

Permitting decisions

Bespoke permit

We have decided to grant the permit for SRC Martells Quarry operated by Sewells Reservoir Construction Limited.

The permit number is EPR/BP3334YQ.

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 provides a record of the decision making process. It:

- highlights key issues in the determination
- summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account
- shows how we have considered the consultation responses.

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

Read the permitting decisions in conjunction with the environmental permit. The introductory note summarises what the permit covers.

Key issues of the decision

Hydrogeological Risk Assessment (HRA)

The operator submitted a Hydrogeological Risk Assessment to support their application. The primary tool used to inform HRA was LandSim probabilistic modelling software which is a commonly used computer model to assess the impact of the landfill upon the water environment. Based on our review of the HRA it was not clear that LandSim is entirely appropriate for the application site given the longer term sub-water table setting. It was also not clear how the short term dewatered scenario is represented by the model. To address the uncertainties, we requested through Schedule 5 Notice dated 26 June 2018 that the operator review their rationale for the use of LandSim and justify its suitability to represent the specific conceptual model for the site. We also requested them to consider the need for alternative modelling methods that might represent the site conceptual model more accurately and to carry out additional modelling where necessary.

We received operator's response on 10 July 2018. The operator provided further information on the modelling rationale which we were satisfied with. We acknowledge the LandSim model is not a perfect modelling approach for the application site but it is a conservative representation and therefore acceptable. The operator also provided us with additional modelling with the RAM software which provided a benchmark against the original LandSim modelling. This confirmed the original findings representative.

In the Schedule 5 Notice we also requested the operator to review their leachate source term for inert waste cells – Cells 2 and 3 and remodel for selected determinands using the C_0 values provided in Section 2.1.2.1 of Council Decision 2003/33/EC. The C_0 values in the Council Decision 2003/33/EC are consistent with the approach used in the derivation of the WAC and are most likely to represent the initial peak concentrations of contaminants in leachate (Liquid to Solid (L/S) ratio 0.1l/kg) and therefore these should be used in place of the 'factor of 10' WAC concentrations that the operator had used in HRA. In the operator's response the RAM model was set up using the Council Decision C_0 values, except for ammoniacal-N and potassium where no WAC values are available and BCL Consultant Hydrogeologists Ltd's WAC testing database was used as a surrogate. We were satisfied with the operator's response and no further action was required.

In terms of groundwater compliance limits, the operator had based their compliance limits on modelled predictions rather than the empirical background data. We needed to understand why this might be necessary although 3-4 rounds of water sampling had been carried out from the new boreholes installed at the site, but the data had not been provided. Within the Schedule 5 Notice we requested the operator to explain this and also provide the available background groundwater quality data for boreholes that will be used for requisite surveillance and review the data against their proposed control and compliance limits which have been based on modelled predictions. We also requested the operator to review and screen the available data to include a hazardous substance with associated limits, and as necessary, revise their proposals for control and compliance limits accordingly. The operator responded confirming that a further 6 rounds of monitoring has been done, and from this they have used statistical analysis to derive control and compliance limits for groundwater quality for BH3, BH4 and GW97-01. We were satisfied with their proposals, including the rationale for discounting ammoniacal-nitrogen and including benzene as the hazardous substance.

Once de-watering at the site has stopped and groundwater flow direction reverts back to flowing towards the north-west, in accordance with the operator's proposal the groundwater compliance limits will need to be reviewed. Given the future uncertainty as to exactly when this will be and the exact flow direction (which will influence selection of boreholes for compliance limits), we have considered, that reliance on the annual monitoring reviews to identify when the appropriate moment should be to review the compliance limits, is the best way to address this. Table S3.2 of the permit refers to the requirement of the review.

Landfill Gas Risk Assessment (GRA)

We are satisfied with the operator's Landfill Gas Risk Assessment. The GRA identifies that the waste types for both the inert and non-hazardous cells of the site have a low potential to generate landfill gas. In-waste and perimeter gas monitoring is proposed, together with methane compliance limits (1% at external boreholes). Carbon dioxide limits are not proposed due to external sources.

However, details of the proposed in-waste gas monitoring were missing from the application. We requested through Schedule 5 Notice dated 26 June 2018 the operator to provide further information on in-waste gas monitoring proposals, including a drawing with labelled locations of proposed monitoring points and update to the GRA. We were satisfied with the operator's response that provided the updated gas risk assessment including the requested details.

Section 4.8 of the GRA states that compliance limits are not proposed for CO₂ because of external sources. Despite this, we require that action levels and associated action plans are set for CO₂ and these need to be determined in accordance with 'Industry Code of Practice on perimeter soil gas (ICoP)'. The available background monitoring data (table 1 of the GRA) is currently insufficient to reliably determine action levels for CO₂ as there are a limited number of data sets. Therefore, we have imposed improvement requirements IC1 and IC2 in the permit that require the operator to collect CO₂ monitoring data once a month for an additional year and after completion of monitoring to propose appropriate action levels and action plans. Up to date, the operator has carried out approximately one years' worth background monitoring in perimeter gas boreholes but this does not provide sufficient data to reliably apply statistics to the dataset. In accordance with ICoP a minimum of 24 data points should be used for the review.

