated by the South Hams District Council Direct Services Organisation.

South Hams District Council is committed to procuring vehicles and equipment that provide best value and have the least environmental impact. All vehicles are currently specified to meet the latest Euro 5 emission standards but this will be raised to Euro 6 standards by September 2014. The council regularly researches and investigates alternative fuel options as part of its green policy although at present operates a conventional diesel fleet.

Residual municipal waste from Torre Quarry transfer station in Kingsbridge is hauled by a contractor appointed by South Hams District Council. The current contract ends shortly and the procurement of a new contractor will place greater emphasis on emission controls in accordance with South Hams policy on its own vehicle procurement, hence it is expected that any new transfer fleet will be operating to latest low emission standards.

All other waste deliveries will be undertaken by contractors appointed by Devon County Council.

Devon County Council Contracts

Devon County Council appoints contractors on a competitive tendering process which considers price and quality of the service provided.

Environmental performance is one of the elements considered in the quality assessment. While this process does not specifically exclude contractors with non Euro 5 vehicles from offering a service, it means that any such contractor would be placed at a competitive disadvantage and therefore less likely to succeed in what is generally a very competitive bidding process.

In addition, Devon County Council requires contractors to achieve the Environmental Management System ISO 14001. While not specifying a particular vehicle emission standard a contractor would encounter added difficulty in becoming accredited if their vehicle fleet did not follow current best practice.

When seeking contracts to haul to the new Energy from Waste facility additional weighting would be placed on the environmental element in recognition of the sensitivity of the location of the facility, thereby encouraging vehicles to meet the lowest emission standards.

Existing Contractors

Devon County Council's existing contractor is Viridor Waste Management who operate the bulk haulers. Viridor operate mostly Euro 5 class vehicles and have a policy to procure vehicles with the lowest environmental impact. Devon Waste Management who haul the demountable skips on behalf of Devon County Council operate only Euro 5 standard vehicles and will look to acquire Euro 6 when replacements become due.

Waste Odour Control

The odour commonly associated with municipal waste is primarily produced by the decomposition of easily putrescible substances such as food waste and to a lesser extent garden waste.

Recycling Centre Residue.

Household waste recycling centres are predominately a recycling operation with approximately 75% of waste handled on the sites reused, recycled or composted. The remainder of the waste is largely dry with a very low level of putrescibility. Dustbin type waste is permitted at the Devon County's recycling centres only by prior arrangement and is segregated into wheeled containers for collection by the local district council as part of the regular refuse collection rounds.

Residual waste from the recycling centres therefore has a very low potential for generating odour and Devon County have received no public complaints relating to odour issues. All waste skips are covered with a tarpaulin type

sheet or net to ensure none of the waste escapes during transit. Empty skips are returned to the recycling centres where members of the public fill them. For this reason cleaning of skips has a high priority and is checked by the Council's recycling centre inspectors on a regular basis.

Residual Municipal Waste.

The District Councils of South Hams, Teignbridge and West Devon are among the highest performing in the country with regard to recycling of domestic waste. In addition to the collection of dry recyclable waste, each authority undertakes separate collection of kitchen and garden waste. This material is sent for either composting or anaerobic digestion at a facility unconnected with the proposed Devonport Energy from Waste development. As a result the residual waste collected from these authorities has a greatly reduced potential to generate odours when compared to typical dustbin waste and Devon County are not aware of any public complaints relating to odour issues.

All contractors involved in waste haulage whether by Refuse Collection Vehicle or bulk hauler, undertake regular cleaning of the vehicles to prevent waste remaining attached to the vehicle or machinery. This is normal good practice and is necessary to maintain the reliable operation of the vehicles as well as controlling odours. Again if Devon County Council is to let a contract specifically to haul waste to a sensitive urban area such as Plymouth, then the required cleaning standards and controls will be evaluated and may be raised in recognition of the increased risk of nuisance in the vicinity of the facility.

REFUSE COLLECTION VEHICLES - ADDITIONAL INFORMATION



The age of the fleet and the replacement policy with regard to “low emission” vehicles

PCC's refuse and recycling collection fleet was purchased in 2007/08 with some additional vehicles being hired-in for the seasonal collection of garden waste. The hired-in vehicles will be replaced by April 2012 with current Euro 5 engines. New Hookloader vehicles were purchased in 2010 at Chelson Meadow and these also meet the Euro 5 emissions standard.

There is currently no formal written PCC policy regarding the management of the Council's vehicle fleet. However, this is currently under review as the 29 Refuse Collection Vehicles (RCVs) purchased in 2007/08 are coming to the end of their operational life and replacements need to be procured. The last procurement of RCV's in 2007 stipulated a requirement for the new vehicles to include the low emission diesel engines meeting the then latest Euro 4/ 5 emissions standard.

