

# CHAPTER 14

## NUISANCES

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## 14.0 CHAPTER 14 NUISANCES

The Integrated Waste Management Facility's (IWMF's) location, site boundary, planning application area and surrounding site setting remains unchanged from that originally assessed and approved under the existing planning permission. Nothing has changed with regard to the location of potentially sensitive residential or other public receptors. The prevention and control of potential nuisances are predominantly dependent upon operational practices.

### 14.1 Draft Environmental Permit EPR/FP3335YU/A001

On the 3 March 2017 a second (revised) Environmental Permit application was submitted to the Environment Agency on GFC's behalf by Fichtner Consulting Engineers Limited for the Rivenhall Integrated Waste Management Facility. This second (revised) Environmental Permit application addressed the original consultation responses raised by local Councillors and members of the public who had expressed concern about the height of the stack.

On the 20 June 2017, the Environment Agency confirmed that it was "minded to" permit the application and issued for public consultation a single Draft Environmental Permit combining all waste management operations within the IWMF (Draft Environmental Permit Number is EPR/FP3335YU/A001).

The final approved details of the Environmental Permit submissions demonstrate that the IWMF embodies Best Available Techniques (BAT) to prevent, and where this is not practicable, to reduce emissions and the impact on the environment as a whole to acceptable standards. The submitted design and the air quality impact modeling and other associated assessments all relate to a revised stack height of 58 metres above surrounding ground level (108m AOD).

Stakeholder engagement events for the Environmental Permit Application were held by the Environment Agency on the 20 and 31 March 2017 at Silver End and Coggeshall; and, a further stakeholder event is planned for the 30 June 2017 at Coggeshall, following the Environment Agency's "minded to" permit decision. The public consultation on the Draft Environmental Permit will run from 20 June to 18 July 2017 after which the Environment Agency will issue its final decision and, if appropriate, the approved Environmental Permit.

### 14.2 Updated Baseline Setting 2017

Across the footprint of the IWMF, quarrying and restoration operations within Site A2 has resulted in the loss of the former airfield runway(s), an aircraft hangar, airfield buildings, and agricultural fields – leaving predominantly bare ground.

Following the implementation of the IWMF planning permission (ESS/34/15/BTE), within the footprint of the IWMF construction area, remaining areas of woodland scrub, topsoil, subsoil and hardstanding (remnants of the former airfield comprising brick foundations and concrete tracks and bases) have been removed. However, in accordance with the existing planning permission, some individual and groups of TPO trees have been protected and retained to provide perimeter screening around the Site.

An area of Open Habitat has been established adjacent to Woodhouse Farm and a hedgerow has been relocated to Wayfarers Field. Quarrying operations are on-going within Sites A3 and A4.

There has been no change in the residential properties within 1 km of the IWMF [Table 14-1]; and, the closest receptor downwind of the IWMF (south-westerly prevailing winds) is Woodhouse Farm.

Braintree District Council has updated its Strategic Housing Land Availability Assessment (SHLAA) to support the production of its new Local Plan. The Braintree District Council website provides details of those sites put forward for potential consideration for future development. The website link for these plans is as follows:

[https://www.braintree.gov.uk/info/200230/planning\\_policy/701/new\\_local\\_plan/4](https://www.braintree.gov.uk/info/200230/planning_policy/701/new_local_plan/4)

The sites presented on the various maps were originally reviewed as potential development sites within the Addendum Environmental Statement of 2015, and no adverse potential impacts were found. One of these potential development sites is the proposed Gladman Development for 350 houses on land east of Silver End. Whilst this has now been granted Outline Planning Permission, the proposed change in the IWMF stack height does not alter the findings of the Gladman Development Environmental Statement or the cumulative impacts associated with its development alongside the IWMF..

The closest footpath to the IWMF site lies approximately 300 m to the south (Footpath No. 8).

Three County Wildlife Sites (CWSs) located within a 3km radius around the Site and nine statutory nature conservation areas located within 10 km.

The IWMF's location, site boundary, planning application area and surrounding site setting remains largely unchanged [i.e. no change in residential properties within 1 km etc] from that originally assessed.

The nuisance mitigation and control measures remain as previously proposed in the original application and the current permission. These are summarised as follows:

### **14.3 IWMF Nuisance Control**

The IWMF operations will be controlled and regulated by the Environment Agency under an Environmental Permit. The Draft Environmental Permit No EPR/FP3335YU issued by the Environment Agency on 20 June 2017 includes various documents submitted with regard to nuisance control, particularly the Draft Odour Management Plan and the Draft Pest Management Plan.

