

# Environment Agency permitting decisions

## Variation

We have decided to issue the variation for Hurst Landfill operated by Summerleaze Limited.

The variation number is EPR/BV7222IV/V004

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

## Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

## Structure of this document

- Description of the changes introduced by the variation
- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

## Description of the changes introduced by the Variation

This is a Substantial Variation.

Leachate levels at Hurst Landfill and the adjacent Whistley Court Farm Landfill have been rising and now exceed compliance limits at both sites. The operator has investigated options for leachate management and disposal and concluded that a field pumping system should be installed, along with a leachate treatment plant (LTP).

It is proposed that the LTP will provide facilities to balance flows, strip dissolved methane and store leachate prior to disposal via a rising main connection to the public sewer. The LTP will be constructed to the southeast of the landfill site within the current Hurst Landfill Permit boundary in the compound currently occupied by the landfill gas flaring equipment. The LTP will be capable of treating a maximum of 85 tonnes per day of leachate, so will be included in the permit as a listed activity as described under Section 5.4

Part A(1)(a)(ii) 'Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment'.

In addition, the operator proposes to adopt the Industry Code of Practice (ICoP) document Perimeter Soil Gas Emissions Criteria and Associated Management, dated January 2011, which justifies the removal of all Carbon Dioxide compliance limits and the use of Carbon Dioxide 'action levels' only. Revised compliance limits and action levels are proposed for Methane. The application includes a report and a Gas Management Plan in support of this. The Gas Management Plan also includes information on the gas generated at Whistley Court Farm Landfill, which is managed at Hurst Landfill, with the permit activity details requiring an update to include this.

## Key issues of the decision

### H1 Risk Assessment – discharge to sewer

The application includes an assessment of the impacts on the River Loddon from the discharge of treated leachate via Thames Water's Wargrave Sewage Treatment Works (STW). This uses data from monitoring and analysis of the Hurst landfill leachate between 2009 and 2013 for 76 determinands. We have audited this assessment in order to check that we can agree with the operator's conclusion that all substances were deemed to have no significant long term or short term detrimental environmental impact on the River Loddon.

The operator has used our H1 software tool to perform the calculations necessary to apply the sewage treatment reduction factor (STRF) to the effluent (allowed for due to treatment at the STW) and calculate the process contribution (PC) of the effluent to the receiving water quality and, where necessary, the resulting predicted environmental concentration (PEC) downstream of the STW.

Emissions with PCs that are less than 4% of the EQS can be screened out from further assessment as they are likely to have an insignificant impact. The operator finds that 59 substances screen out from further assessment with a PC of less than 4% of the EQS, with a further seven substances screening out prior to this at a concentration in the effluent of less than 10% of the EQS.

After including data on the upstream quality, the operator finds that the difference (i.e. the deterioration) between the upstream quality and the PEC is less than 10% of the EQS for six substances, leaving only four substances that have not screened out – cyanide, phenol and two groups of PAHs. The application provides satisfactory explanation of where overly-conservative assumptions have caused these results and gives confidence that the impacts are not likely to be significant.

In addition, any priority hazardous substances were screened out under the significant load test (against pre-defined annual mass limits) and required no further assessment.

We have used our H1 software tool to check on all inputs and calculations. A newer version of the tool has become available since the operator submitted their assessment, which includes some tighter EQSs (such as bioavailable standards for copper, lead, nickel and zinc) and updated STRFs. As a starting point for input to the new tool, we used:

- The maximum measured concentrations of the substances as the mean and maximum values in the assessment.
- Where Thames Water has set consent limits, these have been used as the maximum concentration value for assessment in order to check that a discharge at the consent limit would still have an insignificant

impact. This is also important due to a lack of leachate monitoring data from Whistley landfill site.

- The maximum consented discharge volume of 86.4 m<sup>3</sup>/d as the maximum and mean discharge volumes.
- The actual Q95 river flow rate (2.4 m<sup>3</sup>/s) for the nearest gauging station on the River Loddon at Twyford (39138) was used in preference to the flow estimate obtained by the operator (1.789 m<sup>3</sup>/s).

