



Waste Operation as a Reasonably Associated Activity Bespoke Application

Great Billing Sludge Treatment Centre

Anglian Water Services Ltd

February 2024

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Non-Technical Summary (NTS)

1 Background

1.1 Introduction

In order to satisfy the requirements of the Environmental Permitting Regulations (EPR) 2016, Anglian Water Services (AWS) “The Operator” applied to the Environment Agency to vary the existing Great Billing Sludge Treatment Centre (STC) “The Site” consolidated Environmental Permit (EPR/KP3734GJ/V005) to an installation permit – (application reference number EPR/KP3734GJ/V006)

The current IED permit application would only allow the storage of cake produced at the installation meaning that the cake produced at Great Billing as a result of anaerobic digestion process may be stored prior to deployment.

To facilitate the continued (import) storage of cake from other AWS sites prior to deployment to land as per the current consolidated permit, AWS have been advised that the addition of a waste operation as a reasonably associated activity would be required. From discussions, it is not likely that the standard rules permit conditions for “SR2010 No 17: storage of wastes to be used in land treatment” could be met due to proximity to buildings that are used by the public or are domestic dwellings.

To consider a bespoke application for the addition of a waste operation as a reasonably associated activity some additional information regarding the new activity is required. This Non-Technical Summary (NTS) document, associated application forms and supporting documents provides that additional information to support the application. The application is for the addition of a waste operation for waste storage as a reasonably associated activity to the Great Billing Sludge Treatment Centre (STC) current IED permit application.

1.2 Overview of the current site and activities

Great Billing Water Recycling Centre (WRC) and Sludge Treatment Centre (STC) are located at Great Billing Sludge Treatment Centre, Crow Lane, Little Billing, Northampton, Northamptonshire, NN3 9BX (NGR: SP 81886 61849). The WRC is operated under the Urban Wastewater Treatment Regulations (UWWTR) for the treatment of indigenous sewage sludge whereas waste imports and the STC operates under the Environmental Permitting Regulations (EPR). The STC operation is a non-hazardous waste activity which is currently carried out under a bespoke consolidated waste operation permit (EPR/KP3734GJ/V005). The waste activity comprises of imports, physio-chemical and anaerobic digestion (AD) treatment, and the storage of waste, all for recovery purposes. The STC handles waste derived from the wastewater treatment process indigenously produced on-site and imported wastes. The Site undertakes AD of sewage sludge from the on-site WRC and will continue this operation under a new bespoke Industrial Emissions Directive (IED) installation permit. No hazardous waste is imported or treated at Great Billing STC. The site has a standalone Water Discharge Activity Environmental Permit which will remain an independent permitted activity.

The Combined Heat and Power (CHP) plant is also currently permitted under the same waste operation permit (EPR/KP3734GJ/V005). Electricity and heat for the site are primarily provided by the combustion of biogas generated from the 4 CHP engines (three 1.4 MWe and one 1.516MWe spark ignition engines) and on-site treatment processes, and by dual fuel (natural gas and biogas) steam raising boiler providing steam to the enhanced enzymic hydrolysis (EEH) plant.

1.3 Overview of the Current IED Installation Permit Application

The primary permitted installation activity will be the AD treatment activity. The AD activity will treat indigenously produced sludges and imported sludges and domestic waste. Permitted Directly Associated Activities (DAAs) will be the physio-chemical treatment of sludges; the storage of sludges and cake from AD activity; the storage of biogas derived from the AD treatment of waste and the combustion of biogas in an on-site Combined Heat and Power plant (CHP). In the event the CHP cannot run in an emergency or due to operational issues, biogas will be combusted via an on-site flare stack and back-up boiler system.

As part of, AWS wishes to add 2 new EWC waste codes to allow for cake to be imported onto site for storage before deployment to land. These codes are 19 02 06 "sludges from physico/chemical treatment other than those mentioned in 19 02 05" and 19 06 06 "digestate from anaerobic treatment of animal and vegetable waste".

The IED permit includes:

- Liquid Sludge Import tank and screening
- Primary Digestion Tanks
- Gas Holder
- Digester 1, 2, 3, 4, 5, 6
- Monsal enhanced enzymic hydrolysis tanks (EEH) 1, 2, 3, 4, 5, 6 (5 in operation)
- Import Cake Reception Building including cake bunkers
- Post Digestion Tank 1, 2
- RO Plant Salt Storage
- CHP engines 1, 2, 3, 4 including waste oil tanks and waste heat recovery boilers on CHPS 1-3
- Auxiliary fired steam boiler
- Batching tanks 1, 2, 3, 4
- Poly Storage Silo
- Centrifuges (Duty/assist/Standby) 1, 2, 3, 4
- Biogas burner (flare stack)
- Cake storage – On issue of the cake storage reasonably associated activity permit cake storage would not continue be part of the IED permit.

The following are outputs from the process:

- Cake (dewatered post digestion sludge) - stored in cake bays before being deployed for beneficial use in agriculture as a soil conditioner;
- Bio-gas - stored in an existing gas holder, and is then either:
- Burnt in CHPs, for use on site (no export to grid);
- Burnt in the auxiliary fired steam boiler
- Flared in the waste biogas burner.

2 Introduction

2.1 Overview

This document has been prepared to support the application to add a waste operation as a reasonably associated activity for the Great Billing Sludge Treatment Centre (STC) ('the Site') by Anglian Water (AWS) ('the Operator').

This document contains a description of the Site and proposed reasonably associated activity an assessment of the possible effects of this activity and responses to questions in Parts A, B2, B4 and F1 of the application documentation (plus supporting information where required). Completed forms Part A, B2, B4 and F1 are included as separate documents.

The waste operation reasonably associated activity is to operate the waste storage areas for

- The storage of digested biosolids cake from Great Billing STC prior to being deployed to land under Sludge Use in Agriculture Regulations (SUiAR).
- Digested biosolid cake produced at other AWS sites prior to being deployed to land under Sludge Use in Agriculture Regulations (SUiAR).
- Treatment of digested biosolids cake with non-waste straw where necessary to ensure the correct moisture of digested cake is achieved / maintained.

AWS is seeking to set the total quantity of imported digested cake accepted at the Site as 150,000 tonnes per annum (tpa). The maximum amount of cake stored at Great Billing at any one time is 35,000 tonnes. Cake will not be stored for more than 36 months in line with the activities condition in the standard rules permit "SR2010 No 17: storage of wastes to be used in land treatment". The quantity of digested cake needed to be treated by the addition and mixing of non waste straw will be 10,000 tonnes per year.

No additional infrastructure will be installed, and no site operations or infrastructure will be changed as part of this application.

The site is not within an Air Quality Management Area; the closest AQMA is in Bedford approximately 25km southeast.