Stability Risk Assessment (SRA)

We are satisfied with the operator's Stability Risk Assessment. Given that factors of safety against slope instability are acceptable and no other potential sources of capping or liner deformation or distress have been identified, there is no need for geotechnical monitoring.

Landfill Restoration

The operator has confirmed that the restoration soils will be the original soils from the site that will be stored in perimeter bunds for the duration of the operations. The operator is unlikely to use waste in the restoration scheme but in case there isn't enough soils on site, the option of use of waste is included in the permit. Use of waste on restoration is subject to submission of a restoration plan and recovery versus disposal assessment.

Dust Management Plan

Table 11 of ESID report provides a summary of mitigation measures for particulate matter but in our view more detailed plan was required given the proposal included acceptance of highly dusty waste types near residential receptors. In the Schedule 5 Notice dated 26 June 2018 we requested the operator to provide a more detailed Dust Management Plan as well as details of particulate matter monitoring programmes in accordance with our guidance M17.

We received operator's Dust Management Plan on 24 July 2018. We were satisfied with the operator's proposal to limit monitoring of particulates to daily visual monitoring based on the proposal to remove all highly dusty waste types (ash) from the waste type list. We were also satisfied that there were now more comprehensive mitigation measures in place. Sufficient details of the sheeting used to cover vehicles and tipping methods had been provided. However, the plan was still missing details of maximum waste storage sizes/heights and clear triggers to reduce/cease the operation during high winds. Further submissions of the plan were provided on 7 and 19 September 2018. We are satisfied with the latter submission that now confirms that there will be no stockpiling of waste within the site boundary. Although the operator did not propose to install an on-site weather station to monitor the prevailing wind direction and speed, the operator provided data from the nearest weather station in Wattisham to characterise the climate conditions at the site. This confirmed that the predominant wind direction is from the South-West which is from the direction of the closest sensitive receptor. The nearest receptors are also protected with screening bunds that are along the western, eastern and southern boundaries. Therefore, we have accepted that daily visual assessment of dust emissions from vehicle movements and tipping operations is sufficient to determine the need to employ mitigation measures such as dampening with a water bowser and reduction in operation. The operator has confirmed the spray equipment is available and stored within the wider quarry area.

Waste Acceptance Procedures (WAP)

The operator's Gas Risk Assessment states that 'A rigorous Waste Acceptance Procedure (WAP) will ensure that no biodegradable wastes are accepted for disposal at the Site'. ESID Section 3.18 states that 'detailed waste acceptance procedures (WAP) are provided in the environmental management system, a summary of which is provided in Appendix 8.' However, Appendix 8 only provided summary headings. Therefore, we were unable to check the operator's WAP to determine exactly how their procedures might prevent biodegradable wastes being accepted at the site. Given that the operator was not proposing any gas control measures, through a request for further information on 24 August 2018, we asked the operator to consider a Total Organic Carbon (TOC) limit for the non-hazardous Cell 1 as an additional safeguard against biodegradable materials. This requirement for a TOC limit is consistent with similar requirements at other non-hazardous sites where no gas control measures were proposed, such as the Landfill Tax Qualifying Materials sites.

The operator's first response stated that there are no numerical WAC limits for landfills for non-hazardous waste in the Council Decision 2003/33/EC and therefore they had not proposed a limit. However, in our view this was required to ensure that biodegradable waste would not be accepted and gas generated as a result within the Cell 1. There is potential for some of the permitted waste types such as 19 12 12 to include biodegradable materials. Upon our request, the operator proposed a TOC limit of 5% based on the limit for stable non-reactive hazardous waste (SNRHW) which, due to its nature, does not biodegrade and does not produce leachate or landfill gas. We consider the proposed limit appropriate.

Decision checklist

| Aspect considered | Decision |
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| Receipt of application | |
| 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. |
| Consultation | |
| Consultation | <p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> <p>The application was publicised on the GOV.UK website.</p> <p>We consulted the following organisations:</p> <p>Public Health England Director of Public Health Health and Safety Executive Food Standards Agency Local Authority – Essex County Council Environmental Health</p> <p>The comments and our responses are summarised in the consultation section.</p> |
| Operator | |
| Control of the facility | We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits. |
| The facility | |
| The regulated facility | <p>We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN 2 'Defining the scope of the installation', Appendix 1 of RGN 2 'Interpretation of Schedule 1', guidance on waste recovery plans and permits.</p> <p>The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.</p> |
| The site | |
| Extent of the site of the facility | The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. The plan is included in the permit. |
| Biodiversity, heritage, landscape and nature conservation | <p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.</p> <p>We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or</p> |

