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INTRODUCTION

This chapter of the ES presents an Air Quality Assessment (AQA) in support of the planning application at Ling Hall Landfill Site near Rugby, Warwickshire. The planning application seeks approval to continue the approved landfill operations for a further 10 years beyond the current cessation date of 14 May 2021, resulting in a revised closure date of 14 May 2031.

Proposed Development

6.1 The current permission (ref. R16/890805) requires all landfilling operations to cease on (or before) 14th May 2021, and based upon the remaining void space of approximately 4 million m$^3$, the proposed end date of 2031 would allow for the remaining void to be filled and restored as per the approved restoration plan. In amending the cessation date for the landfill operations, the following facilities at the Ling Hall landfill site would also operate over the additional 10 year period:

- the street sweeping recycling facility (RBC/11CM020);
- the Incinerator Bottom Ash (IBA) processing facility (RBC/13CM003); and
- the green waste composting facility (RBC/17CM021).

6.2 There would be no other changes to the landfill, which would comply with all other existing conditions imposed by the current planning permission.

Scope and Objective

6.3 Pre-application consultation on the scope and methodology of the assessment of air quality was undertaken via a Scoping Report to Warwickshire County Council (WCC) with further correspondence held with the Environmental Health Officers of Rugby Borough Council (RBC).

6.4 The scope of the assessment of air quality includes the following:

- Odour assessment – qualitative assessment of potential effects on amenity of continued landfilling and green waste composting over the further 10-year period; and
- Dust assessment – qualitative assessment of potential effects on amenity and PM10 of continued landfilling and composting, IBA processing and street sweeping recycling facility over the 10-year period.

6.5 This assessment assumes the permitted control measures are adequate to minimise emissions, and therefore assesses the amenity impact of the residual (dust and odour) emissions within the context of land use planning.
6.6 On the basis that the existing landfill site is operated under an Environmental Permit (EP) and regulated by the Environment Agency (EA), the control of landfill gas and landfill gas combustion would continue to be adequately controlled and regulated by under the permitting regime. There are no proposed changes to the combustion plant.

6.7 The proposed continuation of landfill operations would not generate any additional vehicle movements above the existing baseline scenario, on account of the annual fill rate remaining as per existing and the continuation of the Section 106 agreement routing all landfill traffic from the A45/A4071. As such, in consideration of the guidance detailed in Environmental Protection UK (EPUK) / Institute of Air Quality Management (IAQM) Guidance on land-use planning and development control, an assessment of traffic emissions on the local road network has been screened out of the assessment.

RELEVANT LEGISLATION, POLICY AND GUIDANCE

Air Quality Strategy

6.8 The Government's policy on air quality within the UK is set out in the Air Quality Strategy for England, Scotland, Wales and Northern Ireland (AQS) most recently updated in July 2007. The AQS sets out a framework for reducing hazards to health from air pollution and ensuring that international commitments are met in the UK.

6.9 The AQS sets standards and objectives for ten priority pollutants. Standards are the concentrations of pollutants in the atmosphere which can broadly be taken to achieve a certain level of environmental quality. Objectives are policy targets often expressed as maximum concentrations not to be exceeded either without exception or with a limited number of exceedences within a specified timescale.

6.10 Many of the objectives in the AQS are made statutory in England with the Air Quality (England) Regulations 2007 for the purpose of Local Air Quality Management (LAQM).

6.11 The strategy objectives for the pollutants considered in this report are shown in Table 2-1. Strategy objectives for other pollutants can be found in the AQS.

Air Quality Regulations

6.12 The Air Quality Standards Regulations 2010 (the regulations) transpose the Ambient Air Quality Directive (2008/50/EC), and transpose the Fourth Daughter Directive (2004/107/EC) within UK legislation. The regulations include Limit Values, Target Values, Objectives, Critical Levels and Exposure Reduction Targets for the protection of human health and the environment (collectively termed Air Quality Assessment Levels (AQAL) throughout this report). Those relevant to this Air Quality Assessment are presented within Table 6-1.

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1 IAQM & EPUK. Guidance on land-use planning and development control: Planning for air quality 2017 v1.2.
**Table 6-1**

Applied Air Quality Assessment Levels (μg/m³)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Annual Standard</th>
<th>Short Term Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter less than 10µm diameter (PM₁₀)</td>
<td>PM₁₀</td>
<td>40</td>
</tr>
<tr>
<td>Particulate Matter less than 2.5µm diameter (PM₂.₅)</td>
<td>PM₂.₅</td>
<td>25</td>
</tr>
</tbody>
</table>

**Applicable Public Exposure**

6.13 Defra has published technical guidance for use in Local Air Quality Management. According to LAQM.TG(16) air quality standards should only apply to locations where ‘members of the public are likely to be regularly present and are likely to be exposed for a period of time appropriate to the averaging period of the objective. Authorities should not consider exceedences of the objectives at any location where relevant public exposure would not be realistic’ (examples are provided in Table 6-2).

6.14 Longer term standards such as annual means, should apply at houses or other locations which the public can be expected to occupy on a continuous basis. These standards do not apply to exposure at the workplace.

**Table 6-2**

Example

<table>
<thead>
<tr>
<th>Averaging Period</th>
<th>Relevant Locations</th>
<th>AQAL’s should apply at:</th>
<th>AQAL’s don’t apply at:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual mean</td>
<td>Where individuals are exposed for a cumulative period of 6 months in a year</td>
<td>Building facades of residential properties, schools, hospitals etc.</td>
<td>Facades of offices, Hotels, Gardens of residences, Kerbside sites</td>
</tr>
<tr>
<td>1-hour mean</td>
<td>Where individuals might reasonably expected to spend one hour or longer</td>
<td>As above together with locations of regular access, car parks, bus stations etc.</td>
<td>Locations not publicly accessible or where occupation is not regular</td>
</tr>
</tbody>
</table>

**Local Air Quality Management (LAQM)**

6.15 Section 82 of the Environment Act 1995 (Part IV) requires local authorities to periodically review and assess the quality of air within their administrative area. The reviews have to consider the present and future air quality and whether any AQALs prescribed in regulations are being achieved or are likely to be achieved in the future.