There are no point source emissions to land from the waste operation. There are no point or fugitive emissions to surface water or groundwater during normal operation.

Refer to the Environmental Risk Assessment and Environmental Management Plan for the risks and mitigation measures in place at Great Billing STC including the storage area.

2.2 Document content and structure

The following application forms have been completed to support the application and have been submitted as stand-alone documents:

- Part A: About You

- Part B2: General new bespoke permit
- Part B4: Variation to a bespoke installation permit
- Part F1: Charges and declarations

The main body of the Permit application document ('the Non-Technical Summary') includes all the supplementary information required in response to relevant questions within the Part A, Part B2, Part B4 and Part F1 application forms for which there was insufficient space on the forms to answer the questions in full.

The Environmental Permit variation application document ('the Non-Technical Summary') consists of six main parts:

- Section 1 Background
- Section 2 Introduction
- Section 3 Process Description
- Section 4 "Form A" provides information relating to Form A and contact details,
- Section 5 "Form B2" provides the general information required to inform Form B2 relating to the application; and
- Section 6 "Form B4" provides the more detailed information required to inform Form B4 relating to the application
- Section 7 "Form F1" covers the required financial information required for payment of the application fee .

Additional information included as part of this submission and not as stand-alone documents, are found in the following appendices:

- Appendix A – EWC codes
- Appendix B – Site location plan
- Appendix C – Site plan
- Appendix D – Sensitive Receptors

Stand-alone documents included as part of this submission, are detailed below:

- Environmental Risk Assessment
- Environmental Management Plan
- Evidence of Technical Competence (CMS)
- Climate Change Risk Assessment
- Drainage Plan
- ISO 9001 Certificate
- ISO 14001 Certificate
- Odour Management Plan
- Odour Modelling Report
- Annexes to original permit application
- Letter of Delegation
- Form A
- Form B2
- Form B4
- Form F1

3 Process Description

3.1 Cake Import and Storage

Great Billing Sludge Treatment Centre (STC) is co-located on Great Billing Water Recycling Centre (WRC).

The Water Recycling team own and manage the permit and have operational control over the site, and work in conjunction with Water Recycling Operational Logistics (WROL) and Circular Economy (CE) teams who oversee cake movements and storage of cake on site. Any complaints received proven to be specific to WROLs operations will be passed on to the Environmental Compliance Team for further investigation.

Cake is only imported for temporary storage on the site's storage pad and is not a part of the treatment process. Digested cake (19 06 06) only is imported from other AWS sites for storage.

The stored digested cake is stored in storage bays prior to transport off site and application for beneficial use on agricultural land as a soil conditioner under the sludge use in agriculture regulations (SUiAR). All the treated biosolids cake is a quality assured compliant product under the Biosolids Assurance Scheme (BAS).

Digested cake is imported from other AWS sites after going through a treatment process as detailed in the relevant site's HACCP plan.

3.2 Site operations

There is site drainage around the pads with a retaining wall on 3 sides to reduce the risk of pollutions. There are also groyne walls creating bays made from concrete lego walls.

The reception area is regularly inspected to ensure that there are no cracks or damage to the integrity of the impervious areas. The reception area has drainage to ensure that any spillages are collected and contained and transferred to the head of the WRC for treatment.

Vehicles discharge cake onto a concrete pad with sealed drainage allowing excess liquid to drain back to the head of the works for full treatment. If there is deemed an issue with the storage pad, then cake should be removed until further notice whilst the issue is fixed.

The only handling of the waste is done by the excavators, operated by WROL/contractor's technically competent people.

Due to the wet form of the biosolids stored on the site, they do not pose a fire risk. Therefore a Fire Prevention Plan is not required for the site.

The cake straw mixing is carried by the on site loading shovels.

3.3 Cake Acceptance

The following acceptance procedures are in place for imports from other AW sites:

- Quantity of waste delivered is measured.
- Unloading is undertaken by trained operative.
- Vehicle movements are managed by WROL.

Given all digested cake is from other Anglian Water sites, AWS is aware of the composition of the waste, handling requirements and the EWC codes to ensure that these are compliant with the EWC codes of waste that can be accepted as contained in the Environmental Permit.

The WROL / CE teams inspect the site at regular intervals. In addition there is a framework of AW employees and contractors (drivers) who will monitor cake stocks and flag any potential compliance issues to the Recycling and Environmental Compliance Team as needed. ISO 14001 accredited Environmental Management System for WROL manages the impact of the activities carried out by the team as detailed below:

- Cake storage on site and its compliance to the waste permit.
- Haulage of AWS cake to and from the site
- Spreading biosolids on land – the regulation of this activity is covered under a separate mobile plant permit.

The scope of ISO 14001 covers the activities that WROL carry out, rather than the site itself as the site's responsibility lies with the Water Recycling team (the site owners). Locations that are listed on the ISO 14001 certificate relate to the main office bases for the WROL team.

3.4 Sampling, Compliance and Quarantine

On the STC where the digested cake is produced, the biosolid material is sampled regularly throughout the process to ensure it will meet the Biosolid Assurance Scheme standard (BAS). Any requirements for quarantining stock are detailed in the HACCP plan. Sampling is done at the relevant treatment site, or at Great Billing.

If a cake sample fails Hazard Analysis and Critical Control Point standards (HACCP), the site will put out signs so loads cannot be taken off site and it remain until the sample has passed the BAS standard. The full bay is quarantined from the time the sample fails, to when it has passed the standards required to ensure wastes are not mixed.

Digested cake is exported to land where it meets the BAS standard for land spreading. This is wholly owned and operated by the AWS's Circular Economy team and is governed by the Sludge Use in Agriculture (SUAR) regulations.

4 Part A – About you

4.1 Question 5c: AWS Directors:

Director and Company Secretary contacts:

Barry, John Richard (Mr) – [REDACTED]

Ceeney, Natalie (Ms) - [REDACTED]

Courtice, Veronica Anne (Dame) - [REDACTED]

Donnelly Anthony – [REDACTED]

Hirst, John Raymond (Mr) - [REDACTED]

Nassuphis, Alexandros – [REDACTED]

Ogier, Batiste Thomas Degaris – [REDACTED]

Patel, Zarin Homi (Ms) - [REDACTED]

Phillips-Davies Paul Merton Alistair – [REDACTED]

Rivaz Rosalind Catherine (Dr) – [REDACTED]

Simpson, Peter (Mr) - [REDACTED]

Vassileva, Albena Simeonova – [REDACTED]

AWS Company Secretary:

Russell, Claire (Mrs) – [REDACTED]

Directors and Company secretary dates of birth should be redacted wherever this application is made public.

