

Ellington Road AD Facility

784-B042442

Site Condition Report

Environmental Permit Variation Application

SUEZ Recycling and Recovery UK Ltd

November 2023

**Document prepared on behalf of Tetra Tech Limited. Registered in England number:
01959704**



DOCUMENT CONTROL

Document:	Site Condition Report
Project:	Ellington Road AD Facility
Client:	SUEZ Recycling and Recovery UK Ltd
Project Number:	784-B042442
File Origin:	X:\784-B042442 (Ellington Road AD Variation)\60. Project Output\61. Work In Progress\Environmental Permitting\Finals\Finals Version 2\Appendix H - Site Condition Report\Site Condition Report FINAL.docx

Revision:	Final	Prepared by:	Gemma Allan
Date:	May 2023	Checked by:	Andrew Bowker
Status:	FINAL	Approved By:	
Description of Revision:	Final Issue to EA		

Revision:	Final V2	Prepared by:	Lauren Stanger
Date:	November 2023	Checked by:	
Status:		Approved By:	Andrew Bowker
Description of Revision:	Updated to include additional EWC codes, increase the annual tonnages and remove reference to wastewater treatment activity.		

Revision:		Prepared by:	
Date:		Checked by:	
Status:		Approved By:	
Description of Revision:			

Revision:		Prepared by:	
Date:		Checked by:	
Status:		Approved By:	
Description of Revision:			

1.0 EA SITE CONDITION REPORT TEMPLATE

1.0 Site Details

Name of the applicant	SUEZ Recycling and Recovery UK Ltd (SUEZ)
Activity address	Ellington Road, New Moor, Northumberland, NE63 9XS
National grid reference	NGR NZ 25800 89200

Document reference and dates for Site Condition Report at permit application and surrender	The site was originally permitted in 2005, as an open windrow and in-vessel facility. An SCR (in current EA format) was not required at this time.
--	--

Document references for site plans (including location and boundaries)	SUEZ/B042242/PER/01- Site Location and Environmental Permit Boundary
--	--

Note:

In Part A of the application form you must give us details of the site's location and provide us with a site plan. We need a detailed site plan (or plans) showing:

- Site location, the area covered by the site condition report, and the location and nature of the activities and/or waste facilities on the site.
- Locations of receptors, sources of emissions/releases, and monitoring points.
- Site drainage.
- Site surfacing.

If this information is not shown on the site plan required by Part A of the application form then you should submit the additional plan or plans with this site condition report.

2.0 Condition of the land at permit issue

Environmental setting including:

- geology
- hydrogeology
- surface waters

Site Setting

The permit area is situated at Ellington Road (the site), New Moor, Northumberland, NE63 9XS. The site is located adjacent to SUEZs existing landfill site and is situated within a predominantly agricultural area. The nearest residential property is located approximately 710m northeast of the site.

Access to the site is achieved by an access road located directly off the A1068.

The current permit area is centred at approximate National Grid Reference (NGR) NZ 25800 89200. There is no proposed change to site boundary as a result of this variation.

Geology

According to the British Geological Survey (BGS) 'Geology of Britain Viewer' the permitted area consists of Pennine Middle Coal Measures Formation - Mudstone, siltstone and sandstone (Bedrock Geology). The Pennine Middle Coal Measures Formation is a sedimentary bedrock formed between 318 and 309.5 million years ago during the Carboniferous period.

The superficial deposit of the permitted area comprises of Till, Devensian - Diamicton which is a sedimentary superficial deposit formed between 116 and 11.8 thousand years ago during the Quaternary period.

Hydrogeology

According to the Multi-Agency Geographic Information for the Countryside's (MAGIC) website, the bedrock underlying the site comprises a Secondary A Aquifer whilst the Superficial Drift Aquifer comprises a Secondary (undifferentiated).

The MAGIC website indicates that the permit area is not situated within a Groundwater Source Protection Zone (GSPZ).

Hydrology

There are multiple surface water features within 1km in the site. Portland Burn is located approximately 60m northwest of the site. There are two small ponds located 160m and 235m with a larger pond located 965m east. There is a series of three ponds 360m southwest of the facility.

With reference to the Flood Map for Planning Service (FMPS) website, the western edge of the permit area is situated in a Flood Zone 3 area. As defined on the FMPS website, Flood