6.16 Where any of the prescribed AQOs are not likely to be achieved the authority concerned must designate an Air Quality Management Area (AQMA). For each AQMA the local authority has a duty to draw up an Air Quality Action Plan (AQAP) setting out the measures the authority intends to introduce to deliver improvements in local air quality in pursuit of the AQO. As such, local

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2 Department for Environment, Food and Rural Affairs (DEFRA): Local Air Quality Management Review and Assessment Technical Guidance LAQM.TG(16), February 2018
authorities, including WCC, have formal powers to control air quality through a combination of LAQM and by use of their wider planning policies.

6.17 Defra’s technical guidance for use by local authorities in their LAQM work, referred to in this report as LAQM.TG(16), has been used where appropriate in the assessment presented here.

General Nuisance Legislation

6.18 Part III of the Environmental Protection Act (EPA) 1990 (as amended) contains the main legislation on Statutory Nuisance and allows local authorities and individuals to take action to prevent a statutory nuisance. Section 79 of the EPA defines, amongst other things, smoke, fumes, dust and smells emitted from industrial, trade or business premises so as to be prejudicial to health or a nuisance, as a potential Statutory Nuisance.

6.19 Fractions of dust greater than 10μm (i.e. greater than PM10) in diameter typically relate to nuisance effects as opposed to potential health effects and therefore are not covered within the UK AQS. In legislation there are currently no numerical limits in terms of what level of dust deposition constitutes a nuisance.

Planning Policy

6.20 Chapter 5 above has provided a detailed consideration of planning policies at the national and local level relevant to this application and EIA.

National Planning Framework

6.21 Paragraphs 170 and 180 of the National Planning Policy Framework (NPPF) describes the policy context in relation to pollutants including air pollutants:

‘Planning policies and decisions should contribute to and enhance the natural and local environment by:

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of [...] air [...] pollution [...]. Development should, wherever possible, help to improve local environmental conditions such as air [...] quality [...]’

‘Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.’

6.22 Specifically, in terms of development with regards to air quality paragraph 181 states:

‘Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through
traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.’

6.23 The NPPF is accompanied by web based supporting Planning Practice Guidance (PPG) which includes guiding principles on how planning can take account of the impacts of new development on air quality. In regard to air quality, the PPG states:

“Defra carries out an annual national assessment of air quality using modelling and monitoring to determine compliance with EU Limit Values […] It is important that the potential impact of new development on air quality is taken into account […] where the national assessment indicates that relevant limits have been exceeded or are near the limit.”

“Whether or not air quality is relevant to a planning decision will depend on the proposed development and its location. Concerns could arise if the development is likely to generate air quality impact in an area where air quality is known to be poor. They could also arise where the development is likely to adversely impact upon the implementation of air quality strategies and action plans and/or, in particular, lead to a breach of EU legislation (including that applicable to wildlife).”

6.24 The PPG sets out the information that may be required within the context of a supporting air quality assessment, stating that “assessments should be proportional to the nature and scale of development proposed and the level of concern about air quality […] Mitigation options where necessary, will depend on the proposed development and should be proportionate to the likely impact”.

6.25 The policies within the NPPF and accompanying PPG in relation to air pollution are considered within this Air Quality Assessment.

Local Policy – Warwickshire County Council

6.26 Warwickshire County Council have published their Waste Core Strategy which guides the development of waste management facilities until 2028. Within the Strategy, the following policy is of relevance to this this assessment:

- Policy DM2 - Managing Health, Economic and Amenity Impacts of Waste Development

Local Policy – Rugby Borough Council

6.27 The Rugby Borough Council Local Plan\(^4\) was published in June 2019 and covers the development objectives until 2031. The Local Plan replaces the Core Strategy of June 2011. The following policies relate specifically to air quality:

- Policy HS5: Traffic Generation and Air Quality, Noise and Vibration

Environmental Permitting Regime

6.28 The operation of the landfill and the associated activities would continue to be regulated via Environmental Permits (EPR/BU2381IE) under the Environmental Permitting (England & Wales) Regulations (2016) (the ‘EP Regulations’). As such, emissions to air are regulated under the EP Regulations by the EA. It is therefore assumed that the pollution control regime will continue to operate effectively to ensure that the generation and release of dust and odour would be mitigated to an appropriate extent to prevent unacceptable offsite impacts.

Standards for Odour

6.29 Currently, in the UK there are no statutory numerical standards for assessing the acceptability of predicted odour impacts from quantitative odour impact assessments. On this basis, odour impact criteria are typically based upon guideline documents (predominately based on studies from outside of the UK), case law and research.

6.30 Odour assessments are undertaken using the concept of the European Odour Unit (ou\(_E\)), as defined in BS EN 13725. This approach allows impact assessment of any odorous gas as it is independent of chemical constituents and centres instead on multiples of the detection threshold (i.e. the physiological response of a human) of the gas in question. The Environmental Permitting H4 odour management guidance identifies a range of odour impact criteria depending primarily on the nature of the odour (i.e. its pleasantness/unpleasantness) and the likelihood of causing unacceptable impacts based on the 98th percentile of predicted hourly average concentrations over a year (notation given as C\(_{98,1}\)-hour x ou\(_E\)/m\(^3\)).

6.31 These impact criteria apply only to locations where an individual’s exposure is likely to occur for prolonged periods of time i.e. residential properties. Where exposure is more transient, i.e. roads, footpaths, workplaces, further consideration is given to the sensitivity of the receptor and how the duration and frequency of exposure of the individual will influence the acceptability of the predicted impact.

6.32 The Defra ‘Good Practice and Regulatory Guidance on Composting and Odour Control for Local Authorities’ states that 3 ou\(_E\)/m\(^3\) as a 98th percentile – provides a starting point for assessing the impact from most compost plant’. On this basis predicted impacts at residential receptors have been assessed by comparison to the C\(_{98,1}\)-hour 3.0ou\(_E\)/m\(^3\) criterion.