4.2 Question 7: Contact details

Application contact:

Name: Don Haymes

[REDACTED]

[REDACTED]

[REDACTED]

Operational contact:

Name: Tony Mutrie

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Billing contact:

Name: June Hayes

[REDACTED]

[REDACTED]

[REDACTED]

5 Part B2– General – new bespoke permit

5.1 Question 2: About the site

This application is for the addition of a waste operation as a reasonably associated activity to the existing EPR permit (EPR/KP3734GJ/V005) consolidated waste operation permit that is currently being determined into a bespoke installation permit under the Industrial Emissions Directive. The CHP and STC waste activities are currently on a consolidated permit therefore these activities should continue to be included on the same IED permit.

No site operations are changing because of this addition of a waste operation as a reasonably associated activity.

5.2 Question 3a and Appendix 2: Relevant offences

No relevant person in AWS relating to this permit application has been convicted of any relevant offence. Information relating to previous AWS convictions is contained within a stand alone document AWS Convictions April 2023.

5.3 Question 3b: Technical ability

Operational management is provided by qualified individuals and considered to be technically competent. All staff on site are trained to manage and operate activities without causing pollution. Competency in terms of the requirements of the environmental permit will be ensured through the appropriate training of all staff, covering:

- Awareness of the regulatory implications of the Permit for the permitted activity and their own work activities.
- Awareness of all potential environmental effects from operation under normal and abnormal circumstances.
- Awareness of the need to report any deviation from the Permit; and
- Prevention of accidental emissions, and action to be taken when accidental emissions occur.

All staff are aware of the implications of activities undertaken including the operation of the site. Skills and competencies necessary to work on site are documented and records of training needs, and training received for these posts are maintained.

Currently AWS uses the AWS developed technical competency course to demonstrate that personnel have the appropriate technical skills and knowledge to manage the activities undertaken. The AWS scheme is independently certificated as meeting the requirements of the Standard. The Competence Management System (CMS) enables Operators to demonstrate technically competent management on the basis of corporate competence and employees' individual competence. Individual competence remains a key component with each employee having the relevant technical competences required to carry out their role.

AWS engage a third-party certification body (LRQA) to audit and certify the CMS.

The Waste Permitting Scientist located within the Environmental Quality team for AWS provides CMS training to all appropriate AWS personnel and the Treatment Manager, and once issued, training will be provided in respect of the obligations of the Environmental Permit for the site.

Details on technically competent people at Great Billing STC:

Tony Mutrie- Great Billing STC Treatment Manager

Anthony Price

Gerald Waistell

Nathan Copps

Christopher Warren

Stephen Pashen.

5.4 Question 3d Management Systems

5.4.1 Integrated Management System

AWS operates several management systems, scoped and configured to provide the best overall level of assurance and value to the business. The Integrated Management System (IMS) unifies several management system processes into a single framework, enabling our organisation to work as a single unit with unified objectives. The management system standards which support this framework share the same core structure and use common system clauses, terms and definitions, bringing consistency and compatibility between standards.

Key benefits of the IMS framework are:

- Aligned IMS Policy and management system objectives.
- Improved risk management and integration
- Optimised use of business resources
- Enhanced customer satisfaction through the successful delivery of service expectations
- Efficiencies gained from the third-party assessment process - by planning external assessments against a core set of requirements across AW functions and activities, we reduce business impact and maximise value, both in cost and assurance
- Full alignment with AW strategic priorities, business goals and outcomes.

Under the umbrella IMS framework, there several smaller management systems which operate together to cover several areas relevant to AWS. For this permit application, the most relevant management systems are ISO 9001 Quality Management and ISO 14001 Environmental Management.

ISO 9001 Quality Management is concerned with many aspects of water services, water recycling, labs, and AWS's Water Recycling Operational Logistics (WROL) department which manages transport and cake storage on sites.

ISO 14001 Environmental Management only covers WROL's activities on site and sludge and cake movements between AWS sites. The WROL environmental management system manages the impact of the activities carried out by the team as detailed below:

- Cake storage on site and it's compliance to the waste permit.
- Haulage of AWS cake to and from Great Billing STC
- Spreading biosolids on land – the regulation of this activity is covered under a separate mobile plant permit.

The scope of ISO 14001 covers the activities that WROL carry out, rather than the STCs itself as the site's responsibility lies with the Water Recycling team (the site owners). Locations that are listed on the ISO 14001 certificate relate to the main office bases for the WROL team.

Process controls for the sludge product are managed by the Water Recycling team, and HACCP monitoring points are in place at strategic positions in the treatment process, with hardwired measures in place that prevent non-compliant product moving forwards through the treatment process and are detailed in the sites HACCP plans. Compliance to the HACCP plans is reported on at key internal meetings attended by the Director of Water Recycling and heads of department.

The Water Recycling team own and manage the permit and have operational control over the STC, and work in conjunction with WROL who oversee cake movements and storage of cake on site. Any complaints received proven to be specific to WROL's operations will be passed on to WROL's Environmental Compliance Team for further investigation.

5.4.2 Environmental Management Plan

AWS has a site-specific environmental management plan for each AWS site, including Great Billing STC. The site-specific environmental management plan (refer to EMP in application pack) was developed to identify potential risks of the activities carried out, manage and control these impacts. The EMP also acts as a signposting tool for staff to understand what plans and mitigation are in place for:

- establishing an environmental policy.
- determining environmental aspects and impacts of products / activities / services through a risk assessment process.
- planning environmental objectives and measurable targets.
- implementing and operating programs to meet objectives and targets.
- ensuring compliance with environmental legislation including the requirements of environmental permits.
- checking and corrective action; and
- management review.

The EMP allows for the auditing of environmental performance against given criteria and those within the Environmental Permit to demonstrate continual improvement as part of the Plan, Do, Check, Act methodology.

- emergency response.
- odour control.
- accident management.
- risk mitigation,
- odour control,
- reducing impacts on biodiversity.

AWS has several policies and procedures covering the O&M and monitoring of wastewater treatment processes that include sludge treatment plants; these policies and procedures fall within AWS's

overarching management systems. The key procedures are called POSWASTES, POSMAINT and POSTEL.

POSWASTES includes policies, procedures and standards covering all aspects of wastewater treatment operation, including day-to-day operation, training requirements for operators and sampling / testing. POSMAINT covers policies and standards for the maintenance of assets such as planned preventative maintenance and reactive maintenance. POSTEL covers AWS remote monitoring telemetry systems, including policies and standards for alarm action codes, response times and data collection.

5.4.3 Roles and Responsibilities

The Treatment Manager is supported and advised by experts within the Energy Team, Process Science team and the Environmental Regulation team. The Treatment Manager has a staff of works technicians reporting to them.

AWS ensures compliance with both relevant legislation and appropriate standards (for example Environmental Permit conditions) by undertaking regular legislation reviews to identify updates to legislation and guidance applicable to the Plant and its management. The Waste Permitting Scientist monitors waste imports into site to ensure they are below permitted limits.