	<p>Zone 3 areas comprise land assessed as having high probability of flooding from rivers and the sea. The remaining part of the permit area in in Flood Zone 1.</p> <p><u>Ecology</u></p> <p>The following designated and protected habitats are located within 1km of the site:</p> <p>Hawthorn Cottage Pastures SSSI</p> <p>Portland Burn Deciduous Woodland</p> <p>Lowland Meadows</p> <p>Portland Terrace Copse Local Wildlife Site</p>
<p>Pollution history including:</p> <ul style="list-style-type: none"> • pollution incidents that may have affected land • historical land-uses and associated contaminants • any visual/olfactory evidence of existing contamination • evidence of damage to pollution prevention measures 	<p>With reference to historic maps dated from 1900 to present, the following activities were identified on the site and the surrounding area:-</p> <p>1866 – 2000: Rough Grass Scrubland</p> <p>Mining activity is also shown in the general vicinity until the site of Ashington Colliery is illustrated as Wansbeck Business Park in 2000.</p> <p>The landfill adjacent to the northern perimeter of the site is not shown until 1985.</p> <p>A geotechnical report produced by ATKINS prior to the installation of the IVC identified:</p> <p>Concentrations of chromium and PAHs in soil in excess of residential SSVs (see Table 1),</p> <p>Concentrations of ammonia and PAHs in groundwater in excess of the DWS and/or EQS, (see Table 3) and</p> <p>elevated concentrations of soils gases methane and carbon dioxide.</p>
<p>Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)</p>	<p>There is no recorded evidence of historic contamination within the current permit area.</p>
<p>Baseline soil and groundwater reference data</p>	<p>On the basis of the information available, the range of chemical constituents within the Made Ground on the Site have been collated and summarised in Table 1.</p> <p>Baseline previously monitored ground gas data is presented in Table 2, surface water chemical composition in Table 3, and site-wide shallow groundwater composition in Table 4.</p>
<p>Supporting information</p>	<p>Phase I Desk Study & Phase II Geotechnical Interpretative Report Ellington In-vessel Composting (IVC) Facility – Atkins 2009. Findings have been summarised in Tables 1, 2, 3 and 4,</p>

should further information be required, the document is available upon request.

3.0 Permitted activities

Permitted activities

SUEZs Ellington site is currently regulated under a bespoke Environmental Permit (EPR/FP3934WZ) which allowed the operation of an In-Vessel Composting (IVC) Facility as a Section 5.4 A(1)(b)(i). In addition, the site also operates a Wood Shredding Facility and Street sweeping waste transfer station.

SUEZ are seeking to operate an AD facility at the site. The process will generate biogas which then ultimately feeds into a biogas upgrading plant to National Gas Grid criteria and injected into the gas grid. Alternatively, the biogas may be processed by the CHP engine to generate heat and electricity that would be used by the AD plant.

It is considered that the AD facility will fall under following Schedule 1 activity of the Environmental Permitting (England and Wales) Regulations 2016 (as amended): -

- Section 5.4 A(1)(b)(i) - Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment.

In addition to the above, the AD facility will have the following Directly Associated Activities (DAAs): -

- Storage of waste pending recovery or disposal;
- Physical treatment for the purpose of recovery;
- Heat and electricity power supply (i.e. CHP);
- Emergency flare operation;
- Gas upgrading;
- Raw material storage;
- Gas storage; and
- Digestate storage,;

Non-permitted activities undertaken

There will be no non-permitted activities undertaken on-site.

Document references for:

- plan showing activity layout; and
- environmental risk assessment.

The environmental permit boundary is provided as Drawing Number: SUEZ/B042242/PER/01.

An Environmental Risk Assessment is provided as Appendix D to the Environmental Permit Variation Application.

It is essential that you identify in your environmental risk assessment all the substances used and produced that could pollute the soil or groundwater if there were an accident, or if measures to protect land fail. These include substances that would be classified as ‘dangerous’ under the Control of Major Accident Hazards (COMAH) regulations and also raw materials, fuels, intermediates, products, wastes and effluents. If your submitted environmental risk assessment does not adequately address the risks to soil and groundwater we may need to request further information from you or even refuse your permit application.

5.0 Changes to Existing Activities	
Have there been any changes to the activity boundary?	SUEZ are not seeking any changes to the site boundary as a result of this variation.
Have there been any changes to the permitted activities?	SUEZ are seeking to remove the IVC currently operating at the site (EPR/FP3934WZ) and instead operate an Anaerobic Digestion Facility. Details have been provided in the Best Available Techniques and Operating Techniques provided as Appendix C of the Environmental Permit Variation Application.
Have any ‘dangerous substances’ not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	No
Checklist of supporting information	<ul style="list-style-type: none"> • SUEZ/B042242/PER/01- Site Location and Environmental Permit Boundary; • SUEZ/B042242/REC/01- Receptor Plan; • 1440_PL100 - Indicative Site Layout Plan • SUEZ/B042442/AQA/01 - Location of Emission Points to Air • Environmental Risk Assessment (Dated March 2023); • Non-Technical Summary (Dated March 2023); • Odour Management Plan (Dated March 2023); • Pest Management Plan (Dated March 2023); • Pre-Application Discussions (Dated March 2023); • Air Quality Assessment (Dated March 2023); and • Best Available Techniques and Operating Techniques (Dated March 2023).