Assessment Guidance

Local Air Quality Management Technical Guidance (LAQM.TG(16))

6.33 Defra Local Air Quality Management Technical Guidance (LAQM.TG(16)) was published for use by local authorities in their LAQM review and assessment work. The document provides key guidance in aspects of air quality assessment, including screening, use of monitoring data, and use of background data that are applicable to all air quality assessments.

Odour Assessment Guidance

6.34 The IAQM published ‘Guidance on the assessment of odour for planning’ in 2014\(^5\). This guidance is specifically for assessing odour impacts for planning purposes rather than for environmental protection regulatory purposes (e.g. Environmental Permitting, statutory nuisance investigations, etc.). The guidance provides guidelines for what should be included in an odour assessment to support planning, appropriate methods for undertaking an assessment, and a framework for evaluating the significance of effects on amenity.

Dust Assessment Guidance

6.35 The (IAQM) published the document\(^6\) ‘Guidance on the Assessment of Mineral Dust Impacts for Planning’ in June 2016. Designed specifically for the planning process of mineral developments, the guidance sets out a structured methodology for the assessment of impacts and consideration of their significance which can be applied to sites that facilitate similar activities (i.e. stockpiling, internal haulage, material movements and restoration).

ASSESSMENT METHODOLOGY

Assessment of Odour

6.36 The assessment of fugitive odour emissions from the Proposed Development has been undertaken on the basis of a conceptual model as per the IAQM guidance that takes into consideration the potential sources, surrounding receptors and the pathway between source and receptor in order to assess the magnitude of risk.

6.37 Specifically the following aspects are reviewed:

- the type of activities undertaken on site including designed-in mitigation measures in order to determine:
  - the potential magnitude of releases in general terms; and
  - the nature of that release;

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• the location of receptors in the surrounding area with specific consideration of the type of receptor and therefore their potential sensitivity according to guidance; and
• the pathway between source and receptors incorporating buffer distance between receptors and any mitigating features, the frequency of wind conditions likely to result in the dispersion of emissions towards receptors.

6.38 The key steps and methodology are available on the IAQM website.

Assessment of Dust

6.39 In the absence of a prescribed methodology for assessing dust impacts from the onsite activities, the IAQM guidance for mineral sites has been followed. The primary dust generating activities are considered to include material / waste handling and transfer, vehicle movements and restoration; as such the adoption of the methodology within this guidance is considered to be suitable.

6.40 Dust arising from the operations have the potential to reduce amenity and cause damage to sensitive ecological receptors due to visible dust plumes and dust soiling; these coarser dust particles are referred to as ‘disamenity dust’. Smaller dust particles can remain airborne longer, potentially increasing local ambient concentrations of suspended particulate matter (e.g. PM10 and to a lesser extent PM2.5) associated with health effects.

6.41 The IAQM guidance uses PM10 as the health indicator of airborne particles. Activities with operations comparative to those on a mineral site, i.e. soil and waste handling, are more likely to be associated with coarse particulate matter (i.e. PM2.5-10) than the fine particulate matter (i.e. PM2.5). The IAQM guidance assesses the impacts of both airborne particles (PM10) and deposited dust on human and ecological receptors.

6.42 The IAQM minerals guidance presents a simple distance-based screening process to identify those sites where the dust impacts are likely to be significant and require further assessment. Where a more detailed assessment is required, a basic assessment framework is presented which employs the Source – Pathway – Receptor approach to evaluate the risk of dust impacts and effects.

6.43 The IAQM approach considers the potential magnitude of release, the separation distances between sources and receptors, local meteorological conditions and the sensitivity of receptors.

Screening Criteria

6.44 The IAQM uses a distance-based screening criteria for both airborne concentrations and deposited dust. It indicates that disamenity dust impacts from mineral sites of soft rock sites are considered to occur mainly within 250m of the operations, whilst impacts on PM10 concentrations considered up to 1km. The IAQM guidance states:

"from the experience of the working group, adverse dust impacts from soft rock sites are uncommon beyond 250m, measured from the nearest dust generating activity".

6.45 In accordance with the IAQM methodology, if there are relevant receptors within 250m and 1km then further assessment for dust deposition and/or PM$_{10}$ respectively, will be required.

**Further Assessment**

6.46 Should further assessment of dust deposition be required, the IAQM method sets out a qualitative risk-based approach based on the Source – Pathway – Receptor conceptual model, i.e. the hypothetical relationship between the source of the pollutant, the pathway by which exposure might occur, and the receptor that could be adversely affected. The key steps and methodology are available on the IAQM website.

6.47 Should further assessment of PM$_{10}$ be required, the IAQM method sets out a semi-quantitative approach using published estimates of the likely PM$_{10}$ addition from the appropriate type of activity to estimate the process contribution. Further assessment of PM$_{10}$ is required if the background concentration is above 17μg/m$^3$. The key steps and methodology are available on the IAQM website.

**BASELINE ENVIRONMENT**

**Site Setting and Sensitive Receptors**

6.48 The application site is situated around 5.5km$^8$ to the west-southwest of the centre of Rugby, with the centre of Coventry lying around 12.8km to the north-west. For identification it is centred on approximate National Grid Reference (NGR) SP 44742 73482. The closest major road network is the A45 in to the south of the landfill site, whilst open land bounds the areas to the north, west and east. Lawford Heath Industrial estate is located adjacent to the eastern boundary of the landfill site.

6.49 A number of isolated residential dwellings are located in the surrounding area as described in the section below and presented in Figures 6-1 and 6-2 (contained in Appendix 6/1).

**Human Receptors**

6.50 The term 'sensitive receptors' includes any persons, locations or systems that may be susceptible to changes as a consequence of the proposed development (being described in detail in Chapter 3 above).

6.51 Odour effects are accepted to result predominantly from long term and frequent exposure to unpleasant odours at locations where people expect a high level of amenity. For this reason, typically, residential locations are accepted as being of highest sensitivity, shops and businesses as of medium sensitivity and industrial and agricultural properties of low sensitivity.

6.52 The relative sensitivity of receptors to dust has been determined as defined according to IAQM Construction Dust Guidance.