The Treatment Manager is in regular contact with several colleagues regarding operational and compliance issues.

5.4.4 Complaints

Where complaints have been directly associated with or about Great Billing STC in 2020, they have been listed below.

Table 1: Table of Complaints

Complaint date	Summary	Actions taken
13/12/20	581601790- Odour complaint from customer	The cake exported from site was covered over to reduce fugitive emissions. Onsite odour control was increased, and there was continued contact with the customer until the issue was resolved to a satisfactory manner.

5.5 Question 5a: Site layout plan and process diagram

Plans provided, to satisfy question 5a, can be found in the following stand-alone documents some of which are also provided as appendices to this NTS:

- Site Location Plan – See Appendix B
- Site Layout Plan – See Appendix C
- Drainage Plan – See standalone document –“Drainage Plan Great Billing”

5.6 Question 5b: Site condition report

In accordance with Environment Agency requirements, a Site Condition Report (SCR) was provided for the original IED permit application to demonstrate the condition of the land and groundwater at the Site on issue of the proposed permit.

The waste operation area that this reasonably associated activity application is for was included in the original SCR for the IED permit.

As this application will not result in a change to the permitted boundary, a revised site condition report has not been prepared and the original site condition report has been included in this application pack – “Great Billing 2022 Site Condition Report”.

5.7 Question 6: Environmental risk assessment

Using the methodology outlined in with the EA’s environmental management guidance ‘Risk Assessments for your environmental permit’, this section provides a revised assessment of the effects of releases from the site on the environment. It also provides a justification that the measures in place for their control will adequately protect the environment. Emissions resulting in insignificant effects have been screened out; where further detailed assessments of potential environmental impacts are required this is also noted. A full description of the nature of the releases and measures to control them is provided in Section 6.3 below.

The ERA sets the requirements for the management of the permitted area, emission control measures etc. It assesses the risks to the environment, amenity and human health. All control measures within the rules must be adhered to in order to obtain the permit.

The ERA assesses the impacts from the following environmental concerns:

- Point source and fugitive emissions to air.
- Point source and fugitive emissions to water and land.
- Noise and vibration.
- Odour.
- Litter, mud and debris.
- Vermin and insects (pests).
- Human health and environment safety (i.e. visual impacts, Site security, flood risk); and
- Natural habitats and ecology.

Where emissions result in insignificant effects these have been screened out and where further detailed assessments of potential environmental impacts are required this is noted.

A copy of the ERA can be found in the stand-alone document included in the application pack.

5.8 Climate change risk screening

The Site is planned to operate and require an IED permit for more than five years and, therefore, requires a CCRA. It has been submitted as part of the application because the screening score exceeds 5.

The score was calculated as follows:

- Timescale: the site is anticipated to operate beyond 2060.
- Flooding: the site is not susceptible to extreme flooding from rivers or sea without flood defences, and no flood defences are present; and
- Water use: Majority of water use for the proposed permitted activities is sourced from recycled secondary wash water. Mains supply is used for:
 - Poly make up.
 - Heat exchanger system water
 - Eye baths and safety showers
 - Limited wash-down points where it would be uneconomic to extend the final effluent wash-water system.
 - Office messing facilities.
 - Odour control odorisers

No water is currently abstracted from surface and/or groundwater, FE wash water is used wherever possible.

A copy of the CCRA can be found as a stand-alone document included in the application pack. Further information is also in the Environmental Management Plan as required by the B2 guidance.

6 Part B4 – General – New bespoke waste operation permit

6.1 Question 1: Table 1a: Waste Operations

Table 2: Reasonably Associated Activities applied for Great Billing STC

Name of the waste operation	Schedule 1 or other references	Description of the Activity	Activity capacity	Annex I (D codes) and Annex II (R codes) and descriptions	Hazardous waste treatment capacity	Non-hazardous waste treatment capacity
Reasonably associated activities						
Great Billing STC	S5.4, Part A (1), (b) and (i) Storage	Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the Site where it is produced).		R13	0	150,000 tonnes per year 35,000 tonnes at any one time
	S5.4, Part A (1), (b) and (i) Treatment	Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)		R3	0	75 tonnes per day
	Raw material storage				0	0 tonnes
For all storage operations	Total storage capacity		35,000 tonnes ¹		0	35,000 tonnes
	Annual throughput		150,000 tonnes		0	150,000 tonnes

¹ Note: This figure excludes STC assets, and only imports into the storage area should be considered as a throughput in the context of this application

6.2 Question 1: Table 1b: Types of waste accepted.

There will be no changes to the current waste acceptance procedure as described in the original IED application. The EWC codes accepted at Great Billing are in line with the existing waste operation permit. The only additional waste codes to be added in this variation are 19 06 06 which is to reflect the Environmental Agency's change in guidance to separate biosolids in raw or limed cake (19 02 06) and digested cake (19 06 06).

Digested cake coded 19 06 06 is accepted from the onsite Water Recycling Centre and from other AWS sites for storage on site. The trucks enter the site and are weighed at a weighbridge before being directed to one of two cake bays.

Waste Code	WM3 Description of waste	Anglian Water Description
19 06 06	digestate from anaerobic treatment of animal and vegetable waste	Digested cake

The following acceptance procedures are in place:

- Quantity of cake delivered is measured;
- The capacity of the cake storage area is checked to ensure that there is sufficient storage capacity;
- Unloading is undertaken by trained operative; and
- Documents are checked and recorded via a tracking system and maintained on site.

AWS is aware of the composition of the waste, handling requirements and the EWC codes to ensure that these are compliant with the EWC codes of waste that can be accepted as contained in the Environmental Permit. The reception area is regularly inspected to ensure that there are no cracks or damage to the integrity of the impervious areas. The reception area has drainage to ensure that any spillages are collected and contained and transferred to the head of the Water Recycling Centre for treatment.

6.3 Question 2 Table 2: Emissions

There are no point source emissions to air, land, or water as part of normal operations.

6.3.1 Point Source Emissions to Air

There are three mobile units on site which emit suppression sprays (perfume) into the air to reduce odours on site.

6.3.2 Point Source Emissions to water (other than sewers)

Not considered applicable as the drainage network sends water to the head of the works for treatment. There will be no point sources emissions from the Site. There are no direct potentially contaminated discharges to controlled surface waters.

There will be no direct discharge of wastewater to controlled waters.

There are no direct potentially contaminated discharges to groundwaters.

Accidental releases of materials to the environment are controlled through adequate containment measures and working procedures.

6.3.3 Point Source Emissions to sewers, effluent treatment plants or other transfers off Site

There are no effluent treatment plants at Great Billing.