This planning application to vary the stack height by 23 m is being made to align the planning permission with the current details of the Draft Environmental Permit.

The final details of the Environmental Permit will demonstrate that the IWMF embodies Best Available Techniques (BAT) to prevent, and where this is not practicable, to reduce emissions and the impact on the environment as a whole to acceptable standards.

The maximum height of the IWMF stack that is modelled within the Environmental Permit Application is 58 m above surrounding ground level (108 mAOD).

The potential impacts on all identified residential properties within 1 km and on other receptors have been fully assessed in terms of amenity and nuisance. The principle means of controlling and abating of emissions from the IWMF's waste recovery, recycling and treatment operations is the housing of all waste reception and processing operations within environmentally controlled buildings.

The proposed change in the IWMF stack height will not change any of the Nuisance control and mitigation measures at the IWMF, nor increase the potential for nuisance. Existing planning conditions targeted at minimising the potential for nuisance from the IWMF to affect off-site locations will apply and the Environment Agency will regulate and monitor the control of potential emissions by ensuring that the site is operated in accordance with its permitted Environmental Management Plans.

#### 14.4 Summary of Control and Mitigation of Dust and Particulate Matter

To control and minimise dust, the following operational control measures will be implemented in line with industry recognised best practice, namely:

- The production and on-going development of a Dust Management Plan (as required to be submitted and agreed with the Planning Authority prior to beneficial occupation under planning Condition 51 (b));
- Use of appropriate machinery and where necessary water sprays and mists will be used around the perimeter of the Site preparation and Construction works;
- Construction works will progress in a phased and systematic manner, adopting industry recognised best practice in line with the adjacent Bradwell Quarry excavation works;
- During the construction phase the access road will be sprayed and damped down using either a tractor and bowser, or similar recognised dust suppression techniques;
- Vehicles will enter and leave the Site only by the private access road which will be constructed to a high standard with a fully engineered surface;
- Speed restrictions will apply to all vehicles on the access road and on the Site to minimise the uplift of dust created by the vehicles draft;
- Waste will arrive in enclosed trailers and containers and will only be unloaded inside the IWMF buildings;
- All waste operations will take place indoors under negative air pressure;
- No waste storage will occur outdoors;
- Air movement regimes will control all air within the IWMF buildings;
- Throughout the summer months or periods of prolonged dry weather, dust suppression techniques will be employed along the Site access road; and
- In line with recent HSE guidance, vacuum cleaning systems will be installed in appropriate locations within the IWMF to control dust associated with its internal operations. This will reduce the need for sweeping and the creation of dust associated with the routine husbandry and operational management within the IWMF buildings.

During the production of the Environmental Permit application a "Fugitive Emissions Risk Assessment and Management Plan" was prepared and submitted within the Environmental Risk Assessment. No potential exposure was deemed higher than a "Low" risk and this was all internal to the IWMF buildings and their immediate surrounds. Even then, where there was considered a potential risk of dust, the greatest potential nuisance was deemed to be dust on clothing or cars of workers and staff. The summary on dust control was presented in the 'Building Ventilation' section of the Supporting Information, predominantly stated for the MRF and MBT plants that were considered to be at the greatest risk of dust emissions, as follows:

*"In terms of dust control, this is not expected to be a difficult operational concern. Due to the hard-surface nature of all buildings and roads within the IWMF, the trafficking by modern road vehicles, and the naturally damp nature of the waste materials being handled, it is not expected that dust will be created in high quantities in the MBT plant. Nevertheless, as with all operational areas within the installation, good operational husbandry will be instigated in accordance with the recent HSE guidance relating to the control and mitigation of dust ("Construction Dust: Inspection & Enforcement Guidelines 2014" HSE)."*

Within GFC's submission of details for the IWMF planning permission ESS/34/15/BTE, a "Dust Minimisation Scheme Statement" was approved against planning condition 51(a). This statement is presented within Appendix 14A. It contains sections written in respect of the Bradwell Quarry – Site Infrastructure Area, the IWMF Excavation Operations, the IWMF Access Road construction and the IWMF Construction Works. The dust minimisation scheme(s) are designed to minimise nuisance arising from the development of the IWMF.

In line with the original assessment, based on the above operational principles, the impact of dust and particulate matter on areas surrounding the Site would be low. Compared with the existing planning permission, there will be no overall change in the potential for dust in and around the Site resulting from the proposed increase in the height of the IWMF stack.

