WATERDALE WASTE TRANSFER STATION APPLICATION TO VARY ENVIRONMENTAL PERMIT EPR/BP3793MQ

Supporting Information Document

Hertfordshire County Council

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NON-TECHNICAL SUMMARY

Hertfordshire County Council (HCC) owns the Waterdale Waste Transfer Station (WTS) at A405 North Orbital Road, Garston, Hertfordshire, WD25 0PR. The site is operated on behalf of HCC by FCC Environmental.

The WTS operates under an environmental permit, reference: EPR/BP3793MQ, which allows the site to collect a variety of domestic, commercial and municipal wastes for treatment in the form of manual and mechanical sorting and bulking for onward transport for recovery or disposal. The site currently processes up to 300,000 tonnes of domestic, commercial, and municipal waste each year of which no more than 800 tonnes of clinical waste will be accepted.

The site is located just to the north of the town of Garston and is bordered on the west by the A405 North Orbital Road/St Albans Road, to the east by the M1 motorway and to the north by junction 6 of the M1 where it intersects with the A405. Across the M1 to the east is the town of Bricket Wood. To the south lies open public land and residential properties.

HCC wishes to extend the boundary of the site to encompass an adjacent plot of land hitherto used as a coach park and garage. This extension of the site will allow for the erection of a new building to house a shredding facility to process bulky municipal waste i.e., furniture, mattresses, and carpets, allowing for more efficient onward transport and helping HCC to progress towards a target of sending zero waste to landfill by 2030.

The shredding operation will be fully enclosed within a purpose-built building. The building would be fitted with fast-action roller-shutter doors such that loads brought to the facility will be tipped internally with the openings to the building closed.

An extraction system is proposed for the shredding building that will vent to atmosphere via a 15m high stack after passing extracted air through a pre-filter to remove dust and a carbon filter to remove odour., thus minimising any adverse impact upon nearby residential properties.

Rather than increasing the amount of waste being brought onto the site, the shredding facility will accept up to 30,000 tonnes of the permitted 300,000 tonnes of waste handled annually by the site. This will reduce the pressure on the existing WTS and tipping hall.

To support the application, a noise assessment and odour assessment were carried out, both of which predicted that operational noise and odour emissions from the proposed shredding facility are unlikely to have a negative impact upon the amenity of residents. Both reports are included as appendices to this report.

An odour management plan, noise management plan, and updated fire prevention plan have been produced which, together with the operational management plan for the WTS, will minimise the potential for any adverse effect from the operation of the proposed shredding facility.

The design, physical controls and management of the proposed shredding facility mean that the environmental risks associated with the facility range from low to very low. A copy of the Environmental Risk Assessment is also included as an appendix to this report.

Contents

Appendices

1 INTRODUCTION

1.1 Overview

1.1.1 This document and its supporting appendices form an application to vary the Environmental Permit, reference: EPR/BP3793MQ, for the Waterdale Waste Transfer Station (WTS) operated by Hertfordshire County Council (HCC) at A405 North Orbital Road, Garston, Hertfordshire, WD25 0PR.

1.1.2 HCC is seeking to extend the boundary of the existing site to incorporate the premises of a former coach park to the south of the existing site. The additional area of the site will accommodate a new waste treatment building where the shredding of bulky residual waste will be carried out.

1.1.3 The changes included within this variation cover the first phase of works to upgrade the WTS. A second phase of works to upgrade the existing WTS building is planned and will be subject to a separate application to vary the permit at the time.

1.2 Site Location

1.2.1 A site location plan is included in Appendix C – Site Plans.

1.2.2 Waterdale WTS lies to the north of the town of Garston and just inside the M25 motorway which runs 1.25 km to the north of the site boundary. The local area consists of a mixture of community, commercial and residential properties.

1.2.3 The immediate surroundings of the site are dominated by transport infrastructure. To the north of the WTS site is Junction 6 of the M1 motorway, to the east is the M1 North bound carriage way, to the south residential properties and open public space and to the west the A405 North Orbital Road/St Albans Road.

