



Rainham Landfill

Environmental Statement - Volume 4 Non-Technical Summary

Prepared for



Veolia ES Cleanaway (UK)

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FOREWORD

This Environmental Statement (ES) is submitted in support of a planning application made by Veolia ES Cleanaway (UK) (referred to as 'the Applicant') to extend the operational life of Rainham landfill and composting facilities.

The ES has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 and comprises the following documents:

- i) The Environmental Statement (ES) Main Report (Volume 1) contains the detailed project description; an evaluation of the current environment in the area of the Proposed Development; the likely significant environmental effects of the scheme; and details of the proposed mitigation measures which would alleviate, compensate for, or remove adverse impacts identified in the study. Volume 1 also includes a summary of the overall likely significant environmental effects of the Proposed Development, and a summary of additional mitigation, monitoring and/or enhancement measures, along with the residual effects following their assumed implementation;
- ii) Illustrative Figures (Volume 2) which contains all relevant schematics, diagrams and illustrative figures;
- i) Technical Appendices (Volume 3) which include details of the methodology and information used in the assessment, detailed technical schedules and, where appropriate, raw data;
- ii) A Non-Technical Summary (Volume 4) containing a brief description of the Proposed Development and a summary of the ES, expressed in non-technical language.

Hard copies of the Environmental Statement, as a four-volume set, are available at a cost of £200 by writing to Axis, Well House Barns, Chester Road, Chester, CH4 0DH. Alternatively, the Non-Technical Summary (NTS) can be purchased on its own from the same point of contact for £15, with the entire Environmental Statement available for purchase on a CD for £10.



In addition, the planning application is accompanied by a Planning Statement that sets out the planning policy framework against which the application should be determined. The Planning Statement should be read in conjunction with this Environmental Statement.



1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

- 1.1.1 This Environmental Statement (ES) has been prepared in support of a planning application made by Veolia ES Cleanaway (UK) (referred to as 'the Applicant') in support of a planning application to extend the operational life of the landfill and composting facilities at Rainham Landfill (the Site). The Site location is shown on Figure 1.1.
- 1.1.2 This document is the Non-Technical Summary (NTS) of the Environmental Statement (ES) and provides a review of the development proposals, and the possible environmental implications and measures to reduce the likely impacts (mitigation measures), in concise lay terms.
- 1.1.3 The ES has been prepared in accordance with guidance and legislation that requires the likely significant environmental effects of developments to be assessed during construction, operation and decommissioning.

1.2 The Applicant

- 1.2.1 The Applicant is Veolia ES Cleanaway (UK).

1.3 The Site

- 1.3.1 The Rainham Landfill Site comprises an area of approximately 151 hectares. The Site is located on the eastern side of Greater London, and on the northern bank of the River Thames. The key features of the Site and adjoining built waste management facilities are shown on Figure 1.2.
- 1.3.2 The landfill site is defined by Coldharbour Lane to the north, north-east and south-east. To the south of the landfill are the open windrow composting facility, the materials recycling facilities and the new Freightmaster employment development. A public footpath runs along the riverbank to the south and west. The Easter Industrial Park is located to the north-west of the landfill. A concrete pad, formerly used for the treatment of soil, is located to the north of the landfill.
- 1.3.3 The Inner Thames Marshes Site of Special Scientific Interest (SSSI) and Rainham Marshes Local Nature Reserve (LNR) are located directly to the north and north-west of the Site. The eastern section is run by the RSPB. The closest heritage asset



to the Site is the Grade II listed '28 and 30 Erith High Street', located circa 1km south of the Site.

- 1.3.4 The nearest residential properties are located in Erith, approximately 870m to the south-east, on the opposite bank of the River Thames.



2.0 ALTERNATIVES

2.1 Introduction

- 2.1.1 Schedule 4 of the EIA Regulations identifies the information for inclusion in Environmental Statements. Paragraph 2 requires the following:

“A description of the reasonable alternatives (for example in terms of design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including comparison of the environmental effects”.

- 2.1.2 It should be noted that the EIA Regulations place no specific obligation on a developer to study alternatives, but simply to describe them in the manner specified, where they have been considered.

2.2 Alternative

- 2.2.1 Three alternatives to the Proposed Development were considered, these are identified below.