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$^8$ All distances are measured from centre of brickworks to the centre of the settlement using Google Earth and is for identification purposes only.
6.53 In terms of identifying sensitive locations, consideration has been given to sensitive receptors within approximately 1km of the application site. The location of the nearest sensitive receptors shown in Figure 6/1 and listed in Table 6-3.

### Table 6-3
Human Receptor Locations

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Description</th>
<th>Distance to Site Boundary</th>
<th>Applied Sensitivity to Dust / Odour</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>Lawford Lodge Farm Cottage</td>
<td>Residential</td>
<td>40m</td>
</tr>
<tr>
<td>R2</td>
<td>Lawford Lodge Farm</td>
<td>Residential</td>
<td>140m</td>
</tr>
<tr>
<td>R3</td>
<td>Rose Grove Farm</td>
<td>Residential</td>
<td>210m</td>
</tr>
<tr>
<td>R4</td>
<td>Manor Farm</td>
<td>Residential</td>
<td>390m</td>
</tr>
<tr>
<td>R5</td>
<td>Heath Farm</td>
<td>Residential</td>
<td>730m</td>
</tr>
<tr>
<td>R6</td>
<td>Satellite Mediaport Services Ltd</td>
<td>Commercial</td>
<td>160m</td>
</tr>
<tr>
<td>R7</td>
<td>Lawford Heath Industrial Estate</td>
<td>Car Park (long term) / Offices</td>
<td>10m</td>
</tr>
<tr>
<td>R8</td>
<td>The Crescent</td>
<td>Residential</td>
<td>40m</td>
</tr>
<tr>
<td>R9</td>
<td>Sunnyside</td>
<td>Residential</td>
<td>140m</td>
</tr>
<tr>
<td>R10</td>
<td>Rookery Cottage</td>
<td>Residential</td>
<td>400m</td>
</tr>
<tr>
<td>R11</td>
<td>Badgers Close</td>
<td>Residential</td>
<td>80m</td>
</tr>
<tr>
<td>R12</td>
<td>North Lodge (Wolston Grange)</td>
<td>Residential</td>
<td>20m</td>
</tr>
<tr>
<td>R13</td>
<td>Blue Boar Farm</td>
<td>Residential</td>
<td>90m</td>
</tr>
<tr>
<td>R14</td>
<td>Yew Cottage</td>
<td>Residential</td>
<td>50m</td>
</tr>
</tbody>
</table>

**Ecological Receptors**

6.54 A review using the MAGIC web-based interactive mapping service\(^9\) was undertaken to identify statutory designated sites of ecological or nature conservation importance (Special Areas of Conservation, Special Protection Areas or Sites of Special Scientific Interest) within 250m\(^10\) of the application site and within 50m of the route at risk of track out impacts (up to 500m from the site access).

6.55 There are no statutory designated sites within 250m of the application site or within 50m of the route at risk of trackout impacts utilised by site traffic. The closest statutory designation is Draycote Meadows Site of Special Scientific Interest located around 1.7km to the south. The closest non-statutory site is the Ancient Woodland of Fullham Wood 900m to the north.

**Ambient Air Quality**

**Local Air Quality Management**

6.56 In terms of LAQM the application site falls within the administrative boundary of Rugby Borough Council (RBC). A review of the LAQM reports available on the RBC website has been undertaken\(^11\).

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\(^{10}\) Screening distance based upon the IAQM mineral guidance for areas at risk of potential dust deposition.

6.57 RBC has declared one AQMA with respect to annual mean NO\textsubscript{2} concentrations. The AQMA is described as encompassing ‘the whole urban area of Rugby, bounded by the southern boundary with Daventry District Council, A5, M6, minor roads to the west of Long Lawford, A45 and the M45’.

The western extent of the AQMA lies approximately 1km east of the landfill site.

6.58 RBC have not declared any AQMAs on the basis of PM\textsubscript{10} or PM\textsubscript{2.5} concentrations.

**Baseline Air Quality**

6.59 Background pollutant concentration data on a 1km x 1km spatial resolution is provided by Defra through the UK AIR website and is routinely used to support LAQM and Air Quality Assessments. Background pollutant concentrations for PM\textsubscript{10} and PM\textsubscript{2.5} are based upon a 2017 base year and projected to future years\textsuperscript{12} (2019 is presented below). The background concentrations for the grid squares containing the Application Site and nearby receptors are shown in Table 6-4.

<table>
<thead>
<tr>
<th>X,Y (NGR)</th>
<th>PM\textsubscript{10} (µg/m\textsuperscript{3})</th>
<th>PM\textsubscript{2.5} (µg/m\textsuperscript{3})</th>
</tr>
</thead>
<tbody>
<tr>
<td>443912, 274549</td>
<td>13.0</td>
<td>8.5</td>
</tr>
<tr>
<td>443744, 273397 (Site)</td>
<td>13.6</td>
<td>8.7</td>
</tr>
<tr>
<td>444505, 272590 (Site)</td>
<td>13.8</td>
<td>8.8</td>
</tr>
<tr>
<td>445875, 273623 (Site)</td>
<td>14.3</td>
<td>9.2</td>
</tr>
<tr>
<td>444869, 274148</td>
<td>13.9</td>
<td>8.8</td>
</tr>
</tbody>
</table>

**Meteorological Conditions**

*Local Wind Speed and Direction Data*

6.60 The most important climatic parameters governing the release and dispersal of fugitive emissions from the proposed development are:

- wind direction determines the broad direction of dispersal; and
- wind speed will affect ground level emissions by increasing the initial dilution of pollutants in the emission. It will also affect the potential for dust entrainment.

6.61 A windrose providing the frequency of wind speed and direction is presented in Figure 6-3 below. It is evident that winds from the south west quadrant predominate in the area and easterlies tend to be infrequent and characterised by light winds.