1.2.4 There are a number of sensitive residential receptors in close proximity to the proposed development of the site. The closest residential receptors are located to the south at Farriers Way (approximately 195 m from the proposed location of the odour abatement system), Fullers Avenue (275 m) and Bucknalls Lane (250 m) and to the east at Barnes Wallis Way (approximately 460 m from the proposed development across the M1 carriageway).

1.2.5 Beyond the A405 to the west is West Herts Crematorium and the playing fields belonging to Parmiter's School, the school buildings lying less than 0.5 km from the site boundary.

1.2.6 There are six schools within 1 km of the proposed facility.

1.2.7 The following designated environmental sensitive receptors were identified in an EA Nature and Heritage Screening Report:

- Bricket Wood Common, Site of Special Scientific Interest (SSSI), approximately 850m east of the proposed shredding facility (screening distance 1,000 m),
- Deciduous woodland within 50m of the proposed facility; on the site perimeter and immediately west of the A405.

A copy of the Nature and Heritage Screening Report is included in Appendix N to this application.

1.3 Scope of the Variation to the Permit

1.3.1 This variation seeks to permit the operation of a new shredding activity in addition to the current permitted WTS activities at the site. The shredding activity will enable HCC to separate the bulky waste (household items such as furniture, carpets, and mattresses) currently accepted at the WTS and shred these materials prior to onward transfer to the contracted final treatment facilities. The reduced volume of the shredded output allows for more efficient and sustainable onward transfer of this material to the final treatment facilities.

1.3.2 The shredder will operate within a new building that will be constructed on land immediately adjacent to the existing operation. As a consequence, this variation will also extend the current permit boundary to incorporate the additional area of land.

1.3.3 The shredding facility will accept approximately 30,000 tonnes of bulky domestic waste that is currently managed within the existing WTS building. The shredding process will reduce the volume of these wastes for more efficient onward transport to disposal facilities, helping HCC towards their target of zero waste to landfill by 2030.

1.3.4 Odour abatement will be provided to the new building and an additional sprinkler tank and fire water recovery storage tank will be provided.

1.3.5 The overall capacity of the facility will remain as permitted, at 300,000 tonnes per annum, of which no more than 800 tonnes per annum will be clinical waste, and the types of waste to be treated will not change from those currently included in the existing permit. No additional waste treatment activities will be introduced beyond those currently undertaken at the facility.

1.3.6 The proposal also involves upgrading the existing site roundabout and the use of the existing coachyard entrance to serve the proposed shredding facility as part of a one-way system which will ease the pressure on the access to the waste transfer site, reduce queuing on the A405 and improve traffic management and road safety.

1.3.7 A site plan showing the existing site and the proposed additional is included in Appendix C to this report.

1.4 Regulatory Position and Guidance

1.4.1 The proposed variation does not introduce activities which will change the type of permit required for the WTS. There are no new activities which would trigger an installation activity or emission to water which would require a discharge activity.

1.4.2 The following appropriate measures guidance from the Environment Agency (EA) apply to the facility:

- Non-hazardous and inert waste: appropriate measures for permitted facilities;
- Healthcare waste: appropriate measures for permitted facilities.

1.4.3 However, as the proposed variation does not introduce changes to the management or handling of clinical wastes only the EA appropriate measures guidance for non-hazardous and inert wastes applies is considered applicable to the proposed changes.

1.5 Structure of the Permit Variation Application

1.5.1 This report provides details of the operational controls to prevent or minimise emissions as follows:

- Section 2 details the proposed management practices which will be in place at the plant, with specific detail covering:
  - Accident management,

  - Energy efficiency,
  - Efficient use of raw materials and water,
  - Avoidance, recovery and disposal of wastes.
- Section 3 addresses the operational measures which will be in place to prevent and/or control any potential environmental effects of the proposal.
- Section 4 identifies the nature of emissions from the operation and summarises the predicted impacts.