- i) **No New Development Scenario** - This Scenario assumes that landfilling ceases on 31 December 2024 and in accordance with the 2016 planning permission capping and restoration works are to be completed by 31 December 2026. In these circumstances there would be a large, elongated amphitheatre like depression in the central eastern area of the landfill. The sides of this feature are steep sided which would mean they are unsuitable for capping and restoration. The immediate abandonment of operations would give rise to adverse environmental effects; and significantly impact on the restoration and future beneficial use of the Site. As such, this is not considered to be a reasonable alternative.
- ii) **Soils Only Scenario** – This scenario would see only soils deposited at the Site to fill the remaining void. there are increased environmental risks which would likely arise from the placement of imported soil wastes arising from increased differential settlement across the restored landform. For these reasons, this is not considered to be a reasonable alternative.



- iii) **Alternative Landform Scenario** - Consideration has been given to whether the landform of the non-hazardous area of the Site could be re-designed to reduce inputs and bring forward the end date for landfilling. The majority of the reprofiling works would have to take place around the amphitheatre area to locally change the landform from a depression shape into a valley that allowed surface water to shed off the site. Alternatively, larger scale excavations could be undertaken to reform the area on around the amphitheatre into a domed landform. The alternative landform option gives rise to significant timescale, technical, pollution risk, amenity impacts and sustainability issues. As such, this is not considered to be a reasonable alternative.

2.3 Conclusions

- 2.3.1 The EIA Regulations require an ES to provide a description of the reasonable alternatives studied by the developer, and an indication of the main reasons for selecting the chosen option. The Applicant has considered a number of potential options and has confirmed why these have all been discounted. The application is considered the best option in all cases from a logistical, deliverable, viable and environmental perspective.



3.0 SCHEME DESCRIPTION AND CONSTRUCTION METHODS

3.1 Introduction

3.1.1 The Proposed Development comprises:

- i) Continuation of waste inputs to the landfill until 2029
- ii) Continuation of composting
- iii) Restoration complete by 2031

3.2 Proposed Development

Landfill Operations

- 3.2.1 Planning Permission was granted in 1998 to deposit waste until December 2012, and then restore the Site by 2018 (ref. P1275.96). Planning permission was subsequently granted to extend the life of the Site until 31 December 2024 (ref. P1566.12).
- 3.2.2 The landfill is still operational in the central part of the Site, as currently permitted resettlement levels have not yet been reached. The landfilling operations around the majority of the periphery have been completed, with these areas now being both capped and restored.
- 3.2.3 The Site is presently in an obviously unfinished state which will necessarily require the importation of additional material to create a satisfactory final landform that can then be engineered to create a successfully restored site.
- 3.2.4 In September 2024 there remained an estimated 1.085 million cubic metres (m³) of landfill void at the Site principally as a result of increased rates of recycling across the industrial, commercial, and domestic sectors. This increase in the rate of recycling, combined with a general reduction in waste generated per capita, has been driven primarily by fiscal incentives (escalating increase in landfill tax) and political initiatives (improved recycling opportunities at both the local and national level). These leaving factors have consequently reduced the volume of residual waste sent to landfill. As a direct result, it is not possible for Veolia to achieve the approved restoration profiles (as agreed under planning permission P1566.12) by the current approved cessation date of 31 December 2024.



- 3.2.5 Based on current and projected inputs, it is anticipated that an additional 5 years will be required to fully complete the remaining landfill void and to achieve the approved contours, no change is proposed to the approved pre and post contours which are shown on Figures 3.1 and 3.2. A further two years are required to complete the restoration of the Site.
- 3.2.6 The Environmental Permit (EP) for the landfill (note that other operations are operated under different EPs) limits annual waste inputs to the landfill site to 1,700,000 tonnes per annum (tpa) (1Mtpa of non-hazardous waste and 700,000tpa of inert waste). The Site receives approximately 420,000 of tpa of non hazardous municipal solid waste (MSW) and commercial and industrial (C&I) waste. The waste that is landfilled is brought directly from the weighbridge to the operational cell for disposal. In accordance with the EP the waste is inspected as it is placed in the cell to ensure that it does not contain any prohibited waste and that the information on the waste transfer note is accurate.
- 3.2.7 The Site receives waste from 0700-1600 Monday to Friday and 0700-1200 on Saturdays.

Access

- 3.2.8 Access by Ferry Lane and Coldharbour Lane connects The Site with London and the surrounding regions via the A13. The Site is also accessible from the River Thames via a jetty (not part of this application) on the south west boundary.

