



**Contaminated Land  
Inspection Report**

**Mill Road,  
Burnham Overy Town**

**July 2025**

**Reference no. 022134**

Written by

Ashley Wheeler  
Senior Environmental Quality Officer (Land)

Reviewed by

Fabia Pollard  
Scientific Officer

Approved by

Dave Robson  
Environmental Health Manager

Borough Council of King's Lynn and West Norfolk  
King's Court  
Chapel Street  
King's Lynn  
Norfolk  
PE30 1EX  
**Tel: 01553 616200**  
**Email: [environmentalquality@west-norfolk.gov.uk](mailto:environmentalquality@west-norfolk.gov.uk)**

## Contents

Executive Summary .....	1
1 Introduction .....	2
2 Desk Study Information .....	2
Location .....	2
Previous investigation.....	2
Previous Site Usage.....	2
Present Site Usage .....	2
Ownership .....	3
Environmental Setting .....	3
Geology.....	3
Hydrogeology .....	3
Hydrology.....	3
Local Authority Pollution Prevention and Control Regulations .....	3
The Environment Agency Web site records.....	42
MAGIC website records.....	3
Historic Maps .....	3
Planning History .....	4
Norfolk County Council Record .....	4
Environment Agency Records .....	4
3 Site Walkover .....	8
Location of Receptors.....	8
Humans.....	8
Property .....	8
Environment.....	8
Controlled Water - Groundwater & Surface water.....	8
4 Contaminated Land Risk Assessment.....	8
Assessment of probability of a contamination event .....	9
Human health, property environment .....	9
Controlled water - Groundwater .....	9
Controlled water - Surface water .....	9
Assessment of Hazard .....	9
Human Health .....	9
Property .....	9
Environment.....	10
Controlled Water -Groundwater.....	10
Controlled Water - Surface waters.....	10
Conceptual site model.....	11
5 Outcome of Preliminary Risk Assessment.....	12
Conclusion .....	12
Part 2A status.....	12
Further Action.....	12
Appendices .....	14
Appendix A: Site Photographs.....	15
Appendix B: Drawings .....	15
Appendix C: NCC Documents .....	27
Appendix D: Risk Assessment Methodology .....	32
Appendix E: Initial Site Risk and Responsibility Audit Burnham Overy PC.....	37

## **Executive Summary**

The Borough Council of King's Lynn and West Norfolk has published a contaminated land inspection strategy which sets out how it proposes to fulfil its legal responsibilities for inspection under the contaminated land regime. The legal definition of Contaminated Land in Part 2A of the Environmental Protection Act 1990 (Part 2A) relates to unacceptable risks to human health and/or the wider environment. The contaminated land strategy details how sites are prioritised and the arrangements for strategic inspection. Strategic inspections identify where we may need to find out more about the land or where we don't need to take any more action.

A landfill situated on Mill Road, Burnham Overy Town has been identified for inspection. The residents and the Parish Council of Burnham Overy have raised concerns about the site identified in their Initial Site Risk and Responsibility Audit (Appendix E). Given the former use of the land and the sensitivity of the surrounding area, an initial assessment of the site has been undertaken to assess the potential for harm to human health, property, the environment, groundwater and surface waters under Part 2A.

From the evidence gathered during the assessment of the site history and a site walkover, the following can be stated:

- The site was a former Marl Pit and Limekiln, before being used as a landfill by Docking Rural District Council
- The use as a landfill started pre-1948 until operations ceased in February 1986 and the lease was terminated in October 1991.
- The site was since capped and is now heavily vegetated and largely inaccessible.

The Potential Hazard and the Risk associated with the site has been assessed. This reassessment indicates a potential LOW hazard and a risk rating of MODERATE/LOW. The site is not considered to represent a potential risk to human health and the environment under Part 2A of the Environmental Protection Act 1990 based on the information gathered and will not be prioritised for further detailed inspection. If additional information is discovered, or changes are proposed to the site, then the site should be reassessed.

## **1 Introduction**

This report details a review of information and risk summary about land at Mill Road, Burnham Overy Town and provides a conclusion on the risk to human health, property, groundwater and the wider environment.