All of these figures provide a precautionary assessment of the long term and short term impacts.

We limited our suite of substances to those with actual monitoring data (above the limit of detection) and substances with consent limits from Thames Water. All other substances (with concentrations at less than the limit of detection) were screened out at the PC test by the operator, so we focussed our audit on the substances being found at measurable concentrations in the leachate:

Water Impact Screening - Fresh Water Releases										
Apply Test 2										
This page applies Test 2 and displays the Process Contribution as a proportion of the EQS. Emissions with PCs that are less than 4% of the EQS can be screened from further assessment as they are likely to have an insignificant impact.										
Substance	Annual Avg EQS					MAC EQS				
	Annual Avg EQS µg/l	PC µg/l	Modelled PC	% PC of EQS %	PC < 4% of EQS? Test 2	MAC EQS µg/l	PC µg/l	Modelled PC	% PC of MAC %	PC < 4% of MAC? Test 2
Arsenic (River Loddon at Wargrave STW)	50	0.0490		0.10	Pass		0.3707		-	Pass
Benzene (River Loddon at Wargrave STW)	10	0.0000		0.00	Pass	50	0.0000		0	Pass
Boron (River Loddon at Wargrave STW)	2000	1.8898		0.09	Pass		1.9284		-	Pass
Cadmium and its compounds (100 - <200 mg/l CaCO3) (River Loddon at Wargrave STW)	0.15	0.0004		0.29	Pass	0.9	0.0023		0.256	Pass
Chlorfenvinphos (River Loddon at Wargrave STW)	0.1	0.0000		0.00	Pass	0.3	0.0000		0.000556	Pass
Chloride (River Loddon at Wargrave STW)	250000	502.0450		0.20	Pass		624.7397		-	Pass
Chromium VI (95%ile) (dissolved) (River Loddon at Wargrave STW)	3.4	0.0214		0.63	Pass		0.1999		-	Pass
Copper (River Loddon at Wargrave STW)	1	0.0541		5.41	Fail		0.5998		-	Pass
Cyanide (River Loddon at Wargrave STW)	1	0.0131		1.31	Pass	5	0.6664		13.4	Fail
Cyclodiene pesticides: Aldrin, Dieldrin, Endrin, Isodrin (Total)	0.01	0.0000		0.33	Pass		0.0002		-	Pass
Diazinon (95%ile) (River Loddon at Wargrave STW)	0.01	0.0000		0.00	Pass	0.02	0.0000		0.000200	Pass
Dichlorobenzene (River Loddon at Wargrave STW)	20	0.0069		0.03	Pass	200	0.1249		0.0625	Pass
Dichlorvos (River Loddon at Wargrave STW)	0.0006	0.0000		0.07	Pass	0.0007	0.0000		0.239	Pass
Iron (River Loddon at Wargrave STW)	1000	14.6144		1.46	Pass		16.0350		-	Pass
Lead and its compounds (River Loddon at Wargrave STW)	1.2	0.0085		0.71	Pass	14	0.8372		5.98	Fail
Manganese (River Loddon at Wargrave STW)	123	2.0816		1.69	Pass		2.1241		-	Pass
Mecoprop (95%ile) (River Loddon at Wargrave STW)	18	0.0016		0.01	Pass	187	0.0211		0.0113	Pass
Nickel and its compounds (River Loddon at Wargrave STW)	4	0.0657		1.64	Pass	34	0.8330		2.45	Pass
Phenol (95%ile) (River Loddon at Wargrave STW)	7.7	0.0069		0.09	Pass	46	0.7080		1.54	Pass
Sulphate (River Loddon at Wargrave STW)	400000	220.0018		0.06	Pass		749.6876		-	Pass
Toluene (95%ile) (River Loddon at Wargrave STW)	74	0.0000		0.00	Pass	380	0.0000		0	Pass
Trichlorobenzenes (River Loddon at Wargrave STW)	0.4	0.0000		0.00	Pass		0.0000		-	Pass
Xylene (River Loddon at Wargrave STW)	30	0.0000		0.00	Pass		0.0000		-	Pass
Zinc (River Loddon at Wargrave STW)	10.9	0.3245		2.98	Pass		1.2495		-	Pass

The only substances we find with PCs greater than 4% of the EQS are copper, cyanide and lead, which are carried forward for further assessment. These substances also failed to screen out at the PC stage in the operator's assessment.