Restoration

- 3.2.9 The Site will be progressively restored in phases to return The Site to beneficial uses at the earliest opportunity. The restoration phases will follow the completion of landfilling phases. There will be a minimum period of five years' aftercare management of the restored landform following closure.
- 3.2.10 The Site will be restored for use as amenity and public open space to be integrated with the London Riverside Conservation Park ('Wildspace'). As safeguarded by the extant planning permission, the restoration proposals for the Site would be developed in consultation with agreed stakeholders to provide an evolving restoration scheme for the landfill site at Rainham. The proposals presented (see Figure 3.5) incorporate two core themes:



- i) The provision of visitor facilities; and
- ii) Habitat creation and enhancement to deliver a 10% Biodiversity Net Gain.

3.2.11 The design solution will integrate these in a way that recognises the different objectives that stakeholders have for the Site. Given the overall site area (approximately 159ha), it is feasible to incorporate a range of different elements in the final scheme. The restoration proposals set out below describe the overall outline design solution for the Site as well as justifying the proposed location of the various elements proposed.

3.2.12 The overall strategy for The Site is to create an attractive site for visitors to enjoy, while providing habitat diversity that complements the objectives of the wider Wildspace Strategy.

Ancillary Infrastructure and Plant and Equipment

3.2.13 This application seeks consent for the retention of the existing landfill cabins, weighbridge and wheelwash facilities shown on Figure 3.3.

Composting Facility

3.2.14 It is also proposed to continue the open windrow composting operations throughout the extended period of landfilling operations (i.e. until 31 December 2031) in part to help assist with generating the high-quality restoration material required to restore the Site. The layout of the composting facility is shown on Figure 3.4. The composting facility includes composting and wood waste storage and processing



4.0 SUMMARY OF EFFECTS

4.1 Scope of Assessment

4.1.1 In accordance with the EIA Regulations, only the 'main' or 'significant' effects of the development need to be subject to an EIA. In this context, the following section sets out the topics which have been scoped out of the ES along with a justification for this.

4.1.2 As a result of the pre-application discussions, it was determined that the Proposed Development was unlikely to result in significant environmental effects in relation to:

- i) Heritage and Archaeology
- ii) Ground Conditions
- iii) Climate Change
- iv) Major Accidents and Disasters
- v) Flood Risk, Drainage and Water Quality

4.1.3 Nonetheless, these topics are considered as part of the Planning Statement where relevant.

4.1.4 On this basis the Environmental Statement assessed the following topics in detail, the findings of which are summarised in this NTS:

- i) Air Quality
- ii) Landscape and Visual
- iii) Ecology and Biodiversity
- iv) Noise
- v) Traffic and Transportation

4.2 Air Quality

4.2.1 The air quality assessment has considered the potential impacts at representative receptors associated with odours, fugitive dust and HGV exhaust emissions from the Proposed Development.

4.2.2 There are no proposed changes to the nature of material to be handled or methods of working. The waste handling and infilling activities would continue to be managed



and controlled under the existing Environmental Permit and agreed Odour Mitigation Strategy (OMS).

- 4.2.3 Through the incorporation of the in-design mitigation and these measures no unacceptable impacts or resulting effects on amenity have been identified. The resulting significance of dis-amenity effects resulting from odours is not significant.
- 4.2.4 Similarly, there would not be any changes to the nature of material to be handled or methods of working with respect to soils handling for restoration. The activities would continue to be managed and controlled under the existing Environmental Permit and agreed Dust Management Scheme (DMS).
- 4.2.5 Through the incorporation of the in-design mitigation and these measures no unacceptable impacts or resulting effects on amenity, human health or ecological receptors due to fugitive dust have been identified. The resulting significance of dis-amenity, ecological or human health effects resulting from fugitive dust is not significant.
- 4.2.6 The Proposed Development would not result in the generation of additional HGV movements on the local road network when compared to historic levels. The significance of residual effects associated with vehicle exhaust emissions would be not significant.
- 4.2.7 The overall significance of the Proposed Development in relation to air quality effects is not significant.

4.3 Landscape and Visual

- 4.3.1 Chapter 5.0 of the ES, together with supporting Figures and Appendices, sets out an assessment of the likely significant landscape and visual effects of the Proposed Development.
- 4.3.2 This LVIA has examined the potential landscape and visual effects of the Proposed Development, i.e. the extension of time of the Rainham Landfill for five years with restoration in 2031, as opposed to 2026 in the consented application. It has considered the potential direct effects on the fabric of the landscape and the potential effects on the perception of landscape character. The assessment has also considered the potential effects of the Proposed Development on visual amenity.