\textsuperscript{12} Background mapping data for local authorities – http://uk-air.defra.gov.uk/data/laqm-background-home.
The other main climatological parameter that is of interest to the potential emission and impact of particulates is rainfall. Average rainfall data (1981-2010) obtained for the Church Lawford observation station from the Meteorological Office website indicates that the average number of rainfall days per year is 121.3 (days with rainfall >1mm).
Baseline Conditions (Odour and Dust)

6.63 A review of baseline conditions with respect to dust and odours in the surrounding area has been undertaken by reviewing complaint data and searches for other potential sources.

Dust Monitoring

6.64 In accordance with the requirements of the Environmental Permit (Table S3.5), monitoring of particulate matter in ambient air is undertaken with regard to both asbestos fibres and PM$_{10}$. Monitoring of both asbestos and PM$_{10}$ has shown levels to be within the prescribed limits for the past 3 years of operations.

Complaints Data

6.65 Through correspondence with the Environmental Team of RBC, it has been established that RBC have received one complaint in the previous 3 years in March 2018 in relation to dust emissions from the landfill site. No further information on this complaint is available.

6.66 Complaints received by the applicant during the past 3 years have included a total of 7 with regard to odour and 4 with regard to dust emissions. The odour complaints were all unsubstantiated; on analysis of the meteorological data at the time of the complaint, it was confirmed that the receptors in question were upwind of the landfill operations with the likely source being the surrounding farmland upwind of the receptors. The 4 dust complaints were received from Lawford Heath industrial estate in relation to fugitive dust emissions from the asbestos cell. On analysis of the monthly dust monitoring of asbestos fibres undertaken on site, it was confirmed that levels of asbestos fibres were below the permitted levels.

6.67 Following a request to the EA for information, it is understood that out of 7 complaints in relation to odour received during the previous 3 years, one was substantiated by the EA. This complaint was received in March 2017 by a resident of Ling Lane, with the source identified as the excavation of previously-tipped waste area as part of flank re-profiling. The activity in question ceased until a change in wind direction with the waste recovered. The majority of the unsubstantiated complaints were attributed to nearby land-spreading activity by the EA.

6.68 In relation to dust emissions, two complaints were received by the EA from Lawford Heath Industrial Estate, both during 2019. The first was substantiated by the EA; received in June 2019 in relation to asbestos waste placement and cover. The applicant made suitable operator replacements with additional ambient monitoring and supervision undertaken. The second
complaint was unsubstantiated with the EA identifying the appropriate procedures for asbestos placement were being followed.

Other Potential Sources

6.69 A review of the local area with regard to major sources of dust and / or odour has been undertaken, identifying the existing operations of the Breedon Group asphalt and concrete batching plant located within the southern extent of the application site. Both facilities have Environmental Permits in place with conditions stating the facilities would not operate after 2021. As such, there is not considered to be a risk of any cumulative effects during the proposed time extension from 2021 to 2031.

6.70 Other facilities on site, including the street sweeping processing facility, the IBA processing plant and the compost pad have been included in the cumulative assessment.

ASSESSMENT OF EFFECTS - ODOUR

6.71 This section presents the potential impacts on amenity from odour emissions associated with the proposed development.

Existing Situation and Proposed Development

6.72 The proposed development seeks to vary the period of time for landfilling operations, along with the operation of the street cleaning services, composting slab and IBA processing facility for a further 10 years, extending the life of the landfill until May 2031. Waste disposal operations would continue for the required period at a projected rate of around 400,000 tonnes per annum. The imported material type and quantity would remain as per the existing Environmental Permits (comprising household, mixed commercial and industrial waste) and waste operations and management of the site would remain as per the existing situation.

6.73 The area that would be infilled during the proposed 10 year period would be limited to Cells 11, 12 and 13, encompassing a central area within the landfill site of approximately 24ha. The remaining area of the landfill, with the exception of the old runways currently occupied by Breedon Group, have been restored with a proportion of this consented for solar farm development. The proposed 10 year extension would allow for the remaining 4 million m³ void to be filled.

6.74 The tipping area and associated operations would be a minimum of 250m from all offsite residential receptors. Receptors within 250m of the proposed development include the users of Lawford Heath Industrial Estate adjacent to the eastern site boundary.

Risk Factors

Odour Source Potential

6.75 The source of odour from onsite activities are limited to those that make up the existing baseline and would continue as per the respective planning permissions and Environmental Permits though
the proposed additional 10 year period. Operations on site with the potential to generate odour emissions are considered to include the following:

- landfill operations - potential fugitive odour emissions from delivery and disposal of municipal solid waste (MSW) and commercial & industrial waste (C&IW);
- compost pad - potential fugitive odour emissions from delivery, receipt, handling, shredding and turning of green waste.

6.76 The operation of the street sweeping recycling facility is considered to present a negligible odour source\(^\text{13}\), on the basis that greater than 80% of the material produced by the recycling process is mineral in the form of aggregate, sand and silt.

**Landfill Activities**

6.77 The continued disposal of non-hazardous waste has the potential for release of gases into the atmosphere with potential to cause disamenity in the local area. This would be a passive area source represented by the discrete areas where active infilling is taking place. The activities with the potential to introduce odour are confined to the disposal of non-hazardous waste. The extent of the infilling activities during the proposed time extension would be limited to Cells 11, 12 and 13 which would be progressed in a phased manner to minimise exposure of waste at any one time.

6.78 It is noted that the working methods of receiving waste at the landfill and the rate of infilling would continue, in accordance with the Environmental Permit. Waste would continue to be transferred by the enclosed waste carrying vehicle to the tipping face before being discharged into the cell and compacted. Capping would be applied as either daily cover or permanent / temporary capping as required. The management and control of leachate and landfill gas would continue in accordance with current working practises in line with the Environmental Permit.

6.79 Odour control measures are implemented on site in accordance with the Environmental Permit Site Management System (Section 11, Nuisance Management Plan). These controls would continue to be implemented as part of routine operations for the minimisation of odorous emissions and include the following:

- daily observations by site management to identify unusual / high levels of odour;
- wastes bought onto site with noticeable high odour levels are immediately covered with other waste / soils;
- leachate chambers and monitoring points are covered;
- progressive capping of completed areas;
- landfill gas extraction system installed in all capped areas;

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• odour control measures an integral part of design and operation for all leachate treatment plant;
• wastes transferred to tipping face in enclosed vehicles;
• phased infilling, minimising exposed areas of waste;
• placement of the temporary cap on areas where progressive capping is deferred for operational reasons; and
• monitoring of meteorological conditions.