In the next stage of the screening, we undertook some sensitivity analysis around the background (upstream) concentration used to calculate the PEC for copper, cyanide and lead, which showed that the PC from the leachate is a very small proportion of the resultant PEC. All substances are easily screened out, including copper and lead at the new tighter bioavailable EQSs. (In fact,

all substances screen out at the PC stage if actual leachate monitoring data is used, rather than the consent limit.)

Water Impact Screening (Predicted Environmental Concentration) - Fresh Water Releases												
Apply Tests 3 and 4 and identify which releases may need more Detailed Modelling of Emissions/Discharges to Water												
This page applies Tests 3, 4a and 4b and displays the Predicted Environmental Concentrations in relation to the background pollutant levels and the AA or MAC EQS. Any substances that pass all 3 of these tests can be screened out. Substances failing any of the tests must be modelled. Note that releases that have passed Tests 1 and 2 are insignificant and are not shown as they are already screened out.												
Number	Substance	Bkgrnd Conc. µg/l e.g. 200	Annual Avg EQS				MAC* EQS					
			PC µg/l	PEC µg/l	(PEC - BC)/ EQS	PEC - BC >10% AA EQS	% PEC of EQS %	PEC >100% AA EQS	PC µg/l	PEC µg/l	% PEC of MAC %	PEC >100% MAC
						Test 3		Test 4a				Test 4b
8	Copper (River Loddon at Wargrave STW)	0.5	0.0541	0.555	5.4%	Pass	55.5	Pass	0.600	0	-	Pass
9	Cyanide (River Loddon at Wargrave STW)	0.5	0.0131	0.514	1.3%	Pass	51.4	Pass	0.667	1.17	23.4	Pass
15	Lead and it's compounds (River Loddon at Wargrave STW)	0.6	0.00848	0.609	0.7%	Pass	50.8	Pass	0.838	1.44	10.3	Pass

Therefore, although we do not find precisely the same values for PCs and PECs as in the operator's H1 screening, we agree with the broad conclusion that the discharge is not likely to have a significant impact on the receiving watercourse.

### Phosphorus

The other suite of pollutants for consideration are the sanitary determinands - ammonia, BOD, suspended solids and phosphorus. These are assessed using the H1 Annex D2 methodology (detailed modelling) to ensure that any discharges are not causing an unacceptable level of deterioration to the water quality.

The upstream quality of phosphorus (0.226 mg/l) already exceeds the Water Framework Directive (WFD) good status target of 0.12 mg/l. Our River Basin Management Plan for Thames notes that phosphate is at moderate status in this stretch of the river and that it would be disproportionately expensive for phosphate to achieve good status. As such, we must at least ensure that any effluents that contain phosphorus do not cause further deterioration of the receiving water quality.

The operator has carried out an assessment for phosphorus against the WFD requirements for the River Loddon. Although the receiving watercourse does not currently meet 'good' status under the WFD, the assessment has used this target to ensure that the discharge does not impede future improvements.

Table 5-1 Hurst and Whistley Phosphorus H1 Annex D2 Results

Determinand	River Loddon EQS (µg/L)	Phosphorus TEDC Consent Limit Concentration (µg/L)	Average Expected Downstream Concentration (µg/L)	ELV for Hurst and Whistley Discharge (µg/L)
Phosphorus	120	13000	63.5	52155

#### Notes:

- In the absence of actual data, half of the EQS was used in the assessment, a concentration of 60 µg/L. A standard deviation of half the assumed concentration was used i.e. a standard deviation of 30 µg/L.