| Aspect considered | Decision |
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| | <p>habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.</p> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.</p> |
| Environmental risk assessment | |
| Environmental impact assessment | <p>In determining the application we have considered the Environmental Statement.</p> <p>We have also considered the planning permission and the committee report approving it.</p> |
| 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 the key issues section for further detail.</p> |
| Operating techniques | |
| General operating techniques | <p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.</p> <p>The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.</p> |
| Noise management | <p>We have reviewed the noise management plan in accordance with our guidance on noise assessment and control.</p> <p>We consider that the noise management plan is satisfactory.</p> |
| Permit conditions | |
| Use of conditions other than those from the template | <p>Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.</p> |
| Waste types | <p>We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.</p> <p>We are satisfied that the operator can accept these wastes for the following reasons:</p> <ul style="list-style-type: none"> • they are suitable for the proposed activities • the proposed infrastructure is appropriate • the environmental risk assessment is acceptable. <p>We have excluded the following wastes for the following reasons: 10 01 01, 10 01 02, 10 01 03, 10 01 15, 10 01 17, 19 01 12, 19 01 14</p> <p>The operator withdrew these waste types from the proposal after</p> |

| Aspect considered | Decision |
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| | <p>considering ash as highly dusty waste type to prevent particulates emissions beyond the site boundary.</p> <p>We made these decisions with respect to waste types in accordance with our guidance 'Waste Acceptance at Landfills - Guidance on waste acceptance procedures and criteria'.</p> |
| Improvement programme | <p>Based on the information on the application, we consider that we need to impose an improvement programme.</p> <p>See key issues 'Landfill Gas Risk Assessment' for further detail.</p> |
| Emission limits | <p>We have accepted the proposed leachate level limit of 25mAOD for Cell 1. We accept that there is no need to monitor leachate levels in Cells 2 and 3 because these cells accept only inert waste which have a low leaching potential.</p> <p>We have not set any surface water limits in the permit. During dewatering operations the water is discharged under existing authorisation (permit EPR/FP380IKH). Once the land drains have been installed on a restored landform, uncontaminated surface water is discharged to the irrigation lagoon in southwest corner of the site. A generic monitoring of the water quality is required in Table S3.8 of the permit but no limits have been set.</p> <p>See key issues section 'Hydrogeological Risk Assessment' for information about the groundwater compliance limits.</p> <p>See key issues section 'Landfill Gas Risk Assessment' for information about the perimeter gas monitoring limits.</p> |
| 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>In accordance with the operator's proposal, combined gas and leachate monitoring boreholes will be installed in Cell 1 that receive non-hazardous waste. This is to check for potential leachate and gas generation although it is anticipated that this will be minimal due to the nature of the waste types that will be accepted for disposal. The operator's Waste Acceptance Procedures for Cell 1 incorporates a TOC limit of 5% to safeguard against biodegradable materials.</p> <p>Gas monitoring is also proposed for inert waste Cells 2 and 3 but we have agreed that leachate monitoring or collection is not required. The permitted waste types are limited to inert only and strict waste acceptance procedures ensure that only wastes with a low organic content (TOC 3%) will be accepted for disposal.</p> <p>Based on the operator's risk assessments and expected minimal leachate and gas production in all cells, we have accepted operator's proposal to reduce monitoring frequency for leachate level and gas monitoring from monthly to quarterly.</p> <p>We made these decisions in accordance with our guidance 'Landfill (EPR 5.02): how to comply with your environmental permit –additional guidance' and LFTGN 02, LFTGN 03 and LFTGN 07.</p> |

| Aspect considered | Decision |
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| Reporting | <p>We have specified reporting in the permit.</p> <p>We made these decisions in accordance with our guidance 'Landfill (EPR 5.02): how to comply with your environmental permit –additional guidance' and LFTGN 02, LFTGN 03 and LFTGN 07.</p> |
| Operator competence | |
| Management system | <p>There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.</p> <p>The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.</p> |
| Technical competence | <p>Technical competence is required for activities permitted.</p> <p>The operator is a member of an agreed scheme.</p> <p>We are satisfied that the operator is technically competent.</p> |
| Relevant convictions | <p>The Case Management System been checked to ensure that all relevant convictions have been declared.</p> <p>No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.</p> |
| Financial provision | The financial provision arrangements satisfy the financial provisions criteria. |
| Growth Duty | |
| Section 108 Deregulation Act 2015 – Growth duty | <p>We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.</p> |

Consultation

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

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| Response received from |
| Public Health England (PHE) |
| Brief summary of issues raised |
| <p>PHE recommend that any Environmental permit issued for this site should contain conditions to ensure that the following potential emissions do not impact upon public health: fugitive dust / particulate matter from activities on site.</p> <p>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.</p> <p>In relation to potential risk to public health, PHE recommend that the Environment Agency (EA) also consult the following relevant organisation(s) in relation to their areas of expertise:</p> <ul style="list-style-type: none">• the local authority for matters relating to impact upon human health of contaminated land, noise, odour, dust and other nuisance emissions;• the Food Standards Agency, where there is the potential for deposition on land used for the growing of food crops or animal rearing; and• the Director of Public Health for matters relating to wider public health impacts. |
| Summary of actions taken or show how this has been covered |
| <p>The permit includes condition 3.2.1 which requires that emissions of substances not controlled by emission limits shall not cause pollution. We have approved the operator's Dust Management Plan that describes the appropriate measures to prevent or where that is not practicable, to minimise dust emissions.</p> <p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> |