There will be no point source emissions or direct discharges to controlled waters or public sewers, as part of the permit operation. Any surface water from the cake pads will be discharged to the drainage system of the adjacent Great Billing WRC and will undergo treatment through the works before being discharged under an existing water discharge permit. On-Site WRC effluent will meet the requirements of the existing discharge consent. The water used at the Site will be contained in a closed circuit; all wastewater streams will either be recycled within the process or captured and rerouted to the adjacent WRC.

Discharges will be minimal, typically arising from periodic maintenance/cleaning operations. As such, there are no direct potentially contaminated discharges to controlled surface waters and no significant impacts. All drainage (surface water or foul water) will be captured by the on-Site drainage system and returned to the head of the WRC. A drainage plan of the Site is provided with the application, see the stand-alone document called "Great Billing Drainage Plan".

Due to the anticipated very low levels of contamination of the water and the volumes involved, no monitoring of its composition is proposed prior to discharge to the WRC.

Any areas of the Site, where there is a risk of contamination of surface water, groundwater or discharge of process waters are located on impermeable concrete surface. All surface water and rainwater from these areas drain to the WRC internal drainage system and are returned to the head of the works for treatment prior to discharge as final effluent.

A list of the point source emissions to sewers, effluent treatment plants and other transfers off Site is included in Table 4 below.

Table 4: Point source emissions to sewers, effluent treatment plants or other transfers off site

Emission point reference, and location	Source	Location	Characteristics	Frequency	Monitoring /mitigation measures prior to final discharge and emission point discharge.
Rainwater	Run off from impervious surfaces	Cake storage area	Clean rainwater form run off	Rainfall dependent	Rerouted to adjacent WRC.

Refer to the Environmental Risk Assessment on the environmental risk the water emissions pose and how these are mitigated, where relevant.

6.3.4 Point Source Emissions to land

There will be no routine point source emissions to land as part of the activities carried out on-Site.

6.4 Question 3: Operating techniques

This section provides a technical overview of the components, the proposed techniques and measures to prevent and reduce waste arising and emissions of substances and heat, including during periods of start-up or shut-down, momentary stoppage and malfunction, and leaks.

Specifically, consideration is made of:

- The technology to be used;
- The process, in terms of how it will be operated and controlled;
- Measures implemented to control emissions to air, water, sewer and land.

Table 5 lists the technical guidance notes (TGNs) used to inform the techniques and measures proposed to prevent and reduce waste arising and emissions of substances.

Table 5: Technical standards

Description of the schedule 1 activity or directly associated activity	Best available technique (BATC, BREF or TGN reference)	Document reference
Great Billing STC storage as a reasonable associated activity	<p>How to comply with your environmental permit</p> <p>Environment Agency environmental permitting guidance, including:</p> <p>H1 - Risk assessments for your environmental permit</p> <p>H3 Noise assessment and control</p> <p>H4 Odour management</p> <p>H5 Site condition report</p> <p>Control and monitor emissions for your environmental permit</p>	<p>https://www.gov.uk/government/publications/how-to-comply-withyour-environmental-permit</p> <p>https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit</p> <p>https://www.gov.uk/government/publications/environmentalpermittin-g-h3-part-2-noiseassessment-and-control</p> <p>https://www.gov.uk/government/publications/environmentalpermittin-g-h4-odourmanagement</p> <p>https://www.gov.uk/government/publications/environmentalpermittin-g-h5-site-conditionreport</p> <p>https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit</p>

Description of the schedule 1 activity or directly associated activity	Best available technique (BATC, BREF or TGN reference)	Document reference
	Biological waste treatment: appropriate measures for permitted facilities - Biowaste Appropriate Measure Guidance	Biological waste treatment: appropriate measures for permitted facilities - Guidance - GOV.UK (www.gov.uk)

The Environmental Management System and Environmental Risk Assessment (refer to documents in application pack) indicate that, given the current and continued use of appropriate management measures, there are not expected to be any significant risks to the environment arising as a result of the proposed continuation of site operations. Where a risk has been shown in these documents, appropriate mitigation measures have been put in place to minimise the risk to the environment.

6.5 Appropriate Measures

As there is technical guidance and standards and within the technical guidance (Biological waste treatment: appropriate measures for permitted facilities - Biowaste Appropriate Measure Guidance) there is no choice of standards and it is not proposed to use another standard there is no need to justify using the technical guidance or standards. Section 6.3 above indicates there will be no point source emissions to air, water, land or sewer or other transfers off site.

Diffuse emissions have been screened out in the environmental risk assessment provided as a stand alone document with this application.

The only cake imports would be of digested cake see below table for EWC code and description that has gone through the AD process and is both BAS and SUIAR compliant. The justification for the inclusion of this code for this operation is to ensure that there is capacity to store digested cake when the land bank for spreading is unavailable, thus ensuring the digested cake can still be used.

Waste Code	WM3 Description of waste	Anglian Water Description
19 06 06	digestate from anaerobic treatment of animal and vegetable waste	Digested cake

The maximum amount of digested cake that could be stored on site at any one time would be 35,000 tonnes. As a absolute maximum cake will not be stored for more than 36 months in line with the activities condition in the standard rules permit "SR2010 No 17: storage of wastes to be used in land treatment". However the usual cake storage period would be a maximum of 12 months to ensure that the maximum period of potential storage is covered this would be from one growing season to the next. Storage time is dependant on landbank availability.

On the STC where the digested cake is produced, the biosolid material is sampled regularly throughout the process to ensure it will meet the Biosolid Assurance Scheme standard (BAS). Sampling is done at the relevant treatment site, or at Great Billing.

If a cake sample fails Hazard Analysis and Critical Control Point standards (HACCP), the site will put out signs so loads cannot be taken off site and it remain until the sample has passed the BAS standard. The full bay is quarantined from the time the sample fails, to when it has passed the standards required to ensure wastes are not mixed.

Any requirements for quarantining stock are detailed in the HACCP plan.

In order to prevent or minimise fugitive emissions to air when the cake is handled by on site machinery for loading or unloading of vehicles or for moving the cake around the site drop heights are kept as low as possible. All vehicle leaving the site carrying cake will be covered.

6.6 Question 3b: General requirements

6.6.1 Overview

This section provides an overview of the measures in place at the Site for controlling fugitive emissions, noise and odour. An Environmental Risk Assessment has been completed, in accordance with the H1 ERA Guidance and is provided with the application. The response to this question relates to Table 3b in the Part B4 form.

The site has been constructed and operational for a number of years. All elements of the site have been constructed to appropriate standards and are maintained by the existing management systems outlined.

The Environmental Risk Assessment and Odour Management Plan indicate that, given the current and continued use of appropriate management measures, there are not expected to be any significant risks to the environment arising as a result of this permit application. There are no emission limits for operations at Spalding WRC.