#### 14.5 Summary of Control and Mitigation of Bioaerosols

To control and minimise bioaerosols, and again as stated in the original application and Nuisance Assessment, the following operational control measures will be implemented in line with industry recognised best practice, namely:

- The IWMF will be constructed below surrounding ground level where local wind speeds will be much reduced;
- Waste will arrive at the Site in sealed or high sided trailers or containers, enclosed or sheeted, and will only be opened when they have entered the enclosed waste process buildings;
- Recyclable and residual materials resulting from the waste treatment, processing and recycling operations will leave the Site in fully enclosed vehicles;
- Waste treatment, processing and recycling operations will take place within environmentally controlled buildings held at negative pressure. For the IWMF operations, the risk of odorous emissions is likely to be minimal as all systems of waste handling and treatment will be enclosed and will include air and dust extraction equipment as and where necessary;
- The 24 hour operational status of the IWMF will ensure that holding or storage times of unprocessed wastes are minimised. The use and operation of bunkers (both above and below ground) will ensure that the waste processing and treatment operations can run continuously. The bunkers will also act as waste buffer storage in the event of any temporary shutdown of the waste treatment and processing operations arising from routine maintenance or unforeseen breakdowns. Odours and emissions from the bunkers will be strictly monitored and controlled to minimise any fugitive emissions associated with odour;
- Rapid action roller shutter doors will minimise the potential for fugitive odour and bioaerosol emissions;
- No waste storage will occur outdoors; and
- Air will be monitored, managed and controlled throughout the waste treatment process within enclosed and closed loop systems and/or the IWMF's ventilation system.

In terms of Planning Conditions, the relevant conditions to provide odour control measures are 52(a) for during construction and 52(b) for during operations (to be agreed prior to beneficial occupation), namely:

**Condition 52 (a):** *The development hereby permitted shall be implemented in accordance with the details submitted with respect to measures to control fugitive odour from the excavation of materials and construction of the IWMF as approved on 16 February 2016 under condition 52a of planning permission ESS/55/14/BTE. The*

*approved details include: application for approval of details reserved by condition dated 4 August 2015 and the following document "Condition 52a – Odour minimisation scheme by Honace"*

**Condition 52 (b):** *No beneficial occupation of the IWMF shall commence until details of equipment required to control any fugitive odour from the handling/storage/processing of waste have been submitted to and approved in writing by the Waste Planning Authority. The details shall be implemented as approved.*

Within GFC's submission of details for the IWMF planning permission ESS/34/15/BTE, an "Odour Minimisation Scheme Statement" was approved against planning condition 52(a). This statement is presented within Appendix 14B. It contains sections written in respect of the Bradwell Quarry and IWMF Excavation Operations, and the IWMF Construction Works. A more detailed operational Odour Management Plan was submitted with the Environmental Permit Application and is presented within Appendix 14C. It will form part of the final Environmental Permit as approved by the Environment Agency. Once a final version is agreed with the Environment Agency to allow commencement of operations, it will be used as the basis for submission to the Planning Authority to discharge Condition 52(b) prior to occupation.

Any bioaerosols and odours that may be created will be contained, collected and treated within controlled air movement and standard ventilation regimes. In line with the original assessment, based on the above operational principles, the impact of bioaerosols and odour on areas surrounding the Site would be negligible or low.

#### 14.6 Summary of Control and Mitigation of Litter

To minimise nuisance associated with litter to the surrounding area, the following mitigation measures will be used:

- Waste will arrive in fully enclosed or securely covered trailers or containers and will only be unloaded within the IWMF;
- All waste operations and storage will take place indoors under negative air pressure;
- The floor of the waste reception areas with any waste debris will be washed down at the end of the working day;
- Spilled or windblown litter accumulating along the site access road or the IWMF reception areas will be picked and cleared on a routine basis;
- A perimeter boundary fence will be erected around the IWMF to provide additional litter control; and
- Any litter incidents will be investigated and litter collection would be undertaken should it become necessary.

The risk of a litter nuisance will be minimal as all systems of waste transportation, handling and treatment will be enclosed. Fixed fencing will be erected at appropriate locations within the Site or around the boundary of the Site prior to the development of the IWMF and commencement of waste treatment, processing and recycling operations. The boundary fence will comprise rabbit proof chain-link fencing. It will be erected primarily for security reasons; however, it will also be positioned to provide additional litter control in the unlikely event that materials are spilled outside the environmentally controlled waste reception and treatment buildings.

In line with the original assessment, based on the above operational principles, the impact of litter on areas surrounding the Site would be negligible or low.