The Contaminated Land Statutory Guidance (DEFRA, 2012) suggests that where the authority has ceased its inspection and assessment of land as there is little or no evidence to suggest that it is contaminated land the authority should issue a written statement to that effect. This inspection report forms that written statement.

## **2 Desk Study Information**

### ***Location***

The site's location is on Mill Road, Burnham Overy Town, NGR 584345 343242. The closest postcode is PE31 8HX. The site's location is shown in Figure 1 below.

### ***Previous investigation***

The site has not been the subject of any known reports or investigations.

### ***Previous Site Usage***

The site is a former landfill The site was a former Marl Pit with associated Lime Kiln (Appendix, Figure 022134/04), which was then used as a Refuse Pit (Appendix, Figure 022134/02) operated by Docking Rural District Council with the first use indicated to be pre-1948. The site was noted to accept commercial, household waste and sludges. Records indicate the sites operations ceased in February 1986 and the lease was terminated in October 1991.

### ***Present Site Usage***

The site has been capped since its use as a landfill and is seen densely vegetated. (See photographs No 1-5 in Appendices).

### ***Figure 1: Site location***

### ***Ownership***

Contact has been sent out to site owners and no response has been received. The listed site's owners will be consulted and this report will be made available for information.

### ***Environmental Setting***

#### ***Geology***

The OS Terrain 50 digital height dataset indicates that the site is between the 10m & 20m above ordnance datum contour lines (maOD).

No superficial geology is recorded at the site. The bedrock is classified as White Chalk Subgroup (Lewes Nodular Chalk, Seaford Chalk, Newhaven Chalk, Culver Chalk and Portsdown Chalk Formations (BGS digital geology).

Historic Norfolk County Council records, dated 1974 indicate that the former landfill was a chalk pit and sides and floor of the pit are Upper Chalk.

#### ***Hydrogeology***

The site is on land classified as a principal aquifer with Intermediate Vulnerability. It is not within a Source Protection Zone (SPZ).

Historic Norfolk County Council records, dated 1974 indicate that the upper chalk could be hydraulically linked to the River Burne (now 'Burn').

#### ***Hydrology***

The nearest major water feature is the River Burn ~340m southwest of the site.

No private water abstractions exist on site. One borehole exists within 500m for agricultural spray irrigation.

### ***Local Authority Pollution Prevention and Control Regulations***

No LAPPC processes are on site or within 500m of the site.

### ***MAGIC website records***

MAGIC website records the site to be:

- In 2 Nitrate Vulnerable Zones Surface Water Burn NVZ S401 and Groundwater Anglian Chalk G71.
- Historic landfills Staithe Road.
- Groundwater Vulnerability Map (England) – high
- AONB

### ***Historical Maps***

#### ***E-map Explorer***

Enclosure Map 1800 - 1850 – Present as field

Tithe map circa 1840 – Present as field

Ordnance Survey 1st Ed. 1879-1886 – Site seen as a Marl Pit and Limekiln. Path through site.

**Historical Maps on file at the Borough Council of King's Lynn and West Norfolk**  
Historic maps are presented in Appendix B and summarised below.

1843 – 1893: Site seen as a Marl Pit and Limekiln. Path through site.

1891 – 1912: Limekiln Labelled. Marl pit no longer stated. Path through site.

1904 – 1939: No data

1919 – 1943: No data

1945 – 1970: Labelled as a Refuse Tip.

1970 – 1996: No data

### **Aerial Photographs**

Aerial photographs are presented in Appendix B and summarised below.

1945 – 1946 MOD Aerial Photograph – Path through site, vegetated

1988 Aerial Photograph – Majority of site seen bare soils on the centre of the site. Bushes around the site boundary and grass appearing on the north. Possibly taken shortly after the landfill ceased activities.

1999 Aerial Photograph – grass cover over the majority of the site, shrubs and trees seen sporadically across site and lining the south and east boundaries.

2006-2009 Aerial Photograph – Predominantly tree cover.

2023 Aerial Photograph – Predominantly tree cover.

### ***Planning History***

No planning history exists for the site on borough council records.