Regular checks on storage area's integrity are undertaken as part of the ongoing monitoring regime.

6.6.2 Control of fugitive emissions to air

There are no significant fugitive emissions to air of gases, vapours, or particulates as part of normal Site operation.

Details of the procedures AWS follow with regards to the control of mud and debris and potentially polluting leaks and spillages are addressed in the EMP.

As cake storage activities are not being changed on Site as a result of the proposal, it is not anticipated that Air Quality Dispersion Modelling is required to address the emissions.

The results of the air quality desktop study indicate compliance with all relevant air quality standards for both the protection of human health and designated sites. Overall impacts of all air pollutants are considered to be low from the activities undertaken on the Site. The existing approaches and relevant procedures are presented in the EMP, and operational procedures are adequately addressed with respect to emissions.

6.6.3 Odour

The site is situated close to residential areas and a small industrial estate. Odour complaints are shown in Table 1. There are no proposed works to be undertaken on the site in respect of this permit application, therefore, the activities on-site are not anticipated to increase the off-site impact or result in adverse impact upon nearby sensitive receptors or the amenity of the area surrounding the site.

The OMP contains guidance of good practices for carrying out operational and maintenance activities, identifies specific measures for odour control and sets out procedures to monitor and respond to odour complaints.

The OMP was written using the Environment Agency's H4 Odour Management guidance (2011).

Management of the odour risks at the Site is also addressed in the Odour Management Plan. This provides mitigation measures to be followed by all staff to ensure normal operation does not result in odours leaving the STC boundary:

- Moving of cake to not be carried out unless de odourising system is in operation.
- Scrape clean and remove cake on left on the ground surface.
- Clear and report all spillages to Site office.
- Ensure washdown of vehicles is carried out before leaving Site.
- Ensure trucks are covered with sheeting before and after depositing cake on site.

The level of odour risk from the Site is considered to be manageable, as shown in the Environmental Risk Assessment. The existing Odour modelling has been updated to incorporate the latest details and any further actions and procedures which may need to be implemented.

Refer to the stand-alone Odour Modelling Report which provides more information about the current odour condition, and possible mitigation to be reviewed as part of a stepped improvement plan.

6.6.4 Noise

Initial screening has been carried out for the Site. The Site has not received any noise complaints and since the Site is not undergoing changes to equipment and vehicle movements prior to application submission, a Noise Impact Assessment (NIA) is not considered to be required.

Appropriate mitigation for noise and vibration impacts have already been installed at Great Billing as part of a previous planning requirement as listed:

- Acoustic Fencing - 4-metre-high acoustic fencing has been installed on the boundary and behind gas holders.

More information regarding noise control can be found in the original permit application, section 3.3.6 (iii) and Annex C.

No routine monitoring of noise is undertaken at Great Billing, but the mitigation measures listed above actively control noise levels on site.

As such it is taken that the continuation of the site's activities will have minimal impact on the noise levels of the surrounding area and no noise modelling is required. Despite this, appropriate measures have been considered for noise as all equipment on site is maintained under the AWS internal management system, POSMAINT, and there is an existing complaints procedure in place in case there are any complaints in the future.

6.6.5 Dust and particulates

There are not considered to be any significant dust or particulate sources from the Site as identified in the Environmental Risk Assessment. Dust is actively managed by a 3rd party contractor (sweeper) as needed.

The site has no historic records of dust complaints which indicates that the existing dust prevention measures are adequately mitigating the risk.

6.6.6 Bio-aerosols

A bio-aerosols risk assessment has been undertaken for the Site. The point and area source emissions are not considered to be any significant risks to nearest sensitive receptors. See Appendix D for a map of the site in relation to the sensitive receptors. There are no wildlife sites with statutory designations within 250 metres of the site.

6.6.7 Control of fugitive emissions to surface water, sewer and groundwater.

There are not considered to be any fugitive emissions to surface water, sewers or groundwater. There is appropriate containment for the control of liquid wastes put in place to minimise any potential releases, as identified in the EMP.

6.6.8 Control of fugitive emissions to land

Solid waste

Waste generated on the Site includes the following:

Table 6: Waste recovery of different waste streams

Activity	Waste stream	Waste recovery/disposal
Waste generated from other Site activities (i.e. offices)	General waste	Recycled where possible at a materials recycling Site. Non-recyclable waste is disposed of to a designated landfill site.
	Scrap metal	Recycled at scrap metal recycling facilities
	WEEE	Recycled at WEEE recycling facilities

Great Billing WRC has a designated waste management area that is located at NGR SP 82073 61873 by the offices. All skips and containers are located on a hardstanding. Skips and containers are clearly labelled. All waste from the Site is sorted into this waste area at the main site other than the gas cylinders.

If a complaint is made with respect to litter the complaints procedure will be followed. The Site Manager will arrange for litter pickers to clear up as appropriate and will assess whether further control measures will be required to ensure that the risk of recurrence is minimised. The details of the complaint and actions taken to resolve the issue will be recorded in the Site Diary and the complaints register.

6.6.9 Site security

Activities are managed and operated in accordance with the management system. Access to Site and waste is restricted by a 2.5m high chain link security fence. A galvanised steel, electronic, palisade gate secures the main access and is controlled by the control room. The Site is manned 6-6 pm, 7 days a week. For visitors and unauthorised personnel an intercom system at the Site entrance, is used. The Site also benefits from a CCTV system. Cameras are on the inlet, offices,

and STC. Regular inspections of the boundary fencing, and buildings are undertaken to ensure that these have not been compromised and continue to prevent easy access to Site. Repairs are undertaken in accordance with the EMS requirements.

Other risks relating to human health and the environment is presented in the ERA.

6.6.10 Complaints procedure

All complaints received relating to any aspect of the Site and its activities will be recorded and acted upon. Complaints, and actions taken, will be either recorded in the Site Diary or on a complaint record form. If a Site receives a complaint, this form should be completed and shown to the Environment Agency when they next inspect the Site. The forms will be used as evidence that any complaints received have been taken seriously and that actions have been taken to rectify any problems identified.

Complaints will be investigated promptly, and any appropriate remedial action taken. The complainant and anyone else likely to have been affected, should be informed about what has been found and actions taken in a timely manner. The details of the complaint and the actions taken will be recorded in the Site Diary or log. Where action is needed, a specific action plan would be created in order to rectify the situation as much as reasonably possible.

The aim will be to undertake measures to prevent complaints from being raised. However, where this is not possible, proactive measures will be taken to prevent further complaints from being made. For example, if a complaint is made with respect to dust, the Site Manager will arrange for dust suppression equipment to be used. The Site Manager will assess whether further control measures will be required to ensure that the risk of recurrence is minimised. The details of the complaint will be recorded in the Site Diary and the complaints register. If a complaint is received AWS will be informed as soon as is practicable and the complaints procedure will be followed. Confirmation will be recorded in the Site Diary or inspection log. The Site Manager will inform the Environment Agency of the complaint, if appropriate.