6.80 Taking into account the location of the infilling area within the existing site, the nature of the process and the odour control measures that are implemented on site the source potential of odour is considered to be of small source potential, in accordance with the IAQM guidance. Once the landfill is capped, the source term with regard to odour would be negligible.

Operation of the Compost Pad

6.81 Waste handled at the compost pad comprises imported green waste, wood, as well as leaves from the street sweeping recycling operation already established at the site. Green waste is shredded on arrival, followed by storage in windrows before being screened using a mobile trommel for use as either a soil improver for onsite restoration purposes or sold offsite as compost. Wood received on site is shredded or chopped with the high speed shredder with material either sold offsite or used onsite for topping onsite haulage routes. Odour may potentially be generated as a result of the receipt and handling of wastes, during the composting process itself, and management of run-off.

6.82 An odour impact assessment (OIA) was undertaken as part of the Air Quality Assessment in support of the Planning Application (Ref. R/98/CMO15). The OIA assessed fugitive odour emissions using the Simple Calculation of Atmospheric Impact Limits (SCAIL) model developed for the EA. Utilising the design parameters of the facility and representative emission factors, predicted impacts at the surrounding residential receptors were assessed by comparison to the C98,1-hour 3.0ouE/m³ criterion.

6.83 The 2017 assessment concluded that ‘the process contribution to odour exposure from the proposed development at receptor locations is low at less than C98,1-hour 1 ouE/m³, i.e. the odour from the proposed development is predicted to be below the olfactory limit of detection at sensitive receptor locations for 98% of the hours in the year. Given this negligible level of predicted impact it is considered the effect on odour exposure would be insignificant’

6.84 The installation is regulated by an Environmental Permit, and as such the operator must comply with the conditions of their permit (which includes an odour boundary condition) which will ensure that appropriate measures are applied to mitigate potential releases and protect the environment; compliance with these conditions is regulated by the EA.

6.85 Taking into account the conclusions of the 2017 OIA alongside the absence of substantiated complaints in relation to odour received by either the applicant or the Local Authority, the emission potential of odour is considered be of small source potential.
Pathway Effectiveness

6.86 The pathway effectiveness (i.e. the factors influencing the odour flux to the receptors) has been considered in terms of the distance and frequency of winds from the direction of the proposed facility. Pathway effectiveness has been classified following IAQM guidelines as ineffective, moderately effective, or highly effective. Odour episodes tend to occur during stable atmospheric conditions with low wind speed which results in poor dispersion and dilution, therefore low wind speeds (less than approximately 3m/s) have also been examined.

6.87 Activities with the potential to generate odour emissions would be located within the waste infilling area and the adjacent composting pad as annotated on Figure 6-2. Infilling would be undertaken on a phased basis as filling progresses through Cells 11, 12 and 13. To ensure a worst case scenario for the assessment, it has been assumed that the entire infilling area presents a potential odour source. In reality, the phased infilling approach and progressive daily / permanent capping would significantly reduce the area of odour potential.

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m. approx. from source)</th>
<th>Freq. all speeds (%)</th>
<th>Freq. low speeds (%)</th>
<th>Pathway Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>280m</td>
<td>30.0</td>
<td>17.9</td>
<td>Moderately Effective</td>
</tr>
<tr>
<td>R2</td>
<td>390m</td>
<td>26.1</td>
<td>15.4</td>
<td>Moderately Effective</td>
</tr>
<tr>
<td>R3</td>
<td>560m</td>
<td>16.4</td>
<td>5.3</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R4</td>
<td>710m</td>
<td>7.8</td>
<td>2.8</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R5</td>
<td>1,375m</td>
<td>2.7</td>
<td>1.1</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R6</td>
<td>490m</td>
<td>26.3</td>
<td>10.4</td>
<td>Moderately Effective</td>
</tr>
<tr>
<td>R7</td>
<td>40m</td>
<td>31.1</td>
<td>12.9</td>
<td>Highly Effective</td>
</tr>
<tr>
<td>R8</td>
<td>400m</td>
<td>11.6</td>
<td>4.7</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R9</td>
<td>370m</td>
<td>16.0</td>
<td>4.5</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R10</td>
<td>850m</td>
<td>5.2</td>
<td>2.1</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R11</td>
<td>380m</td>
<td>14.6</td>
<td>5.2</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R12</td>
<td>410m</td>
<td>20.2</td>
<td>7.5</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R13</td>
<td>480m</td>
<td>8.1</td>
<td>4.1</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R14</td>
<td>570m</td>
<td>18.4</td>
<td>6.0</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R15</td>
<td>750m</td>
<td>19.9</td>
<td>8.7</td>
<td>Ineffective</td>
</tr>
</tbody>
</table>

Magnitude of Effect

6.88 The risk of odour exposure has been classified on the basis of the IAQM guidelines using the receptor sensitivity and pathway effectiveness, as presented in Table 6-7.

<table>
<thead>
<tr>
<th>ID</th>
<th>Receptor Sensitivity</th>
<th>Risk of Odour Exposure</th>
<th>Magnitude of Odour Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>High</td>
<td>Negligible</td>
<td>Negligible Effect</td>
</tr>
<tr>
<td>R2</td>
<td>High</td>
<td>Negligible</td>
<td>Negligible Effect</td>
</tr>
<tr>
<td>R3</td>
<td>High</td>
<td>Negligible</td>
<td>Negligible Effect</td>
</tr>
<tr>
<td>R4</td>
<td>High</td>
<td>Negligible</td>
<td>Negligible Effect</td>
</tr>
</tbody>
</table>
The magnitude of odour effect is considered to be negligible the all bar one of the identified receptor locations in accordance with the IAQM guidance. Receiver 7 (Lawford Heath Industrial Estate) is considered to have a slight adverse effect due to the proximity to odour sources on the eastern boundary and the precautionary scenario whereby the entire infilling area is assumed to present a cumulative odour source. In reality the extent of the potential odour source from landfilling would be significantly smaller with significantly reduced frequency of wind speeds due to the phased infilling of the site and progressive restoration.