### ***Norfolk County Council Records***

Norfolk County Council's Planning search does not show any results for the site. Correspondence with Norfolk County Councils closed landfills team provided documents (Appendix C) relating to the sites operation which indicate the site was in use prior to 1948 operated by The Rural District Council of Docking. Photographs were also provided from 1997 showing the site which at this time was capped and vegetated with grasses and small trees. The documents indicate Gas monitoring boreholes were noted initially to be proposed for the site, but no gas monitoring points were installed. The site is described as a disused chalk pit potentially linked hydraulically to the River Burne (now Burn). Records provided note the operations ceased in February 1986 and the lease was terminated in October 1991.

### ***Environment Agency Records***

The Environment Agency records the site as 'Staithe Road' The historic landfill data records that indicate the site has a first input listed as 31/12/1975, This differs from the Norfolk County council data due to differences in recording landfill activities before implementation of the Control of Pollution Act 1974. The Rural District Council of Docking is listed as a Holder. The record lists the landfill was used for the disposal of Commercial & Household waste, and liquid sludge up until 31/12/1986.

Publicly available Water Quality Archive data from the Environment Agency contains records from 2000 to 2020 which we have used to look at any changes between 2 points identified as 'R.Burn National Trust Mill' and 'R.Burn Roys Mill' on figure 2. The Mill Road landfill is outlined in light blue. Both sampling points are downstream of a

sewage treatment works which is seen to on the south of figure 2 marked 'Burnham Market STW'.

Roys Mill and The NT have the same sample type (river / running surface water) one is upstream (Roys Mill) from the closest point to the landfill, one downstream (National trust Mill). Although it is feasible that migration could occur higher upstream leading to contamination before the water is tested, if contamination is occurring between those points closest to the landfill the values are likely to be greater at the downstream point than the upstream. It is worth noting upstream of both points there is a sewage treatment works. So sampling points past the sewage treatment works were chosen to attempt to isolate any changes the landfill may have caused/be causing.

There is another data point north of the site labelled Burnham Overy Staithe, within the SSSI, the sampling for this site is limited in terms of contaminants and focussed on bacterial testing so comparison was not possible for the majority of factors. While a more targeted investigation closer to the landfill would yield more conclusive and actionable results, this data is freely available and spans a significant time period so it is worth looking at to understand the differences in the results of testing at the two points to see if there is anything indicative of or an indication of likely contamination that could be from the Mill Road Landfill. The river itself and the ecosystem surrounding it is one of the potential receptors so having sampling data for some contaminants of concern is a good source of background information.

Significant assumptions have been made for this limited analysis. We have assumed the landfill's potential leachable contaminants could flow into the river. Previous NCC Documents have stated the chalk pit could be hydraulically linked to the river burn(e). This is not to be taken as a thorough investigation of the site due to the assumptions made and significant limitations. This is an attempt to use useful data to see if any contamination is indicated to be occurring.

The following determinants were shared between the data and have been summarised in table 1:

- Oxygen, Dissolved, % Saturation
- Ammoniacal Nitrogen as N
- Orthophosphate, reactive as P
- Conductivity at 25 C
- Chloride
- pH

**Figure 1 - Map of the Wider area around the Landfill (light blue outline), showing sampling points with data available. The 'R.Burn National Trust Mill' and 'R.Burn Roys Mill' were considered to be down gradient of the landfill and downstream of the Burnham Market Sewage Treatment Works (STW).**

**Table 1 - Table showing the Averages from the contaminant data as well as minimum and maximum figures over the 20 years to show the extremes at both ends and data spread.**

The results provided show that the figures from each location have significant overlap and averages are fairly close together. The Environment Agency's Water quality monitoring using multi parameter probes factsheet<sup>1</sup> has been used to interpret the data.

Ammoniacal nitrogen as N, Chloride and Orthophosphate as P is greater upstream in the River Burn than downstream, which may be due to proximity to the sewage treatment works, the effluent from which may be higher in these contaminants. If landfill leachate were to be impacting the river between the sites we might expect the value to be higher downstream instead.

Conductivity varies in streams and rivers from 300 to 1000  $\mu\text{S}/\text{cm}$  but varies with geology, with chalk aquifers typically having higher conductivity values. Significantly higher conductivity can indicate that pollution has entered the river.