PCC's latest proposed RCV procurement (awaiting approval in 2011) will stipulate engines again meet the Euro 5 standard albeit a future Euro 6 emission standard is due to be introduced from 2013/14 which will most likely be the standard specified for subsequent RCV procurements.

PCC is also investing in specific RCV driver training to improve fuel consumption and in turn reduce emissions from vehicles. In-cab technology will help optimise collections and reduce missed bins. This will lead to reduced fuel consumption and a reduction to the carbon footprint of the service.

The potential for using odour sprays on lorries

PCC log complaints on the CRM system when customers phone or write in to the Council. A search of the CRM database has shown that the Council has not received any complaints relating to odour nuisance from Refuse Collection Vehicles or other vehicles collecting refuse.

The Council operates a weekly collection service for household wastes which are likely to cause odours. This collection frequency minimises the production of odour and is in line with the Government's preferred frequency for collecting waste of this

type. The Council advises residents to double wrap wastes likely to cause odours before putting the waste into their container.

The Council's Trade Waste service collects from a range of customers some of whom produce odorous wastes. These wastes are collected on a more frequent basis than the weekly service offered to householders and can be as frequent as a daily collection. These measures reduce the risk of odour nuisance to residents.

Most residents present waste for collection in refuse sacks even if they have a wheeled bin. The refuse sacks prevent odours escaping whilst the waste is transferred from the collection point to the body of the collection vehicle. It is this containment which acts as an odour barrier. The RCVs compact the waste once inside the body of the vehicle and some of the bags will split and release any odours that might be present into the body of the vehicle. A spray is unlikely to have a significant effect on controlling any odours released into the body of the vehicle.

The vehicles are emptied and washed at the end of their shift using the vehicle wash at Prince Rock. These measures reduce any residual odour.

The Council has not found examples of other authorities in this country using sprays in RCVs collecting household waste. There is evidence that this technique is used in other countries.

The primary use of sprays in this country is confined to sites processing or storing large quantities of waste such as landfill sites, composting sites or Refuse Transfer Stations. The odour sprays are not used continuously but control odour in the event that it might cause a local nuisance. Modern Refuse Transfer Stations are fitted with odour spray systems as a precautionary measure as good practice.

There are Health & Safety issues for operatives from a spray system. A chemical is mixed with the water to either eliminate the smell or disguise it with a pleasant odour. The combination of the atomised water and chemical could irritate the breathing passage and lungs of operatives.

WASTE DISPOSAL HOOKLOADER VEHICLES



PLYMOUTH CITY COUNCIL HOOKLOADER VEHICLES



Photo of a typical Hookloader vehicle with a container mounted showing the automatic sheeting system

Background:

A hookloader consists of an industry standard vehicle chassis with a special hydraulically operated lifting system fitted to allow the loading and off-loading of demountable roll on and off (rolonof) containers. The modern vehicles have an automatic mechanism for covering the container with a plastic sheet.

The hookloader vehicles are used to service the 'rolonof' containers provided at the Household Waste Recycling Centres (HWRCs) and at the Prince Rock depot.

The HWRCs are provided for the use of residents for the deposit of material that cannot be collected in the normal residual waste kerbside collection. The HWRC is not intended to accept 'normal' black bag waste although some residents will deliver such waste. A composition analysis of HWRC waste indicated that only 3% of the waste delivered to the HWRC was biodegradable and likely to cause odours. Members of the public have to deliver waste to the HWRCs using their own transport so would not normally deliver odourous waste uncontained in their vehicle.

Current Fleet:

The Council currently operates four hookloader vehicles which cover the following service areas:

One services the Chelson Meadow Household Waste Recycling Centre

One services the Weston Mill Household Waste Recycling Centre

One services the Prince Rock Waste Transfer Station

One covers all three sites as required during busy periods.

The engines in the current fleet are specified to the Euro 5 standard

Replacement Arrangements:

The current vehicles are hired under contract. The contract started in December 2010 and runs to December 2011. There is an option to extend for a further year and this will be taken up in order that the next procurement of vehicles coincides with the introduction of Euro 6 engines.