Considering the site location, the setback distances to the surrounding receptors and the meteorology it is considered that the control measures currently implemented at the site with regard to the operation of the landfill and composting pad are satisfactory. On the basis that the existing control measures continue throughout the extension period, the risk of disamenity impacts resulting from release of odour from the proposed extension in time is considered to be negligible with no further assessment required.

**ASSESSMENT OF EFFECTS - DUST**

Activities that would continue during the further 10 year period with the potential to generate dust emissions are identified as the following:

- landfilling activities;
- IBA processing plant;
- street sweeping recycling facility; and
- compost pad.

The operations that would continue through the proposed 10 year period have the potential to produce both fine and coarse particulates, the make-up of which is dependent on the activities undertaken and the type of waste being handled. Particles greater than 10µm in diameter (PM10) are unlikely to have an impact on health and are generally associated with disamenity and dust soiling. As the diameter of the particles reduces, the likelihood of impact on human health increases.
6.93 The landfilling activities would continue to include the infilling of asbestos in designated cells on site. Monitoring undertaken in accordance with the Environmental Permit proves that the risk of asbestos fibres being present within any fugitive dust emissions is negligible. Monitoring at the prescribed upwind and downwind locations, which is undertaken twice per year, would continue throughout the proposed 10 year period.

Screening Criteria

6.94 On the basis of the adopted screening criteria, an assessment of deposited dust is required at human and ecological receptors within 250m of the identified activities. An assessment of particulate matter (PM$_{10}$) is required at human receptors within 1km.

6.95 On account of there being no ecological receptors with a sensitivity to dust soiling within 250m, further assessment on ecological receptors is not required. However, due to the presence of human receptors within 250m, further assessment for the potential impact of deposited dust and PM$_{10}$ on human receptors is required.

Further Assessment – PM$_{10}$

6.96 The assessment of PM$_{10}$ follows the key elements as recommended within the IAQM Minerals guidance. The likelihood that the AQAL for PM$_{10}$ would exceed as a result of the proposed development has been assessed.

6.97 The existing air quality in terms of annual PM$_{10}$ has been taken from the DEFRA background maps in the absence of any background monitoring in proximity to the site. The maximum background PM$_{10}$ concentrations for the grid square of the site and surrounding receptors is 14.3 µg/m$^3$, representing 35.7% of the corresponding AQAL for PM$_{10}$. Moreover, concentrations are predicted to decrease year on year. On the basis that the proposed development would be a continuation of existing activities, an increase in PM concentrations in the local area would not be anticipated.

6.98 It is therefore considered that in the absence of designed in or additional mitigation, the impact and effect of the proposed development on human health from emissions of PM$_{10}$ (and PM$_{2.5}$) would be negligible. This is consistent with EA research that states: ‘levels of PM$_{10}$ measured at the boundary of landfill sites are comparable to those encountered in many parts of the UK’ and should not therefore impact local air quality significantly.

Further Assessment – Dust Soiling

Site Characteristics

6.99 As described in paragraph 6.77 the area that would be infilled during the proposed 10 year period would be limited to Cells 11, 12 and 13, encompassing a central area within the application site of approximately 24ha. The operation of the street sweeping processing plant, IBA processing plant and compost pad would continue as per the existing baseline throughout the 10 year period, with restoration in line with the approved landfill restoration plan.

6.100 Landfilling activities have the potential to produce fugitive dust emissions, the make up of which is dependent on the activities undertaken and the type of waste being handled. The main source of
dust emissions from landfill activities are considered to dust generated from the internal haulage, active waste infilling phase and during the restoration phase.

6.101 The compost pad is greater than 250m from any offsite receptors and has therefore been screened out of the assessment on the basis that any dust emissions would cause negligible effects at distances greater than 250m. Likewise, the potential for bioaerosols do not require assessment due to the absence of receptors within a 250m radius.

6.102 The street sweeping recycling facility occupies an area of 0.87ha and accepts pre-bulked material that is transported to the site using tipper type vehicles. After processing, material stands on a concrete pad for a short period of time to allow moisture to drain before being taken to suitable locations on the landfill for use in restoration, daily cover, or stockpiling. The process itself incorporates water in the form of spray bars and log washers. Given the wet process and the high moisture content of the processed material, the sources of dust from the street sweeping facility are limited to the internal haulage of material.

6.103 Once operational, the IBA processing plant would accept imported bottom ash where processing removes ferrous and non-ferrous metals, followed by grading of the ash to meet specification and stockpiling on site. Potential sources of dust are primarily from internal haulage and the stockpiling of ash. The process itself is enclosed within a building and therefore not considered to present a potential dust source. The facility is operated and regulated under EP BU2381IE and is undertaken in accordance with the Dust Management Plan (2012).

6.104 The street sweeping processing facility and IBA processing plant are approximately 240m-250m from the closest offsite receptors and would therefore expect to have a minimal impact with regard to any dust emissions in the absence of mitigation.

6.105 There would be no additional sources of dust at any of the onsite operations above those in the approved baseline. It is understood that the activities associated with the Breedon plant would cease in 2021 and therefore have not been included in the assessment of effects of the proposed time extension.

Dust Impact Estimation

6.106 In accordance with the IAQM methodology, dust generating activities from the proposed development have the potential to impact upon receptors located within the screening distance of 250m. Table 6-8 below presents receptors with dust generating activities within 250m.