Any drivers who regularly cause a dust or mud and debris nuisance as a result of mismanagement of their vehicles will be discussed and advice sought if relevant.

If a complaint is made with respect to insects the Site Manager will investigate whether any of the activities at the Site could be the source of the nuisance.

If a complaint is made with respect to litter the Site Manager will arrange for litter pickers to clear up as appropriate and will assess whether further control measures will be required to ensure that the risk of recurrence is minimised. The details of the complaint will be recorded in the Site Diary.

Any complaints relating to fugitive emissions and the actions taken will also be recorded in the Site Diary and copies of the incident reports (including those provided to the Environment Agency) retained on-Site.

If a complaint is made with respect to vermin or an infestation is suspected, where normal treatment activities appear to be unsuccessful, the Site Manager will discuss and agree any further measures required with the pest control firm. The complaint reporting procedure will be followed as described below.

If a complaint is made with respect to noise or vibration the Site Manager will assess the cause of the complaint and will report the findings. If the noise or vibration leading to the complaint has been caused by a continuing operation, additional noise or vibration surveys may be required to confirm the degree of impact upon the receptor. The Site Manager will make any

recommendations for further noise or vibration control to the Management Team and shall inform the Environment Agency of the complaint as soon as it is practicable to do so.

In the unlikely event that a complaint is made with respect to odour the Site Manager will investigate the source of the odour and take steps to reduce its impact. If the source appears to come from the Site, then appropriate actions to reduce the odour will be taken.

Complaints investigation procedure

In the event of any complaint, this section deals with the complaint assessment procedures. The primary role of this assessment will be to ascertain whether the complaint is associated with any Site operations and what action should be taken to prevent or minimise the probability of a recurrence.

It is important that any person acting on behalf of AWS is appropriately trained and that all steps and decisions are documented.

Step 1 – Complaint received.

The Site operator or Environment Agency receives a complaint regarding the STC. Details logged within the complaints register.

Step 2 – How to respond.

Complainant is contacted to inform them the complaint has been received and request further information, where required.

The primary reasons for investigation of complaints are to identify the likely cause and source for the complaint and it is important to gather as much information about the complaint as possible. At the outset of any investigation, the Site Manager is to determine the priority for responding to the complaint.

If possible, someone from the Environment Agency will attend after a complaint has been made so that they can carry out an effective and subjective appraisal of the complaints and note any results into the complaints register.

Step 3 – Determine what to record and how.

The complaint details and the investigation outcomes and actions taken are to be recorded in the CSMS. This information must be filled in on Site at the time of notification of the complaint.

Step 4 – Follow-up investigation

In order to resolve any problems successfully, it is essential to understand fully the source, reason and the operational conditions that led to the complaint. The first step in the investigation will be to select the most appropriate methodology for assessment. All the information collected should be filled in on the internal complaints form and a note made referencing this in the complaints register.

Step 5 – Communication with the complainant

The Site Manager or contractor tasked with addressing the complaint is responsible for collecting all the information and providing feedback to the complainant, or the Customer Contact Centre will contact the complainant. Wherever possible an explanation of the actions taken and the reasons for the decision should be made to the complainant.

If it is decided that there was no ground for the complaint this should be clearly explained to the complainant, along with information about what they should do, if they are unhappy with the response.

Step 6 –Complaints records

AWS will be developing a system to log and track complaints, so they are more easily accessible for site teams. Currently all complaints AWS receives are stored on a computerised system (SAP).

6.7 Question 4: Monitoring

The storage area of the site currently does not have requirements for any monitoring of activities, emissions or the environment. This is a reasonably associated waste operations application for a site with no point source emissions like generators or engine, therefore there is no monitoring proposed.

6.7.1 Emissions to water (other than sewers)

There are no direct releases to controlled waters of emissions arising from the cake storage area. As such, no monitoring or reporting is required.

6.7.2 Emissions to sewers, effluent treatment plants or other transfers off Site

All discharge directly to the site drainage system which diverts water to the head of the works of the adjacent Great Billing WRC. As such, no monitoring or reporting is required.

6.7.3 Emissions to land

There are no direct releases to land of emissions arising from the storage area.

7 Part F1 – OPRA, charges and declarations

7.1 Question 1: Working out charges.

Advice confirmed that this application is activity, 1.16.12 as on the Environment Agency's charging scheme but that the cost would be 50% of the full £7,930 fee as this would be a reasonably associated activity. The resultant application fee being £3,965.

7.2 Question 3: Payment

Payment will be by Barclaycard. Contact details are found in Section 4.2 of this NTS and in Section 7c of Form A.

Fee to be paid: £3,965.

Breakdown of fee:

- New permit application 1.16.12 £3,965

7.3 Question 5: Confidentiality and National Security

AWS do not wish to claim confidentiality with this application.

Directors dates of birth should be redacted wherever this application is made public.