Emission Standards:

The Euro emission standards are set out in the following table:

EU Emission Standards for HD Diesel Engines, g/kWh (smoke in m ⁻¹)								
Tier	Date	Test	CO	HC	NO _x	PM	Smoke	
Euro I	1992, < 85 kW	ECE R-49	4.5	1.1	8.0	0.612		
	1992, > 85 kW		4.5	1.1	8.0	0.36		
Euro II	1996.10		4.0	1.1	7.0	0.25		
	1998.10		4.0	1.1	7.0	0.15		
Euro III	1999.10, <i>EEVs only</i>		ESC & ELR	1.5	0.25	2.0	0.02	0.15
	2000.10		ESC & ELR	2.1	0.66	5.0	0.10 0.13 ^a	0.8
Euro IV	2005.10		1.5	0.46	3.5	0.02	0.5	
Euro V	2008.10		1.5	0.46	2.0	0.02	0.5	
Euro VI	2013.01		1.5	0.13	0.4	0.01		

a - for engines of less than 0.75 dm³ swept volume per cylinder and a rated power speed of more than 3000 min⁻¹

Odour Control:

The non-recycled waste will be placed in open-topped 'rolonof' containers at the various locations identified in the first section. The hookloader will collect the container and transport it to the disposal point.

The operating procedure for the hookloader drivers requires that they cover the 'rolonof' container with the automatic sheeting system. This contains both the material and any odours.

The 'rolonof' containers are collected regularly which prevents odours developing. The waste placed in the 'rolonof' containers is not compacted and this prevents any odourous waste from escaping its containment once placed inside the 'rolonof' container.

Haulage of Waste from Torbay Council to the South West Devon Energy from Waste Plant

In July 2010 Torbay entered into a long term contract with May Gurney to form a new Joint Venture Company "TOR2". TOR2 manage the collections, Transfer Station, Recycling Centre, collections and haulage of Torbay's waste and recyclable materials. However the Authority dictates where residual waste will be sent for disposal.

High environmental standards were a priority in the awarding of the contract. The achievement of the Environmental Management System ISO 14001 is a condition of the contract within 18 months of the start of the new Joint Venture and will therefore be in place before commencement of operations at the Energy from Waste Plant. The existing contract has a maximum life of 25 years (10 years with further options at three five year intervals) and any further contracts will have a high value placed on environmental criteria for vehicle and haulage specifications.

Municipal waste collected in Torbay is initially taken to Paignton Transfer Station. The recyclable materials and residual waste are collected separately.

Residual waste destined for the Energy from Waste facility will be loaded into articulated bulk haulers for onward transport. These vehicles will approach the facility from the A38 St Budeaux by-pass junction.

Details of these vehicles and their emissions standards are included in the attached appendix provided by Torbay's partner TOR2, but all vehicles are Euro 5 standard and new vehicles procured during the contract would be required to meet all legal standards and best practice under the terms of the contract.

It is also worth noting that food waste is collected separately at the kerbside in Torbay and is sent to Holsworthy to an anaerobic digestion facility. Therefore reducing the putrescibility (and potential for odours) of the waste to be transported to the new Energy from Waste facility. Much of Torbay's garden waste is also collected separately at the recycling centre and local centres.

More information on odour control has been provided by TOR2 in the accompanying appendix but cleaning of the vehicles is undertaken regularly and is considered standard practice for maintenance as is the use of enclosed vehicles. This prevents not just odour but litter nuisance and the transfer of dirt and mud.

The Household Waste Recycling Centre is predominately a recycling operation with a high proportion of waste handled on the site reused, recycled, or composted. The remainder of the waste is largely dry with a very low level of putrescibility.

Appendix provided by TOR2

Waste Transfer Vehicles Torbay

Detailed below are Tor2's expected outcomes of our vehicles travelling to the new Energy from Waste facility. Included in this overview are details of emissions, policies, cleansing and odour control. It is our intention to ensure that we will comply with all EU and UK legislation currently in place.

The vehicles will be travelling approximately 80 miles per day, utilizing all major roads and avoiding congestions. This is to ensure swift passage to their end destination. All drivers will be trained in smart driving to ensure that the vehicles are operated within acceptable tolerances, i.e. fuel efficiency and effective and efficient driving skills.

Currently Torbay use 2 DAF85 C460E Tractor Units to move Torbay's waste from Paignton to Heathfield's landfill site. In addition to this we also operate 2 DAF85 Hook loaders.

It is the intention to utilize these vehicles to transfer waste from Torbay to the new Energy from Waste facility at Plymouth.

- DAF85 CF460E Tractor Units
- Hook loaders
- BMI 110 YD Ejection Trailer x 5
- Boughton Demountable Trailer x 1

The vehicles meet EURO 5 standards and UK legislation and operate with license requirements for the movement of waste.

Odour control is carried out by the drivers who have a stringent regime of cleaning and disinfecting the trailers used for waste carrying. This also is inline with EU guidelines and UK legislation.