1.5.2 The report is supported by the following supplementary information and reports included as appendices to this report:

- Site Plans,
- Environmental Risk Assessment,
- Site Condition Report,
- Noise Assessment,
- Odour Assessment,
- Odour Management Plan,
- Fire Prevention Plan,
- Noise Management Plan,
- Dust Management Plan.

2 MANAGEMENT TECHNIQUES

2.1 General

2.1.1 The site operates under a Compliance and Working Plan (CWP) which details the activities that are carried out on behalf of HCC at the WTS. Documented procedures detail specifically how each activity is controlled and address the requirements for management system as set out in the permit.

2.1.2 The CWP will be updated and revised to clearly define the management structure, roles and responsibilities of all staff and the new area of the site and activities carried out there.

2.2 Inspections and Maintenance

2.2.1 Site boundary patrols are carried out frequently and at least daily. All staff have a responsibility to look out for and report any issues that might lead to emissions from the site or cause annoyance to nearby neighbours.

2.2.2 The shredder and associated plant will be subject to a programme of preventative maintenance and servicing in accordance with the manufacturer's recommendations.

2.2.3 Interceptors will be inspected routinely and cleared as necessary.

2.3 Organisation

2.3.1 The existing WTS is operated on behalf of HCC by FCC Recycling (UK) Limited, trading as FCC Environment, whose registered office is 3 Sidings Court, White Rose Way, Doncaster, DN4 5NU.

2.3.2 FCC Environment is a specialist waste and resource management company operating a range of waste management sites including material recycling facilities (MRF), energy from waste (EfW) plants and landfill sites.

2.3.3 The contract with FCC Environment is managed by a contract manager and a contract supervisor at HCC.

2.3.4 There are two site managers which allows for a Technically Competent Person to be in attendance during the operational hours of the site. Copies of certificates of technical competence are included in Appendix M.

2.3.5 An organogram of the organisational structure is appended to this document as Appendix P.

2.4 Competence and Training

2.4.1 The following Technically Competent Managers (TCMs) have been appointed for the works to be undertaken under the permit:

Table 2-1: TCM Details

Name	Sam Davies	Tony Betterton
Qualifications Held	The FCC Environment UK Ltd Competence Management System Certificate (CMS) – Transfer Station Management	The FCC Environment UK Ltd Competence Management System Certificate (CMS) – Transfer Station Supervision
Certificate Awarded	August 2023	September 2023

2.4.2 Training commensurate with their responsibilities and roles is given to all staff. All staff responsible for operation of the shredder will receive training prior to bringing the shredder unit into commercial use.

2.4.3 Records of training given are held on-site and online and will be made available for inspection by the relevant authorities upon request.

2.5 Monitoring and Reporting

2.5.1 Monitoring and reporting of emissions and other performance parameters will be carried out in accordance with the permit.

2.6 Accident Management

2.6.1 HCC maintain a safe system where operatives must sign in and out at the weighbridge office. Additionally, operators are obligated to complete mandatory modules on an online training hub and keep them up to date. Accident Management

2.6.2 An Accident Management Plan for the WTS is held in the site office. The plan is routinely reviewed annually but will be reviewed to include the extension to the site and the shredding activity.

2.6.3 The existing Fire Prevention Plan (FPP) for the site has been updated to include the new area of the site and the shredding activity. A copy of the FPP is included in this application as Appendix I to this report.

2.6.4 A fire detection and suppression system will be installed in the shredding building.

2.6.5 A new 650m^3 capacity fire water recovery tank will be installed to serve the new facility.

2.6.6 Fire suppression at the new site will be served by the existing 950m^3 capacity water tank fed by an on-site fire hydrant.

2.6.7 The pumping system from water tanks to fire suppression systems are checked on a weekly basis by site operatives and serviced by an external contractor on a quarterly basis.