- 4.3.3 Aside from minor changes to the baseline, it is judged that the LVIA produced in 2012 remains a valid assessment of the landscape and visual effects of the consented scheme.
- 4.3.4 The effect of the Proposed Development on the landscape resource would be limited. The operational landfill site was already, at the time of the 2023 baseline, forming an established part of the landscape, with topography already rising to the consent level such that its effects had been fully realised. The five year extension of operational time, would not increase the height of the topography of the remaining central areas above the height of areas already completed, neither will it result in the loss of any features of value. As such the effect on landscape character would be minimal.
- 4.3.5 The effects on visual amenity are also predicted to be very limited. Again, due to the fact that the topography of the site has already reached its consented profile and there will be no further increase in overall height, it is not anticipated that there would be any significant effects on visual amenity as the Proposed Development would only result in a relatively modest increase to the operational time, with effects limited to the presence of visible operations in the centre of the site, where they are relatively remote from receptors.

4.4 Noise

- 4.4.1 Chapter 6.0 provides an assessment of the noise and vibration impacts of the Proposed Development during its construction, operation and decommissioning period at the identified noise sensitive receptors. The study benefits from a baseline study to inform the assessment and to ensure that the impacts are determined in context with the baseline sound climate.
- 4.4.2 During the waste disposal, restoration and composting period of the development there would be a range of noise sources in use and noise levels would vary throughout the lifespan of the Proposed Development. The highest noise levels relative to NSR are likely to occur during Phase 2 in 2025 when plant is closest to the southwest corner of the Site.
- 4.4.3 The introduction of BPM mitigation measures has the effect of minimising noise levels at the NSR.



- 4.4.4 It is concluded that the operational noise with the implementation of mitigation measures, using best practical means, is likely to result in an impact magnitude classification of negligible at receptors and a neutral level of effect.
- 4.4.5 The change in noise levels as a result of the traffic associated with the Proposed Development would be negligible and as such represents a neutral significance on high sensitivity residential receptors. As such the impact is considered not significant in EIA terms.
- 4.4.6 In terms of cumulative effects from other proposed or permitted developments on Site have been considered and the impact on residential NSR is likely to result in a negligible impact magnitude and a neutral level of effect and not significant.
- 4.4.7 In terms of the effect on ecological, recreational NSR, the results of analysis show a slight impact and minor level of effect and not significant.
- 4.4.8 In summary, no significant noise effects have been identified by the noise assessment in relation to the Proposed Development. Table 4.1 below summarises the predicted effects of the operational and restoration of the Proposed Development.

Table 4.1 - Residual Impact at Nearest Sensitive Receptor after Mitigation Measures

Source	Nature of Effect	Time Period	Potential Effect	Proposed Mitigation	Residual Effect	Residual Impact Magnitude
Operational Road Traffic noise	Direct & Temporary	Daytime	Neutral	None Required	Neutral	Negligible
Operational Noise ¹	Direct & Temporary	Daytime	Neutral	BPM Mitigation	Neutral	Negligible
Operational Noise ²	Direct & Temporary	Daytime	Neutral to Slight	BPM Mitigation	Neutral to Minor	Negligible to Slight
Cumulative Effects	Direct & Temporary	Daytime	Neutral	BPM Mitigation	Neutral	Negligible

¹Relative to residential receptors ²Relative to ecological and recreational receptors

Conclusions

- 4.4.9 Noise levels have been considered and assessed during the waste disposal, restoration and composting phases of the Proposed Development. Relevant and appropriate noise guidance and standards have been used to determine the impact. The assessment has been undertaken to establish the impacts of the Proposed

Development, such that any likely noise impact on existing and potential NSR is within acceptable limits and no significant impacts are likely to occur.

- 4.4.10 To establish any likely impact from noise, an assessment of baseline sound levels has been considered by undertaking sound monitoring at the nearest residential receptor areas.
- 4.4.11 In accordance with appropriate standards, best practical means would be employed to control the noise generation during the operational period. Measures include, for example, restriction on operating hours, use of broadband type noise reversing alarms and management controls of plant maintenance and operation.
- 4.4.12 The effect of the Proposed Development on site has been considered and impacts presented in terms of the cumulative effect of any developments local to the Proposed Development from permitted or proposed development on Site.
- 4.4.13 The assessment shows that with appropriate mitigation measures there would be no significant impacts during the waste disposal, restoration and composting activities of the Proposed Development.