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Sources within 250m</th>
<th>Distance (closest, approx.)</th>
<th>Direction (relevant directions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R7</td>
<td>Lawford Heath Industrial Estate</td>
<td>Waste Infilling Internal haulage route</td>
<td>&lt;50m</td>
</tr>
<tr>
<td>R13</td>
<td>Blue Boar Farm</td>
<td>Paved access route</td>
<td>150m</td>
</tr>
</tbody>
</table>
**Residual Source Emissions**

6.107 Dust management and control would continue to be implemented as per current operations. The environmental design measures and dust control measures implemented on site, alongside the resulting dust emission magnitude are summarised in Table 6-2.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Location</th>
<th>Env Control Measures</th>
<th>Resulting Emission Magnitude</th>
</tr>
</thead>
</table>
| Waste tipping             | Landfill            | Daily observations of dust & meteorological conditions  
                           | 4 x water bowsers onsite to spray working areas, as required  
                           | Waste of high dust potential not deposited during windy/dry weather conditions  
                           | daily cover, as required  
                           | phased infilling and progressive restoration  
                           | Seeding / panting of restored areas as required                                                  | Medium                      |
| infilling / restoration   | Unpaved roads       | Waste transported to tipping area in enclosed vehicles  
                           | 4 x water bowsers onsite to dampen down haulage routes, as required  
                           | All routes maintained and graded                                                                | Medium                      |
| Internal Haulage          | Access Road / Public Highway | Wheel wash used by all existing vehicles  
                           | Paved access road >200m length  
                           | Regular sweeping of access road and highway, as required  
                           | All vehicles adequately sheeted  
                           | Regular inspections of highway                                                                  | Small                       |
| Off site Haulage          | IBA Ash Stockpile transfer | Windrows aligned SW-NE to afford lowest surface area to prevailing wind  
                           | Dust suppression system of jets and nozzles around perimeter of site adjacent to stockpiles  
                           | water sprays on stockpile surface to assist in crust formation                                    | Small                       |
| Material storage          | Street Sweeping / restoration area | Material of high moisture content on concrete pad  
                           | processed material stored within LF for restoration use  
                           | water bowsers onsite to spray stockpiles, as required                                             | Small                       |
|                           | Landfill            | Daily observations of dust & meteorological conditions  
                           | 4 x water bowsers onsite to spray working areas, as required  
                           | Waste of high dust potential not deposited during windy/dry weather conditions  
                           | daily cover, as required  
                           | phased infilling and progressive restoration  
                           | Seeding / panting of restored areas as required                                                  | Small                       |
Taking the above designed-in environmental measures into account, the residual source magnitude of emissions for fugitive dust are considered to be small to medium, in the context of the IAQM guidance. To ensure a precautionary assessment approach, a medium source magnitude has been utilised within the assessment.

Pathway Effectiveness

The pathway effectiveness of each sensitive receptor was determined through a combination of the distance to the emission source and the frequency of winds with the potential to disperse dust towards that receptors. The determination of pathway effectiveness is presented in Table 6-10.

To ensure a precautionary scenario of pathway effectiveness, the source of potential dust emissions have been divided into the two following phases, representing broad time frames of the proposed time extension:

- Scenario A (ScA): infilling across Cells 11 & 12 (concurrently with no phasing to present a worst case) alongside operation of IBA processing plant and street sweeping processing plant; and

- Scenario B (ScB): infilling across Cell 13 (with no phasing to present a worst case) alongside operation of IBA processing plant and street sweeping processing plant.

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Distance from source (closest point)</th>
<th>IAQM distance category</th>
<th>Relevant wind directions</th>
<th>Frequency of winds (%(&gt;5m/s, dry days only))</th>
<th>IAQM frequency category</th>
<th>Pathway effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>R7 (ScA)</td>
<td>&lt;50m</td>
<td>Close</td>
<td>220-030</td>
<td>4.47</td>
<td>Infrequent</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R7 (ScB)</td>
<td>&lt;50m</td>
<td>Close</td>
<td>170-270</td>
<td>2.67</td>
<td>Infrequent</td>
<td>Ineffective</td>
</tr>
<tr>
<td>R13</td>
<td>150m</td>
<td>Intermediate</td>
<td>280-330</td>
<td>1.37</td>
<td>Infrequent</td>
<td>Ineffective</td>
</tr>
</tbody>
</table>

Dust Impact Risk

The dust impact risk for each receptor is determined through combining the residual source emission and the pathway effectiveness. The impact risk is determined as ‘negligible’ for all receptors within 250m of activities with the potential for dust generation based on the maximum residual source magnitude of ‘medium’ across the entire area of the landfill extension.

Dust Magnitude of Effect

The resultant magnitude of dust effect at all sensitive receptors assessed is determined to be ‘negligible’. It is therefore considered that assuming the designed-in dust control measures are continued through the proposed further period of landfill operations, that further mitigation is not required.
MITIGATION

Mitigation – Odour Emissions

6.113 The proposed development would continue to be controlled by the EA though the Environmental Permit (EP) which states the following under Section 3.3 in relation to odour:

“Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.”

6.114 Taking into account that the outcome of the IAQM assessment and the control measures in place that would continue into the proposed development, the existing mitigation measures are considered to be satisfactory, with no additional measures recommended.

Mitigation – Dust Emissions

6.115 Taking into account that the outcome of the IAQM assessment and the control measures in place that would continue to be employed, the existing mitigation measures are considered to be satisfactory, with no additional measures recommended.

6.116 Monitoring of dust emissions would continue as per the requirements of Table S4.10 of the Environmental Permit and the current Fibres and Particulate Management Plan (FPMP)\(^{14}\).

CUMULATIVE EFFECTS

6.117 There are no additional sources of odour or dust within the immediate locale other than those included within the assessment for both dust and odour. It is understood that the activities operated by Breedon Group would cease by 2021 in accordance with the conditions of their Environmental Permit and as such have not been considered with the assessment.

CONCLUSIONS

6.118 This air quality assessment has assessed the potential impacts on air quality and local amenity associated with the proposed 10 year time extension to the current landfilling operations and associated activities at Ling Hall Landfill. The potential impact associated with odour and dust emissions on human and ecological receptor locations within the site locale have been assessed using methodologies from published IAQM guidance documents.

6.119 The conclusions of the air quality assessment are that the proposed continuation of landfill operations would result in a negligible effect with regard to both odour and dust impacts on local receptors.
APPENDIX 6/1
Figure 6-1
Site Setting & Sensitive Receptors
Figure 6-2
Proposed Development