Table 1: Results of Atkins Soil Screening

Determinand	Min Conc (Mg/Kg)	Max Conc (Mg/Kg)	SSV		Exceedance		Location of Exceedance
			Residential with plant uptake	Commercial / Industrial	Residential with plant	Commercial / Industrial	
Chromium	20	42	14.69	330	Yes	No	All 12 Locations
Indeno(123cd)pyrene	<0.1	0.5	0.37	222	One	No	HP01 at 0.45m bgl (0.5mg/kg)
Dibenz(ah)anthracene	<0.1	0.3	0.02	22.4	Two	No	HP01 at 0.45m bgl

							(0.3mg/kg) and TP2 at 0.30m bgl (0.1mg/kg)
Benzo(ghi)perylene	<0.1	0.7	0.11	2225	Three	No	BH2 at 0.30m bgl (0.2mg/kg) , HP01 at 0.45m bgl (0.70mg/kg) and TP2 at 0.30m bgl (0.20mg/kg)

Table 2: Results of Atkins Soil Leachate Screening

Contaminant	Number of Samples	Minimum (Mg/L)	Maximum (Mg/L)	Water Quality Standard (Mg/L)	Number of samples >Water Quality Standard
Arsenic	3	0.001	0.008	10	0
Chromium	3	<0.003	0.005	0.05	0
Copper	3	<0.004	0.009	2	0
Nickel	3	<0.003	0.012	0.02	0
Selenium	3	<0.001	0.001	0.01	0
pH	3	8.2	9.5	6.5-10	0
Sulphate	3	<10	67	250	0

Table 3: Results of Atkins Groundwater Screening

Contaminant	Number of Samples	Minimum (Mg/L)	Maximum (Mg/L)	Water Quality Standard (Mg/L)	Number of samples >Water Quality Standard
Ammonia	3	0.93	4.83	0.015	3
Fluorene	3	0.0005	0.0005	0.00002	1(BH2)
Anthracene	3	0.0003	0.0003	0.00002	1(BH2)
Fluoranthene	3	0.0004	0.0004	0.0001	1(BH2)
Benzo(k)fluoranthene	3	0.0006	0.0006	0.0000054	1(BH2)
Benzo(a)pyrene	3	0.0005	0.0005	0.00003	1(BH2)

Table 4: Chemtech Environmental limited Soil Sample Results

Lab Number Sample ID Depth (m)			38681-1 BH 1 1.20	38681-2 BH 2 1.20	38681-3 BH 3 1.50	38681-4 WS 2 0.80	38681-5 WS 3 0.50	38681-6 WS 4 0.50
Test	Method	Units						
pH	CE004 ^M	Units	8.1	8.2	8.0	8.1	7.8	7.9
Sulphate (2:1 water soluble)	CE049 ^U	Mg/L	68	240	111	88	94	<10
Sulphate (total)	CE010 ^M	Mg/Kg	288	568	799	412	733	296

5.0 Measures taken to protect the land

Use records that you collected during the life of the permit to summarise whether pollution prevention measures worked. If you can't, you need to collect land and/or groundwater data to assess whether the land has deteriorated.

Checklist of supporting information

- Inspection records and summary of findings of inspections for all pollution prevention measures
- Records of maintenance, repair and replacement of pollution prevention measures

6.0 Pollution incidents that may have had an impact on land, and their remediation

Summarise any pollution incidents that may have damaged the land. Describe how you investigated and remedied each one. If you can't, you need to collect land and /or groundwater reference data to assess whether the land has deteriorated while you've been there.

- Records of pollution incidents that may have impacted on land
- Records of their investigation and remediation

7.0 Soil gas and water quality monitoring (where undertaken)

Provide details of any soil gas and/or water monitoring you did. Include a summary of the findings. Say whether it shows that the land deteriorated as a result of the permitted activities. If it did, outline how you investigated and remedied this.

Checklist of supporting information

- Description of soil gas and/or water monitoring undertaken
- Monitoring results (including graphs)

8.0 Decommissioning and removal of pollution risk

Describe how the site was decommissioned. Demonstrate that all sources of pollution risk have been removed. Describe whether the decommissioning had any impact on the land. Outline how you investigated and remedied this.

Checklist of supporting information

- Site closure plan
- List of potential sources of pollution risk
- Investigation and remediation reports (where relevant)

9.0 Reference data and remediation (where relevant)

Say whether you had to collect land and/or groundwater data. Or say that you didn't need to because the information from sections 3, 4, 5 and 6 of the Surrender Site Condition Report shows that the land has not deteriorated.

If you did collect land and/or groundwater reference data, summarise what this entailed, and what your data found. Say whether the data shows that the condition of the land has deteriorated, or whether the land at the site is in a "satisfactory state". If it isn't, summarise what you did to remedy this. Confirm that the land is now in a "satisfactory state" at surrender.

Checklist of supporting information

- Land and/or groundwater data collected at application (if collected)
- Land and/or groundwater data collected at surrender (where needed)
- Assessment of satisfactory state
- Remediation and verification reports (where undertaken)

10.0 Statement of Condition

Using the information from sections 3 to 7, give a statement about the condition of the land at the site. This should confirm that:

- the permitted activities have stopped
- decommissioning is complete, and the pollution risk has been removed
- the land is in a satisfactory condition.