## 14.7 Summary of Control and Mitigation of Insects, Vermin and Birds

To minimise nuisance associated with insects, vermin and birds to the surrounding area, the following mitigation measures will be used:

- The controlled air movements within the IWMF will prevent odours from attracting insects, vermin and birds;
- All waste operations will take place indoors under negative air pressure, minimising odours which could attract insects, vermin and birds;
- No waste storage will occur outdoors;
- Regular monitoring for signs of vermin or other infestation will be carried out; and
- Any such nuisance incidents will be investigated and treated with the use of pest control measures such as insecticide or rodenticide should it become necessary.

The risk associated with insects and vermin will be minimal as all systems of transportation, loading and unloading, and treatment will be enclosed within an environment that will be largely inaccessible and unacceptable to vermin. This will act as the primary control mechanism. Regular inspections will be made of the Site, particularly throughout the warmer summer months, to monitor and control insects and vermin. When necessary, specialist contractors will be used to control, spray and exterminate vermin and insects. Such actions would be carried out when required.

The risk associated with scavenging birds, usually associated with large open-air waste management facilities will be minimal, as all systems of transportation and treatment will be enclosed within an environment which will be largely inaccessible and unacceptable to birds. This will act as the primary control mechanism and birds will be deterred from the scavenging on the Site.

A detailed Pest Management Plan was submitted with the Environmental Permit Application and is presented within Appendix 14D and will be agreed with the Environment Agency within the approved Environmental Permit. It will form part of the final Environmental Permit as approved by the Environment Agency.

In line with the original assessment, based on the above operational principles, the impact of insects, vermin and birds on areas surrounding the Site would be negligible or low.

## 14.8 Summary of Control and Mitigation of Light Pollution

The IWMF is located within a light sensitive area; therefore, the original Nuisance Assessment outlined the required methods to minimise the potential light pollution from the IWMF. To minimise nuisance associated with light pollution to the surrounding area, the following mitigation measures will be used:

- Natural lighting will be used wherever possible;
- Areas with restricted access will not be illuminated unnecessarily;
- External light sources will be fitted at a low level directed downwards towards the area requiring light;
- Timers and movement sensitive lights will be fitted where possible;
- Bitumen will be used on the access road so that illumination can be provided without producing significant upward reflected light;
- The IWMF, and hence light sources, will be screened from view;

- The operating hours for the IWMF (07:00 hrs to 18:30 hrs Monday to Friday, and 07:00 hrs to 13:00 hrs Saturday, excluding Sunday and Bank Holidays) will ensure minimal operations during non-light hours; and
- Lighting used during construction will comply with recognised Health and Safety Standards, in the interests of safety and the environment.

The ground level for all operational HGVs driving to and from the IWMF site, and manoeuvring within and around the IWMF, will generally be 15 metres below surrounding ground level (at the IWMF), and along the main site access road at least 5 metres below surrounding ground level. The heights of permanent lighting around the building will be well below the surrounding ground level and facing downwards. Therefore, the greatest potential risk of light pollution to surrounding areas will be during the construction period, when by necessity construction must be undertaken at much higher levels than the final operations.

Within GFC's submission of details for the IWMF planning permission ESS/34/15/BTE, a "Construction Lighting Scheme" was approved against planning condition 43. This statement is presented in Appendix 14E. It comprises a written statement "C43.1 Construction Lighting" and the full design and calculations "C43.2 Lighting Scheme" by Hilclare Limited. In addition, a permanent lighting scheme and Design Summary for the Woodhouse Farm car park was prepared by Pell Frischmann and approved against planning condition 13.

In line with the original assessment, based on the above operational principles, it is likely that the impact of light pollution on areas surrounding the Site would be low.

The Civil Aviation Authority has confirmed that the proposed increase in the IWMF stack height to 58 m above surrounding ground level (108 mAOD) will not require a lighting beacon. Lighting of en-route obstacles only becomes legally mandated for structures of a height of 150m (492ft) or more above ground level.

Whilst the IWMF stack will not reach nor exceed a height of 300ft (91.4m) agl, in line with best practice, its location and elevation will be notified for aviation purposes to the MOD's Defence Geographic Centre.

No en-route lighting beacons will be required on the IWMF's stack. The stack poses a negligible risk to aviation and its height is comparable to the existing telecommunications mast located at Sheepcotes Farm and the network of high voltage electricity pylons that cross the open countryside which stand unlit at 50m above surrounding ground level. It should be noted that the high voltage electricity pylons skirt the perimeter of Earls Colne Airfield and are unlit. For completeness, the location and elevation of the stack will be shared with the Essex Police and Essex and Hertfordshire Air Ambulance who can enter its position into their flight system(s).