It can be seen that even at the maximum consented limit for phosphorus, the downstream concentration is only increased by 3.5 µg/l. The operator concludes that there is no detrimental impact from the discharge. We agree that it meets our requirement of 'no deterioration' (the discharge of effluent does not cause a deterioration in the downstream mean quality by more than 10% of the upstream quality). We are satisfied with these findings and do not need to carry out further assessment of the impacts. This also includes our consideration of ammonia, BOD and suspended solids because the STW is specifically designed to treat these pollutants and we are satisfied that this disposal route is BAT.

To conclude, we have completed our review of the H1 assessment of the discharge on the River Loddon and are satisfied that any impacts are not significant.

Update: during the determination the operator provided a limited set of results from leachate sampling undertaken at adjacent Whistley landfill site. Some of these values exceed the maximum consented levels used in the assessment (boron, iron, chloride), so we have updated our H1 assessment and can confirm that the environmental impacts are still not significant.

### **Point Source emissions to water – emission limits and monitoring requirements**

As the H1 assessment has shown that the impacts of the discharge on the River Loddon are not significant, we have decided that emission limit values (ELVs) on hazardous pollutants and sanitary determinands are not necessary for this permit. We will include a limit and a monitoring requirement on the daily volume of the discharge, in order to ensure that the volume of discharged effluent used in the H1 risk assessment remains representative of emissions from the installation. We will also include monitoring requirements for a suite of substances so the operator has the data required for any future assessments. This is important in ensuring that the operator can comply with condition 3.3 'Emissions of substances not controlled by emission limits' to ensure that these substances do not cause pollution.

### **Point source emissions to air**

Sector guidance note S5.03 on the treatment of landfill leachate explains that methane stripping is the use of diffused air to strip out or reduce the dissolved methane content of leachate and is commonly used. It reduces methane concentrations sufficiently to allow discharge to sewer but does not significantly reduce COD or suspended solids.

The application describes the removal of methane gas from the leachate by the passage of air bubbles introduced into the tanks by an aeration unit. The leachate flows from one tank to the next in series, allowing sufficient residence time for the methane to be stripped from the leachate.

Concentrations of methane present in exhaust gases will be well below explosive levels and an indicative standard is included in S5.03 to require that adequate volumes of air shall be used during the stripping process to keep

concentrations of methane present in the exhaust gas well below explosive levels. We have confirmed with the operator that the concentrations of stripped methane will be very low – vent gases from the leachate treatment plant will never enter the explosive range whilst the blowers are working under normal conditions (and the operator has measures in place to deal with any blower failures). Furthermore, in light of the low volumes of methane actually stripped from the leachate, the capture or combustion of the methane is not considered necessary or practical. We consider that releases to atmosphere are not likely to be significant due to the scale and nature of the operations carried out. There are no statutory air quality limits or objectives for methane for effects on human health and the environment.

Sector guidance note S5.03 notes there may be greater concern for the potential for release of odorous gases during the stripping process. However, at the great majority of full-scale methane stripping installations in the UK, such odour effects have been minimal and have not required specific treatment. Even so, the operator proposes that the LTP will be linked to a bio filter to prevent the release of methane and odours as an off-gas. The filter will consist of a bio filter comprising peat, bark and wood, retained by a mesh base. We are satisfied that the bio filter has been designed with reference to Table 2.18 and Section 2.2.6 in S5.03 'Guidance for the Treatment of Landfill Leachate'. These design considerations will be referenced in the permit within Table S1.2 Operating Techniques. As such, we do not require an Odour Management Plan, but the permit includes the provision for us to require one if necessary (condition 3.3.2).

### **Landfill gas**

The application includes a Gas Management Plan (GMP) for Hurst Landfill Site that is also applicable to the management of landfill gas from adjacent Whistley Court Farm landfill site, which is connected to the same landfill gas control system. The permit activity details require an update to include gas from Whistley.