2.6.8 Weekly checks also include the correct operation of fire alarms and fire doors.

3 OPERATIONAL CONTROLS

3.1 Waste Pre-Acceptance and Waste Acceptance Criteria

3.1.1 As detailed in paragraph 1.3.3 this variation will not seek to change the permitted waste types or annual tonnage accepted at the WTS. A full list of the wastes that the WTS is permitted to accept is reproduced in Appendix J. The proposals will simply divert approximately 30,000 tonnes per annum of bulky household waste (e.g., furniture, carpets and mattresses) away from the existing WTS building to a new shredding building on the new area of the site.

3.1.2 Given there are no changes to the permitted waste types the existing waste pre-acceptance procedures will remain appropriate.

3.1.3 Vehicles bringing bulky waste to site will enter the shredding facility via a separate designated site entrance, where they will weigh on via an automated weighbridge. They will only be able to proceed to the tipping hall once the identity of the hauler and the type of waste brought to site has been confirmed; a process of which will be conducted through ANPR and a touch screen for the drivers to access at the weighbridge. This will be monitored by one of two site operatives who will be in charge of managing the shredding facility.

3.1.4 Vehicles containing bulky wastes will then be directed to the shredding building or, as currently happens for all other wastes, to the tipping hall or the appropriate bay where the waste is discharged under supervision of a site operative.

3.1.5 They will then weigh-out via a second automated weighbridge; the necessary checks will be completed in the same automated fashion and weighbridge tickets will be provided.

3.1.6 Non-compliant wastes are segregated pending removal by a specialist contractor within 7 days or, if there is insufficient space to segregate the waste, re-loaded to the vehicle that delivered the load while the offending carrier makes arrangements for appropriate disposal. The same procedures will be applied to non-compliant wastes that would have been destined for treatment within the shredding building.

3.1.7 Vehicles leaving the site will be weighed out on a second weighbridge and the relevant paperwork provided upon departure. Both weighbridges are subject to regular calibration.

3.2 Waste Storage and Containment

3.2.1 Bulky wastes will be tipped or manually unloaded into internal storage bays for a maximum of five days prior to being shredded.

3.2.2 The shredding facility building will have an impermeable concrete floor. Access to the building will be via fast-acting doors on all vehicular access points. These doors will remain shut other than for access.

3.2.3 Shredded waste will be stored in bays within the shredding building for a maximum of five days prior to collection for onward transport.

3.2.4 Loading of vehicles for onward transport of the shredded waste will be carried out by mechanical shovel within the shredding building.

3.3 Waste Activities

3.3.1 The proposed shredder will be electrically powered and will be located in a fixed position within the shredding building.

3.3.2 Shredding will only take place during normal operating hours (see paragraph 3.4.2 below). It is anticipated that the daily volume of waste delivered to the shredding facility will be processed within the working day.

3.3.3 Bulky waste will be reduced to particles approximately 500 mm in size.

3.3.4 The shredder will be cleaned down at the end of each operating day using compressed air. Debris blown from the shredder will be swept into the shredded waste bay.

3.4 Site Access and Security

3.4.1 Access to the site is from the A405 St. Albans Road.

3.4.2 The site operational hours are:

Monday – Friday	06:00 to 20:00
Saturday	07:00 to 16:00
Sunday	08:00 to 16:00
Public Holidays	08:00 to 16:00

3.4.3 Any activity taking place outside these hours will be restricted to loading containers and carrying out “housekeeping” activities. All activity on site will take place within the hours permitted by planning permission.

3.4.4 Entry to the WTS is through 2.4m high palisade security gates. The perimeter of the site is comprised of 2.4m palisade fencing, chain-link fencing and hedging. The perimeter of extension to the site will be secured by extending the palisade fence to enclose that area.

3.4.5 The site operates CCTV security cameras which are monitored from the weighbridge. Coverage will be extended to the shredding facility.

3.5 Fuel Storage and Site Vehicles

3.5.1 Three mechanical loading shovels operate on the site and where required will be utilised within the new shredding building. These and HGVs operating from the site are re-fuelled on site.