Conductivity is noted to be lower downstream, if significant pollution was occurring we may expect this to be higher at that location. No sample over the 20 years on both the National Trust and Roys Mill monitoring locations exceeded 862  $\mu\text{S}/\text{cm}$ . The factsheet states "Treated sewage effluent usually has a conductivity of  $>1000 \mu\text{S}/\text{cm}$  because of the presence of chloride, phosphate, and nitrate" again, this may be why the upstream value is higher.

Dissolved Oxygen (DO) is one of the most important indicators of river water quality since it is necessary for aquatic life. The concentration is reduced by the respiration of living organisms and replenished by photosynthesis of aquatic plants, algae and re-aeration from the atmosphere. The DO concentration in unpolluted waters is around 10 mg/l or between 90-110 %. Averages for both sites lie within this range with the value higher downstream. Concentrations below 50% may adversely affect the functioning and survival of biological communities. No sample dropped below this point in the 20 years of data analysed.

The BGS landfill factsheet<sup>2</sup> states "*both leachate and landfill gas can migrate laterally, affecting development sites adjacent to, or in the vicinity of, the landfill; liquid leachates, often of low pH (acid), can pollute groundwater or connected surface water bodies*". If this were occurring in relation to the Mill Road landfill we would expect the pH to be lower downstream. The average of the data indicate on average pH is higher downstream. (7.75 NT vs 7.63 Roys Mill). pH could be higher upstream due to interaction with the underlying chalk increasing alkalinity.

The data available does not show considerable difference between the Roys Mill upstream and National Trust downstream site. Where there are differences, the averages of the data point to better water quality downstream, the opposite what would be expected if a significant level of contamination were reaching the river between the two locations.

---

1

<https://buckinghamshire.moderngov.co.uk/documents/s32273/WaterqualitydatainterpretationfornontechnicalcustomersFeb201.pdf>

2

[https://www2.bgs.ac.uk/brownfield/factsheets/BGR\\_calcGroundRiskFactsheet\\_Landfills.html](https://www2.bgs.ac.uk/brownfield/factsheets/BGR_calcGroundRiskFactsheet_Landfills.html)

### **3 Site Walkover**

A site visit was carried out by one of BCKLWN Contaminated Land Officers on 31st May 2024 and the following was noted. (See photographs No 1-5 in Appendices).

The site was heavily vegetated and fenced off from the road running along the west of site. There was no access or paths visible onto the site and to the site which would have been difficult to traverse due to the vegetative growth shown in Photographs 2, 3 & 4. No vegetative distress was noted around the perimeter of the site and the plants growing on the site looked to be healthy.

A previous site visit on 11/01/2013 noted the site as being generally overgrown with vegetation including trees and brambles. At this time the site was entered from the north across agricultural fields, where it dropped down into a depression. No anthropogenic material was noted across the site and the vegetation did not show any signs of vegetative stress.

The entire site was not explored due to the density of brambles which covered the site. However, it was considered that the area which was viewed would be representative of the remainder of the site.

#### ***Location of Receptors***

##### *Humans*

The nearest residential dwelling is approximately 160m to the south. Access to the site is difficult due to the dense vegetation and lack of footpaths alongside the main road. Opportunity for direct contact is low.

##### *Property*

The nearest residential dwelling is approximately 160m to the south. Further development is south of this. The surrounding land has agricultural use, there is was no indication of vegetative stress noted in the bordering crops or pasture land.

##### *Environment*

There are no designated environmental receptors as set out in Table 1 of the statutory guidance within 1km of the site. An SSSI is located just over 1km north however, which the River Burn connects to.

##### *Controlled Water - Groundwater & Surface water*

The site is on land which is classified as a principal aquifer but is not within a source protection zone. The nearest water feature is the River Burn ~340m southwest of the site.

### **4 Contaminated Land Risk Assessment**

The Council has used a process adapted from CIRIA C552 (Contaminated Land Risk Assessment, a guide to good practice) to produce the conceptual site model and estimate the risks to defined receptors. This involves the consideration of the probability, nature and extent of exposure and the severity and extent of the effects of the contamination hazard should exposure occur. Further explanation is provided in Appendix D.