In line with our guidance, the GMP includes a landfill gas risk assessment, control measures, operational procedures, monitoring plan and an action plan. The operator recognises that it is a live operational document and they will update it as any risks change, or due to any regulatory requirements, with at least an annual review.

We understand that landfill gas yields have dropped such that the landfill gas engine has been removed from site and the flare is not in constant use. There are a number of uncertainties around the landfill gas infrastructure and the potential volumes of gas that might be generated once pumping of the leachate for treatment commences. We also have concerns that the flare currently on site is not BAT.

We requested additional information during the determination on a number of technical matters associated with the GMP. In summary, the operator has responded to confirm that:

- If gas yields increase to a level where flaring is possible, they are committed to replacing the existing open flare with a correctly sized enclosed flare.
- Repairs to the seals around the leachate wells have been made and inspections are undertaken to identify any defects, with repairs arranged.
- Where compliance limits are at risk of being exceeded, the frequency of monitoring will be increased depending on the level of risk and following discussion with the Environment Agency.

We have agreed to remove the gas engine as a directly associated activity (DAA) from the permit. However, we have included an improvement condition requiring the operator to review their gas yields once pumping of the leachate has commenced and to upgrade their gas infrastructure and flare as necessary.

### **Industry Code of Practice (ICoP)**

The application includes a review of the perimeter borehole action limits and compliance levels for boreholes G38 to G69. In part, this is to address an improvement condition relating to proposing borehole-specific limits for methane and carbon dioxide. The report expands the scope of works to provide an interpretation of carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>) monitoring data following the guidance set out in the Industry Code of Practice '*Perimeter soil gas emissions criteria and associated management*' (August 2011).

Following a review of background data and statistical analysis, the proposed action levels and compliance limits are:

- G41: CO<sub>2</sub> Action Level 17.7% v/v;
- G41: CH<sub>4</sub> Action Level 0.5% v/v; and
- G41: CH<sub>4</sub> Compliance Limit 1.0% v/v.
  
- G45: CO<sub>2</sub> Action Level 10.0% v/v;
- G45: CH<sub>4</sub> Action Level 0.5% v/v; and
- G45: CH<sub>4</sub> Compliance Limit 1.0% v/v.

As there was an absence of background data for all other boreholes, the report proposes a precautionary approach to apply the lower backgrounds from G45 in the selection of the action levels and compliance limits for the remaining boreholes.

We have reviewed the data and are satisfied with the operator's proposals to adopt the ICoP. This included confirmation from the operator that there are no basements within 200 metres of the landfill site, which is of importance to ensure human receptors are not at risk of asphyxiation. The operator's Gas Management Plan includes the action levels and compliance limits, as well as details of the monitoring and action plans.

As such, the limit for carbon dioxide in external monitoring boreholes has been removed from Table 3.4 of the permit. The methane limit remains as 1% v/v.



## Annex 1: decision checklist

This document should be read in conjunction with the application, supporting information and permit/notice.