3.5.2 Diesel is held in two underground storage tanks of 27,427 l and 24,477 l capacity.

3.5.3 “AdBlue” fuel additive is stored in a further 20,000 l capacity tank.

3.5.4 Heating oil for heat and hot water for the welfare facilities is held in a 2,200 litre bunded tank in a locked compound.

3.5.5 The diesel storage tanks are located within the existing WTS boundary and are regulated under the existing environmental permit. No further diesel or AdBlue storage is proposed as part of the site extension.

3.5.6 The above fuel storage arrangements do not represent a change to the existing fuel storage arrangements.

4 EMISSIONS AND IMPACTS

4.1 Emissions to Air

4.1.1 There are no point source emissions to air from the existing WTS.

4.1.2 The shredder is an electric unit and therefore will not introduce combustion emissions.

4.1.3 The shredding facility will be provided with a general ventilation system for the main hall and a dedicated extraction hood and reverse jet filter that serves the new shredder. The volume of air extracted from the shredder hood will be 18,000 m^3/hour and from the shredding building 34,000 m^3/hour of air will be extracted.

4.1.4 The extracted airflows will be combined and passed through a reverse air-jet pre-filter to remove dust from the air flow.

4.1.5 The filtered air will then pass through a dual bed carbon filter before being discharged from a 15 m high stack.

4.1.6 Dust collected by the reverse air-jet filters will be gravity fed, via a rotary valve to an intermediate bulk container (IBC) or similar collection vessel. The collected dust will be disposed of in accordance with POPs Regulations.

4.1.7 The extraction system for the shredder and shredding building will introduce a single point source emission to air.

4.1.8 The performance of the odour and dust filters will be monitored by a series of instruments installed throughout the system (flow sensors, differential pressure switches, etc.) to maintain the design airflows. Any fault will raise a specific alarm in the control panel, with more serious faults preventing the system from starting up.

4.1.9 Preventive maintenance will be carried out on all extraction and filtration equipment on a regular basis to ensure that the plant is kept in good condition. Consumable items will be replaced at the interval recommended by the manufacturer unless operational experience dictates otherwise. Consumable items are expected to include:

- dust filter bags,
- pleated panel filters,
- rigid bag filters,
- carbon media.

4.1.10 Fugitive emissions will be monitored during a site boundary patrol at least once a day. Action to be taken in the event of fugitive emissions being observed or a complaint being received are detailed in the Dust Management Plan for the shredding facility.

4.1.11 There are no emissions that are significant with respect to air quality as a result of this variation.

4.2 Emissions to Surface Water and Sewer

4.2.1 Run off from the concrete access road and the area surrounding the extraction system serving the dust and odour control equipment is discharged to sewer via full retention interceptors.

4.2.2 Clean run-off from roofs and non-trafficked yards areas is discharged separately via soakaways.

4.2.3 In the event of a fire, firefighting water can be diverted away from the soakaway to the 650m^3 capacity storage tank by motorised penstock valves.

4.2.4 A drainage plan for the additional land to accommodate the shredding facility is included in Appendix C.

4.3 Emissions to Ground/Groundwater

4.3.1 Emissions to ground and or groundwater will consist of clean surface water run-off from the roof of the shredding facility building and un-trafficked areas of the surrounding yard. Discharge will be via the soakaway marked G on the drainage plan in Appendix C.

4.3.2 The soakaway is designated as a geo-cellular soakaway comprising 139 units measuring 2,000 x 1,000 x 750 mm high. The soakaway is served by a 300 mm diameter perforated pipe. Four soakaway test points to enable soil infiltration rate/permeability will be installed, denoted TP01 to TP04 on Drawing B.

4.3.3 Motorised penstock valves will divert potentially contaminated water to the fire water storage tank in the event of an incident that may give rise to contaminated surface water.

4.4 Fugitive Emissions

4.4.1 Fugitive emissions to air as a result of this variation are limited to nuisance dust. Fugitive emissions of dust during the operation of the shredding building will be limited by enclosing the whole process within a building and by the use of fast-action roller-shutter doors.