### ***Assessment of probability of a contamination event***

From the information gathered it is considered that there is the potential for a source of contamination to be present on the site due to the use of the site as a former landfill.

#### *Human health, property environment*

The site is difficult to access due to the dense and vegetation present and the type of vegetation (Bramble and Nettles). The nearest property is 160m south and the surrounding fields show no signs of vegetative stress. The site is also located around 10m above the nearest property.

The probability of a contamination event affecting human health, property, designated environmental receptors is LOW.

#### *Controlled water - Groundwater*

The site is on a principal aquifer, MAGIC map identifies the site as having high groundwater vulnerability. The site is not shown to be within a source protection Zone. The record lists the landfill was used for the disposal of Commercial, Household and liquid sludge. The landfill ceased operations in February 1986 and so any material on site, in the landfill has been present for 38 years at the time of writing.

The probability of a contamination event to groundwater is assessed as LOW

#### *Controlled water - Surface water*

No drainage is seen on or bordering site, however historic landfill records from Norfolk county council indicate that the site could be hydraulically linked to the river burn ~340m southwest. We have not found evidence of significant contamination to the river in the limited review of Environment Agency data from 2000 to 2020.

The probability of a contamination event to surface water is therefore assessed as LOW

### ***Assessment of Hazard***

#### *Human health*

The site is a former landfill accepting liquid sludge, commercial & household waste. Contaminants may be present within this waste that could cause harm to human health. The material on site has been present for at least 38 years and it is unclear if the remaining material poses a significant risk. The site is not open, has been capped with soil and has developed dense vegetation in that time. Ground gas monitoring was initially considered for the site but never installed. Any ground gas generated from site has likely diminished over time. Therefore, the associated risk for human health would be LOW.

#### *Property*

Liquid sludge and household waste could potentially include materials that could potentially lead to gas formation, posing a risk to property. The material on site has been present for at least 38 years. No complaints have been noted relating to the site or damage to property recorded on the records we have accessed. Therefore, the associated risk for property would be LOW.

#### *Environment*

There are no designated environmental receptors as set out in statutory guidance within 1km of the site. No complaints have been noted relating to damage to the

environment recorded on the records we have accessed. The associated risk for environment would be VERY LOW.

#### Ground/surface Water

Landfill materials could potentially contain leachable wastes/contaminants which could pose a risk to controlled waters.

The site is on land which is classified as a principal aquifer but is not within a source protection zone. The nearest water feature is the River Burn ~340m, limited analysis of river sampling data has been included in the report which did not give rise to concerns of significant contamination for the analytes tested. The material in the landfill has been present for at least 38 years and it is considered likely the majority of the contaminants which would be able to affect human health and ecology could have volatilised or have leached out of the soils and migrated away from the source. However, there is still some uncertainty regarding other contaminants that have not been considered within the river sampling analysis and any impact that to groundwater locally. Therefore, the associated risk from hazards would be considered MEDIUM.

### **Conceptual site model**

The conceptual site model (Table 3) shows the sources, pathways and receptors identified and the subsequent risk classification.

Table 3: Conceptual site model

Source	Pathway	Receptor	Probability	Hazard	Risk
Heavy metals, polyaromatic hydrocarbons	Direct contact, ingestion, dust inhalation, plant uptake and consumption of wild fruit	Humans (adults and children)	Low	Low	Low risk
petroleum hydrocarbons	Direct contact, migration.	Property (buildings)	Low	Low	Low risk
asbestos	Direct contact, leaching.	Environment*	Very Low	Low	Very Low risk
containing materials, putrescible wastes and other contaminants within the landfill	Direct contact, Leaching.	Controlled water (surface and groundwater)	Low	Medium	Moderate/ low risk

Moderate/Low risk - It is possible that harm could arise to a designated receptor from an identified hazard. However, if any harm were to occur it is more likely that harm would be relatively mild.

Low risk - It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.

Very low risk - There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is unlikely to be severe.