7.4 Question 6: Application Checklist

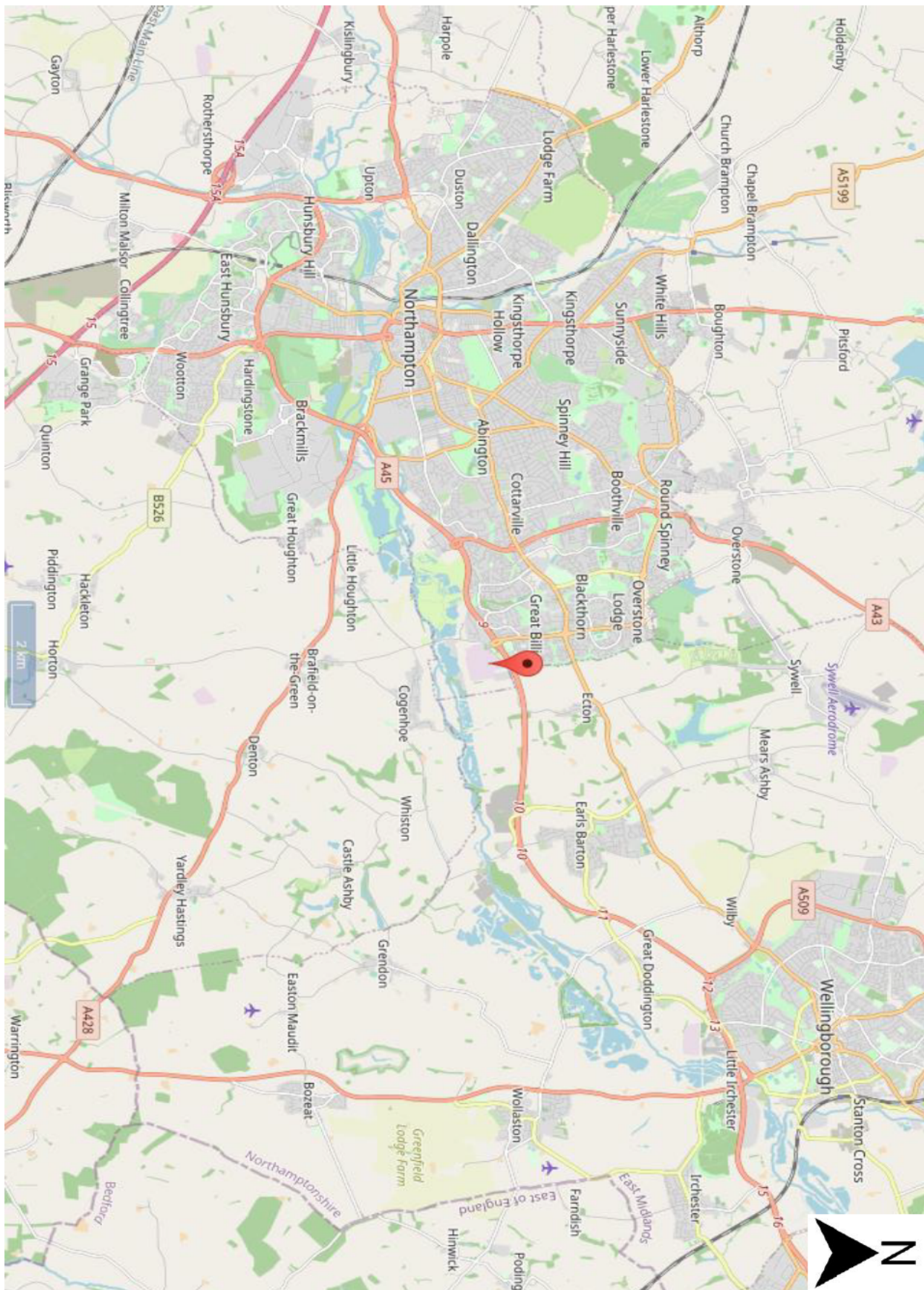
A full list of stand-alone documents which form part of the application can be found in section 2.2 above. References to all other questions are found in the Non-Technical Summary which makes reference to the question in the subtitle. Specific sections to the Non-Technical Summary are identified in the relevant forms.

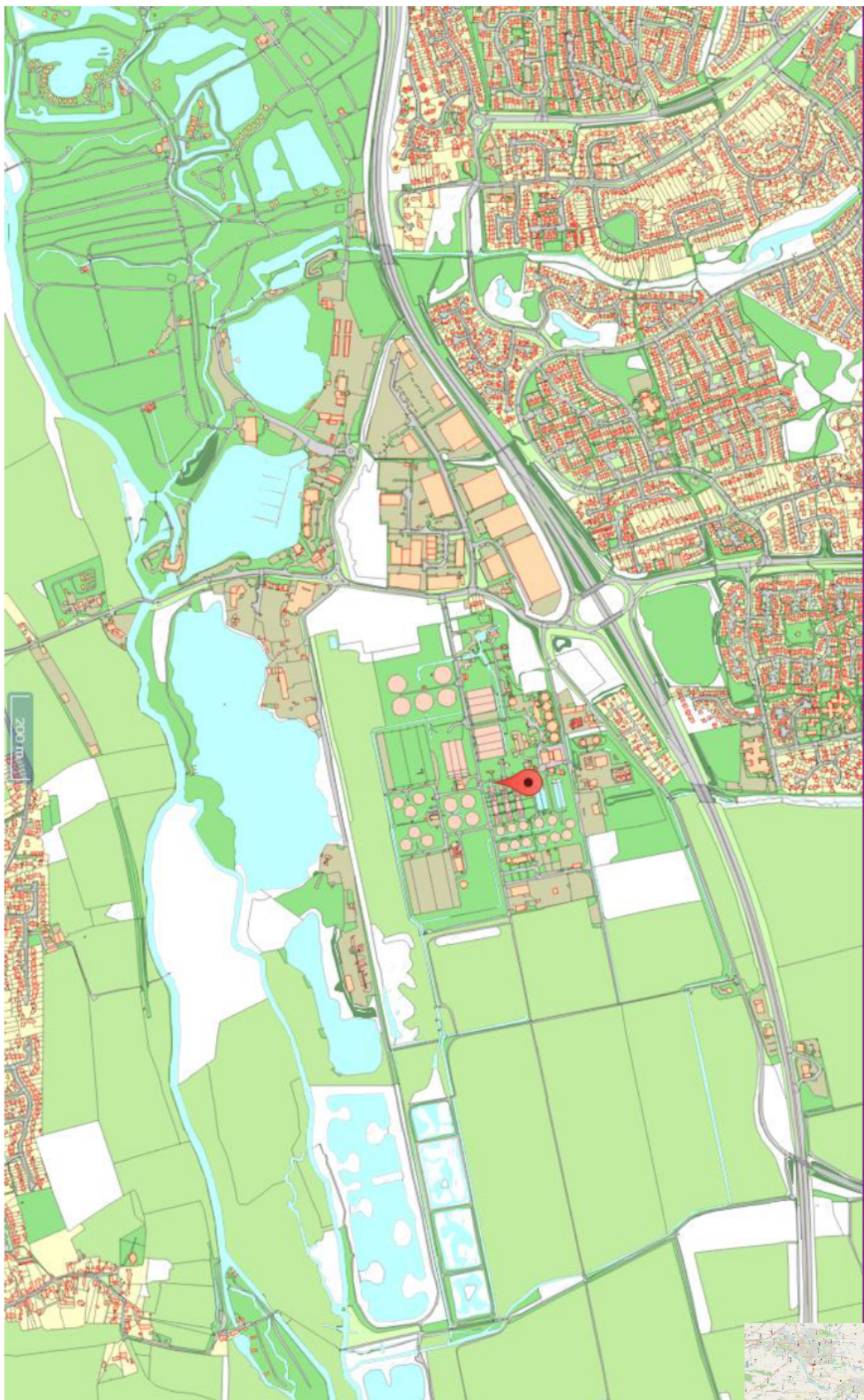
A. Appendix A – EWC Codes

The waste codes below are the only wastes to be imported into Great Billing. The descriptions are taken from directly WM3. The main text in Section 6 above offers more clarification over specific wastes.

19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE
19 06	wastes from anaerobic treatment of waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste

B. Appendix B – Site Location Plans





D. Appendix D – Sensitive Receptors