4.4.2 As detailed in 4.1 above, both the shredder and the shredding building will have dust extraction and filtration installed.

4.4.3 A Dust Management Plan has been produced for the shredding facility and is included in Appendix L to this application.

4.4.4 The potential for fugitive emissions to air of VOCs will remain similar to the permitted WTS as no new fuel storage is being introduced.

4.4.5 There are no liquid materials introduced as a result of this variation and, therefore, there is no change to the potential for fugitive releases to water.

4.5 Odour

4.5.1 Whilst bulky wastes are not expected to have a high odour potential the design of the shredding building combines both containment measures and secondary abatement to control odours.

4.5.2 All storage and processing of waste within the new shredder building will be carried out within a purpose- built building. The shredder building will be fitted with rapid-action doors which will remain shut other than for access. Vehicles will tip waste within the building with the doors closed. Storage periods for waste within the shredder building will be kept to a maximum of five days for both bulky waste and shredded waste. Storage will be in concrete bays.

4.5.3 The shredder building will be fitted with an extraction system incorporating a carbon filter to remove odour, as detailed in section 4.1, and a 15m high final discharge stack.

4.5.4 An Odour Assessment was carried out in relation to the proposed shredding facility. A copy of the Odour Assessment report is appended to this report as Appendix G and concluded that the odour from the proposed shredder facility is considered to be not significant.

4.5.5 Odour management within the existing WTS site will remain as currently permitted.

4.5.6 An Odour Management Plan has been produced and will be implemented for the shredding facility. The Odour Management Plan is included in this application as Appendix H.

4.6 Noise

4.6.1 Noise impacts associated with existing WTS and the new shredder activity have been assessed and are detailed in the Noise Impact Assessment included as Appendix F**.**

4.6.2 Noise prediction calculations were undertaken using worst-case scenario data to predict the potential noise impact from the operation of the shredding facility. These predicted noise levels were assessed against measured background noise at three locations.

4.6.3 The assessment, which followed British Standard BS4142:2014 Methods for Rating and Assessing Industrial and Commercial Sound, was made using daytime measurements only since the WTS will not operate during the night.

4.6.4 The assessments concluded that adverse impact from noise from the shredding facility on nearby sensitive receptors is unlikely, i.e., the predicted noise rating of the shredding facility is less than the background noise level.

4.6.5 A Noise Management Plan has been produced to ensure effective management of noise from the shredding facility. The plan is included as Appendix O to this application.

4.7 Litter and Pests

4.7.1 The bulky wastes to be stored and treated at the proposed shredding facility have a low potential to attract pests.

4.7.2 Pest control practices in place at the existing WTS will be extended to the new area of the site and the new activity.

4.7.3 The incoming bulky waste will present a very low risk of litter. Management of the wastes within a building will ensure the risk of litter remains minimal.

Appendix A
APPLICATION FORMS

Appendix B
EXISTING ENVIRONMENTAL PERMIT

Appendix C
SITE PLANS

Appendix D
ENVIRONMENTAL RISK ASSESSMENT

Appendix E
SITE CONDITION REPORT

Appendix F
NOISE ASSESSMENT

Appendix G
ODOUR ASSESSMENT

Appendix H
ODOUR MANAGEMENT PLAN

Appendix I
FIRE PREVENTION PLAN

Appendix J
PERMITTED WASTE TYPES AND QUANTITIES

Appendix K
AIR QUALITY IMPACT ASSESSMENT

Appendix L
DUST MANAGEMENT PLAN

Appendix M
TECHNICAL COMPETENCE CERTIFICATES

Appendix N
NATURE & HERITAGE SCREENING REPORT

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NOISE MANAGEMENT PLAN

Appendix P
ORGANISATIONAL STRUCTURE

WATERDALE WASTE TRANSFER STATION APPLICATION TO VARY ENVIRONMENTAL PERMIT EPR/BP3793MQ

Supporting Information Document

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