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>Receipt of submission</b>		
Confidential information	A claim for commercial or industrial confidentiality has not been made.	✓
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential. The decision was taken in accordance with our guidance on commercial confidentiality.	✓
<b>Consultation</b>		
Scope of consultation	<p>The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.</p> <p>For this application we consulted the following bodies:</p> <ul style="list-style-type: none"> <li>• Local authority environmental protection department</li> <li>• Local authority planning department</li> <li>• Sewerage undertaker</li> <li>• Health and Safety Executive</li> <li>• Public Health England and the relevant Director of Public Health</li> </ul>	✓
Responses to consultation and web publicising	<p>The web publicising and consultation responses (Annex 2) were taken into account in the decision.</p> <p>The decision was taken in accordance with our guidance.</p>	✓
<b>European Directives</b>		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓
<b>The site</b>		
Extent of the site of the facility	<p>The operator has provided plans which we consider are satisfactory, showing the new extent of the site including discharge points.</p> <p>A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Site condition report	<p>The operator has provided a description of the condition of the site. This SCR considers the additional land to be included for the pipework from Hurst Landfill to the sewer discharge point to the north east of the site via the adjacent Whistley Landfill.</p> <p>We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED–guidance and templates (H5).</p>	✓
Biodiversity, Heritage, Landscape and Nature Conservation	<p>We have only carried out our screening for sites downstream of the discharge point from the STW to the River Loddon, as the discharge is the only change to the installation’s activities that could impact on these sites.</p> <p>There are no SACs, SPAs or Ramsar sites within 10km or any SSSIs within 2km downstream of Wargrave STW.</p> <p>The Loddon River Local Wildlife Site (LWS) is immediately downstream of the discharge point and a number of protected species are found in the River Loddon.</p> <p>The impact on this LWS and these species is considered by the H1 assessment (see Key Issues), which screens out all hazardous pollutants as having an insignificant impact on the receiving watercourse (discharge causes deterioration of &lt;10% of the EQS to the river quality) and confirms that phosphorus will cause no deterioration (less than 10% deterioration to the upstream quality). These species/habitats will not be adversely affected by the discharge.</p> <p>We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p>	✓
<b>Environmental Risk Assessment and operating techniques</b>		
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator’s risk assessment is satisfactory. See Key Issues for our audit of the H1 surface water assessment.</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.	
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes.</p> <p>In their BAT assessment, the operator has referenced S5.03 Guidance for the Treatment of Landfill Leachate (2007), the Reference Document on Best Available Techniques for Waste Industries (2005) and the CIRIA C736 guidance Containment systems for the prevention of pollution (2014).</p> <p>The application includes information on the operating techniques, with detail of the associated BAT standards:</p> <ul style="list-style-type: none"> <li>- The LTP has been designed to provide sufficient air flow, provision of fine bubbles, prolonged residence time for leachate in the aeration tanks and a counter current flow to ensure that effective methane stripping is maintained.</li> <li>- The LTP will sit within a Epoxy coated (inner surfaces) mild steel bund of sufficient capacity and geometry to contain more than 110% of the LTP brimful capacity and to prevent jetting from the inner LTP. There will be no protrusions through the bund.</li> <li>- Although it may not be required in practice, the plant will include an antifoam dosing system. Antifoam chemicals will be sited within a bund.</li> <li>- Overfilling of the LTP will be prevented by a series of level control devices.</li> <li>- Particular attention has gone into the choice of the storage and treatment vessels to ensure corrosion protection from leachate.</li> <li>- The treatment tank will be linked to a bio filter to prevent the release of methane and odours as an off-gas. It has been designed with reference to S5.03 (humidity, particulates, temperature, pressure, packing medium).</li> <li>- The methane stripping plant is fitted with a duty and stand-by blower, either of which is sized to provide sufficient air to strip methane and result in a non-explosive off-gas.</li> </ul>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	<ul style="list-style-type: none"> <li>- The bio filter is located more than 6m away from the flare, so is outside of the relevant DSEAR / ATEX zone of the flare and any other potential ignition sources.</li> <li>- Infrastructure and equipment within the LTP will be inspected on a regular basis and maintained and repaired as necessary. The application includes an inspection schedule and a preventative maintenance and inspection schedule.</li> <li>- The operator has developed a system to identify, assess and minimise the environmental risks and hazards of accidents and their consequences. The accident management plan will be implemented and maintained at the LTP to ensure the site and site staff are fully prepared for such incidents.</li> </ul> <p>Emissions of pollutants to surface waters have been screened out as insignificant, and we agree that the operator's proposed techniques are BAT for the installation. There are no relevant emission benchmarks for the methane stripping plant and no new ELVs will be required in the permit.</p>	