4.5 Ecology and Biodiversity

- 4.5.1 Chapter 7.0 of the ES, together with the supporting Figures and Appendices, sets out an assessment of the likely significant effects of the Proposed Development upon ecology and nature conservation assets at the Site and within the surrounding area.
- 4.5.2 The network of designated sites in proximity to the application site (Inner Thames Marshes SSSI (which includes Rainham Marshes LNR and M031 River Thames and tidal tributaries SINC) and M039 Wennington, Aveley and Rainham Marshes SINC) have been identified as the only important ecological feature requiring assessment. The EcIA has concluded that extending the Proposed Development for a further five years would have no significant impact upon the designated sites adjacent to the application site provided avoidance measures currently implemented are maintained throughout the operational activities. A neutral impact on the adjacent designated sites is therefore predicted.
- 4.5.3 The habitats occurring within the application site (neutral grassland, mixed scrub, hedgerow (priority habitat) and ponds (priority habitat), and Notable plant species) are of local importance to biodiversity value and are considered suitable to support



protected and notable species. The EclA has concluded that extending the Proposed Development for a further five years would have no significant impact upon these habitats provided avoidance measures currently implemented are maintained throughout the operational activities. A neutral impact on these habitats is therefore predicted.

- 4.5.4 Protected species occurring within the application site (invertebrates, common amphibians (i.e. excluding GCN), reptiles, breeding birds and water vole) are of local importance to biodiversity value. The EclA has concluded that extending the Proposed Development for a further five years would have no significant impact upon these species provided avoidance measures currently implemented are maintained throughout the operational activities.
- 4.5.5 The EclA has concluded that during the recontouring involved with the restoration phase likely impacts to the onsite fauna are predicted and therefore, significantly negative impacts are anticipated in the absence of mitigation measures.
- 4.5.6 A Biodiversity and Ecological Management Plan (BEMP) will be produced and followed and therefore, ensuring impacts on these species will be neutral.
- 4.5.7 This impact assessment concludes that on the basis of the information available, there are no likely significant residual effects.
- 4.5.8 New legal/ policy implications of the development are predicted and will require a BNG agreement and 30-year Habitat Management and Monitoring Plan (HMMP) to ensure that the delayed restoration plan will be able to deliver and maintain a minimum of 10% net gain in biodiversity.

4.6 Transport

- 4.6.1 Chapter 8.0 of the ES, together with the accompanying Transport Assessment (TA) report in Appendix 8.1, sets out an assessment of the likely environmental effects of the Proposed Development from a traffic and transportation perspective.
- 4.6.2 Given the review of anticipated future operational road conditions and reference to appropriate guidance, it is concluded that the Proposed Development would not result in a significant impact on operational or environmental conditions over the local transport network and there is no requirement for off-site transport improvement / mitigation works.



- 4.6.3 The impact of trips generated by the proposal have been assessed against anticipated future road conditions and with reference to appropriate guidance. Given the characteristics of the assessed study area, which does not accommodate sensitive receptors, it can be concluded that traffic-related environmental effects associated with the Proposed Development are considered to be not significant in EIA terms.

4.7 Cumulative Effects

- 4.7.1 The only cumulative development that has been identified as having potential to give rise to cumulative environmental effects with the Proposed Development is the adjacent application for the Materials Recycling Facility. No significant cumulative environmental effects were identified.

5.0 CONCLUSION

- 5.1.1 Veolia is seeking consent to amend the timescale for waste disposal and open windrow composting and the date by which restoration of the Site is required to be completed.
- 5.1.2 A detailed Scheme Description is provided at Chapter 3.0, but to summarise, the Proposed Development would likely consist of the following key elements:
- i) Extension to waste disposal and open windrow composting operations to continue until 31 December 2029, with restoration to be completed by 31 December 2031
 - ii) Regularisation of existing site levels
 - iii) Retention of all landfill buildings and infrastructure whilst essentially required for the operation of the landfill and composting facilities.
- 5.1.3 The ES has assessed and evaluated all potential significant, direct, indirect, cumulative and in-combination environmental effects of the Proposed Development.
- 5.1.4 The ES provides a detailed description of the Proposed Development and provides an assessment of likely significant effects which could arise in relation to the following topics:
- i) Air Quality
 - ii) Landscape and Visual
 - iii) Noise
 - iv) Ecology and Biodiversity
 - v) Transport
- 5.1.5 The assessments have demonstrated that no significant effects would occur as a result of the Proposed Development.