Lighting around the perimeter on the IWMF will not spill above the height of the full cut off luminaires, and by using light absorbent construction materials around the perimeter of the IWMF the potential for light reflection is negligible.

Pell Frischmann conducted the original external lighting impact assessment for the proposed Integrated Waste Management Facility at Rivenhall Airfield where both the local and wider environment was considered, and a supportive statement confirming that there will be no changes as a result of increasing the stack height by 23 metres, has been prepared on GFC's behalf and presented within Appendix 14F.

The use of full cut off luminaires ensures no direct light emittance above the horizontal and from a mounting height of 8m no direct light should fall on the stack either above or below the level of the surrounding landscape.

The reflective stack cladding starts at an elevation of 60mAOD (10m above surrounding ground level). The IWMF is lowered into the ground, and perimeter lighting will be at an elevation of 8m above finished floor level(s) (which vary from 30mAOD around the CHP Plant to 35mAOD around the perimeter of the buildings) would be established at an elevation of 38mAOD to 43mAOD. The risk of light spill reflection onto the stack will be negligible.

## **14.9 Conclusions and Mitigation Proposals - Nuisance**

The IWMF's location, site boundary, planning application area and surrounding site setting remains unchanged from that originally assessed and approved. The prevention and control of potential nuisances is predominantly managed by best operational practices. The operational control and mitigation measures that were originally proposed remain unchanged and the measures that have now been designed in detail and will be employed at the IWMF are extensive enough to minimise and control potential sources of nuisance. The surrounding site setting and local environment will not be at risk from nuisances from the IWMF's operations. In line with best practice, a risk screening and assessment process will be applied (and revised if necessary) following commencement of operations at the IWMF.

Under the IWMF planning permission ESS/34/15/BTE, Conditions 43, 44, 51(a) and 52(a) have been discharged. Appendices 14A, 14B and 14E provide the approved details which will offer control over lighting, dust and odour associated with development of the IWMF. The details of the proposed construction lighting demonstrate that it will operate within the condition levels, and the dust and odour management plans demonstrate how these will be minimised and controlled during the period of the proposed construction operations that are most likely to be pose the greatest risks of nuisance.

Details of the proposed operational Odour Management and Pest Management Plans submitted to the Environment Agency with the Environmental Permit Application are presented within Appendix 14C and D.

Lighting around the perimeter on the IWMF will not spill above the height of the full cut off luminaires, and by using light absorbent construction materials around the perimeter of the IWMF the potential for light reflection is negligible.

## **14.10 Cumulative Nuisance Assessment**

Ultimately, the final approved Environmental Permit Reference No EPR/FP3335YU/A001 will provide the management and control procedures to prevent and minimise nuisance impacts during the operations at the IWMF, limiting the impact resulting from its operation on any foreseeable development in or around the site.

The permit application demonstrated that the IWMF design and operations embody Best Available Techniques (BAT) to prevent, and where this is not practicable, to reduce emissions and the impact on the environment as a whole to acceptable standards.

In considering the potential Nuisance Impacts associated with the installation of the proposed electricity cable and water abstraction (and potential discharge) pipelines, standard methods of working that are outlined within the installation statements will be applied. This will result in the management and control of the potential (short-term) impacts, particularly to the few residential properties and public footpaths located along its route.

The electricity cable and water pipeline(s) will be routed within the verge of the IWMF site access road, across areas of restored quarry workings, within the public highway or along agricultural field boundaries. The nuisance impact associated with these works on residents or members of the public will be low and short term in nature.

The sites of potential residential or other development areas (including the Gladman development site in Silver End) indicated on the Braintree District Council website for the

emerging New Local Plan are not significantly near enough to the IWMF site to change the conclusions with respect to potential nuisance.

It is concluded that, from a potential nuisance assessment perspective, the cumulative EIA for the IWMF proposal and wider foreseeable developments in and around the site has been considered and assessed, and there are no significantly negative effects that have been identified.

The additional consideration that has been undertaken in light of the proposed increase in stack height under this planning application has led to no fundamental change to the findings of the nuisances assessment.

## APPENDIX 14 A

Dust Minimisation Scheme Statement ESS/34/15/BTE

## APPENDIX 14 B

Odour Minimisation Scheme Statement ESS/34/15/BTE

## APPENDIX 14 C

Environmental Permit: Odour Management Plan

## APPENDIX 14 D

Environmental Permit: Pest Management Plan

## APPENDIX 14 E

Construction Lighting Scheme ESS/34/15/BTE

## APPENDIX 14 F

Lighting Statement 2017