<b>The permit conditions</b>		
Updating permit conditions during consolidation.	<p>This variation builds on the previous variation (EPR/BV7222IV/V003), which was a consolidation produced under the landfill permit review. This updated previous permit conditions to those in the new generic permit template as part of the permit consolidation. The new conditions have the same meaning as those in the previous permit(s). Certain template conditions were amended to reflect current best practice. These changes have been developed in consultation with industry having regard to the relevant legislation.</p> <p>We have retained all conditions and amended any necessary to introduce the methane stripping plant. The operator has agreed that the new conditions are acceptable.</p>	✓
Waste types	We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	<p>Leachate will be accepted at the LTP facility from Whistley and Hurst Landfills only.</p> <p>19 07 03 – landfill leachate other than those mentioned in 19 07 02</p> <p>We made these decisions with respect to waste types in accordance with S5.03 Guidance for the Treatment of Landfill Leachate.</p>	
Improvement conditions	<p>Based on the information on the application, we consider that we need to impose improvement conditions.</p> <p>We have imposed improvement conditions to ensure that:</p> <ul style="list-style-type: none"> <li>➤ Landfill gas related uncertainties/improvements are addressed.</li> <li>➤ Leachate monitoring (Whistley) is reported.</li> </ul>	✓
Incorporating the application	<p>We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process.</p> <p>These descriptions are specified in the Operating Techniques table in the permit.</p> <p>The new reference ensures that the new operations will be in accordance with S5.03 Guidance for the Treatment of Landfill Leachate and CIRIA guidance on containment systems. It also references operational information provided by the operator regarding treatment capacity, the stripping process, leachate acceptance, handling and storage, monitoring, odour, noise, containment, inspection, maintenance and details of risk management for spills &amp; leaks, vandalism, fire hazard, plant &amp; equipment failure and explosions.</p>	✓
Emission limits	<p>We have decided that emission limits should be set for the parameters listed in the permit.</p> <p>See the Key Issues sections on:</p> <ul style="list-style-type: none"> <li>• Point Source emissions to water – emission limits and monitoring requirements</li> <li>• Industry Code of Practice (ICoP)</li> </ul>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	Otherwise, no emission limits have been added, amended or deleted as a result of this variation.	
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>See the Key Issues sections on:</p> <ul style="list-style-type: none"> <li>• Point Source emissions to water – emission limits and monitoring requirements</li> <li>• Industry Code of Practice (IcoP)</li> </ul> <p>Otherwise, no monitoring requirements have been added, amended or deleted as a result of this variation.</p> <p>Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate.</p>	✓
Reporting	<p>We have specified reporting in the permit.</p> <p>The operator must report their daily flow to sewer and LTP effluent concentrations on a quarterly basis as well as the annual tonnage of leachate treated. These requirements have been imposed in order to ensure that the volume and flow rate of discharged effluent used in the H1 risk assessment remain representative of emissions from the installation.</p> <p>We made these decisions in accordance with S5.03 Guidance for the Treatment of Landfill Leachate.</p> <p>Otherwise, no reporting requirements have been added, amended or deleted as a result of this variation.</p>	✓
<b>Operator Competence</b>		
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓
Technical competence	Technical competency is required for activities permitted. The operator is a member of an agreed scheme.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Financial provision	<p>There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.</p> <p>The financial provision arrangements satisfy the financial provisions criteria.</p>	✓

## Annex 2: Consultation and web publicising responses

Summary of responses to consultation and web publication and the way in which we have taken these into account in the determination process.

Response received from
Public Health England
Brief summary of issues raised
PHE has no significant concerns regarding risk to health of the local population from this proposed activity, providing that the applicant takes all appropriate measures to prevent or control pollution, in accordance with the relevant sector technical guidance or industry best practice.
Summary of actions taken or show how this has been covered
We have ensured that the operator has referenced the appropriate guidance and plans to use the required operating techniques.

We did not receive responses from:

- Local authority environmental protection department
- Local authority planning department
- Sewerage undertaker
- Health and Safety Executive

No responses were received in relation to our web publication.