\*Ecological systems as set out in Table 1 of the contaminated land statutory guidance

## **5 Outcome of Preliminary Risk Assessment**

### ***Conclusion***

The Borough Council considers that based on information available at the time of this strategic inspection, there is a potential source of contamination but the potential for harm is limited due age of the waste and limited volume. No relevant contaminant linkage has been established. This assessment indicates a potential LOW hazard and a risk rating of MODERATE/LOW.

There was no evidence of harm or of a significant possibility of significant harm to the receptors identified in the conceptual site model. As the risk posed is moderate/low, the site would be classified as Category 3 for Controlled Waters as set out in the Statutory Guidance (Appendix D contains the categorisations from the Statutory Guidance). We have determined that there is not a strong case that the risks from the land are of sufficient concern, that the land poses a significant possibility of significant harm. The legal test for significant possibility of significant harm is not met. The site will be kept under review should circumstances change.

The site would be considered Category 4 for Human health, Property and the Environment.

If the land use changes or it is redeveloped, this land may require further investigation. The National Planning Policy Framework (NPPF) states that responsibility for securing a safe development rests with the developer and/or landowner. The Borough Council will require that adequate site investigation information, prepared by a competent person is presented to ensure that the site is suitable for any proposed new use.

### ***Part 2A status***

Statutory Guidance states that 'If the authority considers there is little reason to consider that the land might pose an unacceptable risk, inspection activities should stop at that point.' In such cases the authority should issue a written statement to that effect. This report forms that written statement.

On the basis of its assessment, the authority has concluded that the land does not meet the definition of contaminated land under Part 2A and is not considered contaminated land.

### ***Further Action***

This assessment is based on the site's current use and is valid providing no changes are made to the soil or vegetation cover material, to surface water conditions or to the site's use.

No further assessment of the site is considered necessary under Part 2A unless additional information is discovered or if changes are made to the site.

Due to the identified controlled water receptor (River Burn) the Environment Agency was consulted on the final draft of the report. The Environment Agency's comments are below, and support the report's conclusions:

### Environment Agency/GWCL Position

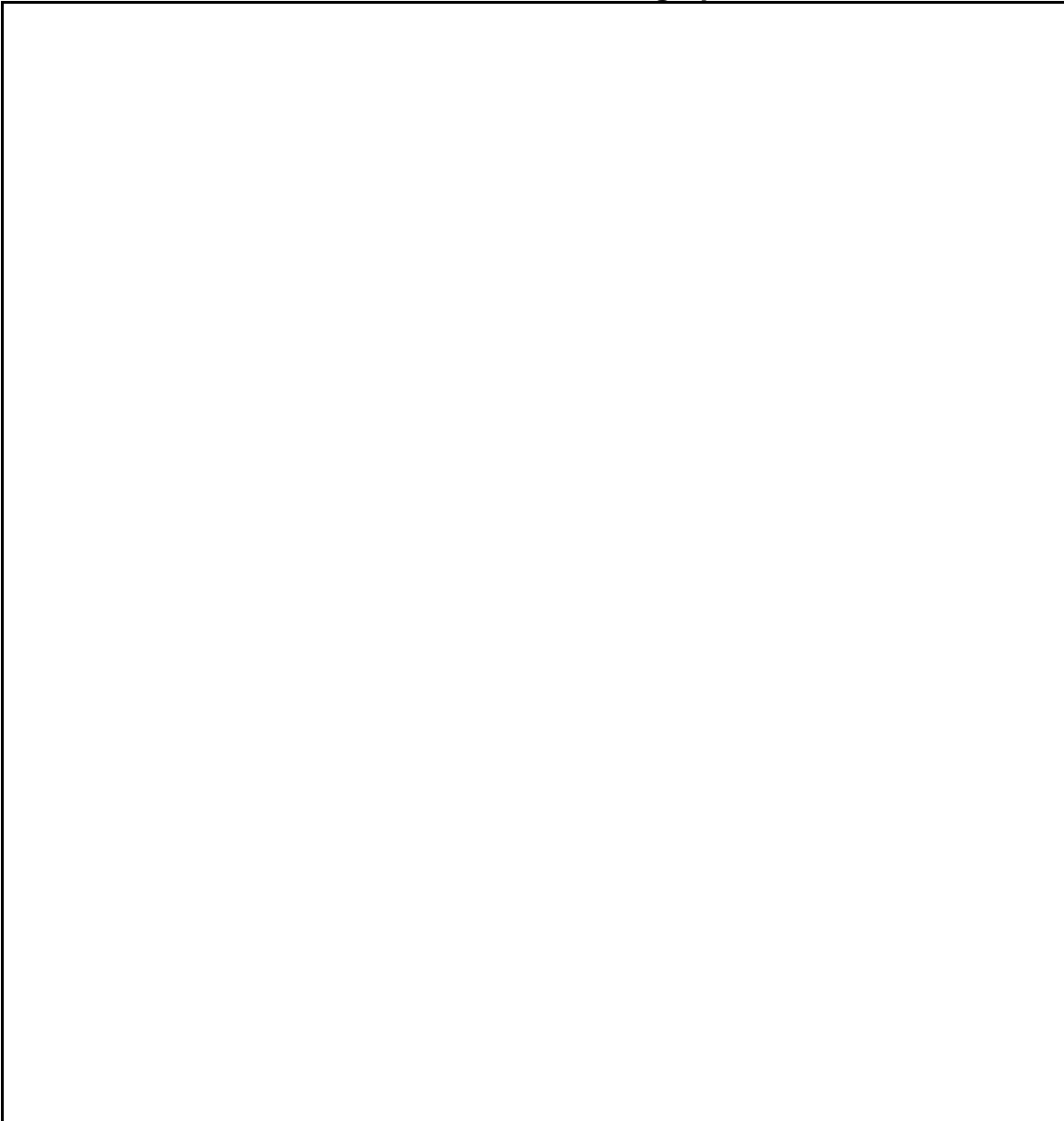
We have reviewed the Report and agree with your overall conclusions. Our comments are as follows:

- *We agree that there is the potential for a source of contamination to be present due to the sites former use as a landfill.*
- *The site is located on the Chalk Formation designated as Principal aquifer. It is not within a Source Protection Zone and there are no groundwater abstractions in the vicinity of the site. The chalk groundwater is a potential receptor to contamination from the site. In terms of risk to groundwater, estimating an approximate depth of chalk pit to be 3m and the groundwater level beneath the site to be approximately 4mAOD (assuming the groundwater is in hydraulic continuity with the River Burn), an unsaturated zone beneath the site of approximately 3-8m would be expected (assuming a ground level of 10-15mAOD).*
- *We agree that the River Burn is a potential receptor to contamination from the site. However, the review of up and downstream Environment Agency sampling data (2000 – 2020) for the determinants available has not indicated evidence of any significant contamination.*
- *We agree there is still uncertainty regarding other contaminants associated with landfill wastes which have not been considered as part of the river sampling analysis.*
- *In conclusion, whilst there is a potential source of contamination which may be resulting in localised groundwater contamination, based on the available information the landfill does not appear to constitute significant pollution of controlled waters and does not meet the requirements of paragraphs 4.37, 4.38 and 4.39 (EPA 1990: Part 2A Statutory Guidance 2012). These seek the Local Authority to focus on significant pollution.*
- *There is currently no evidence to indicate that a significant possibility of significant pollution of controlled waters may occur, and on this basis, we consider that the site would be considered Category 3 (Water) (EPA 1990: Part 2A Statutory Guidance 2012).*
- *To provide additional confidence to support this decision, there are several wells/boreholes in the area reported on the BGS Geindex site. It is worth exploring whether any of them could be sampled. TF84SW61 and TF84SW52 are located up gradient and TF84SW54 and TF84SW22 located downgradient of the site.*
- *We agree with the Local Authority decision that no further assessment of the site is considered necessary under Part 2A presently, unless additional or new information is found.*
- *In the event of a land use change or if the site is redeveloped, adequate site investigation should be carried out under the Planning Regime to ensure that the site is suitable for its proposed use.*

## Appendices

**Appendix A**

**31/05/2024 Photographs**



OS Map showing the locations of the Photographs.

Photograph 1. A photo from north of the site looking south showing the agricultural fields. the trees at the centre of the image to the left of the road are the northern section of the Mill Road site

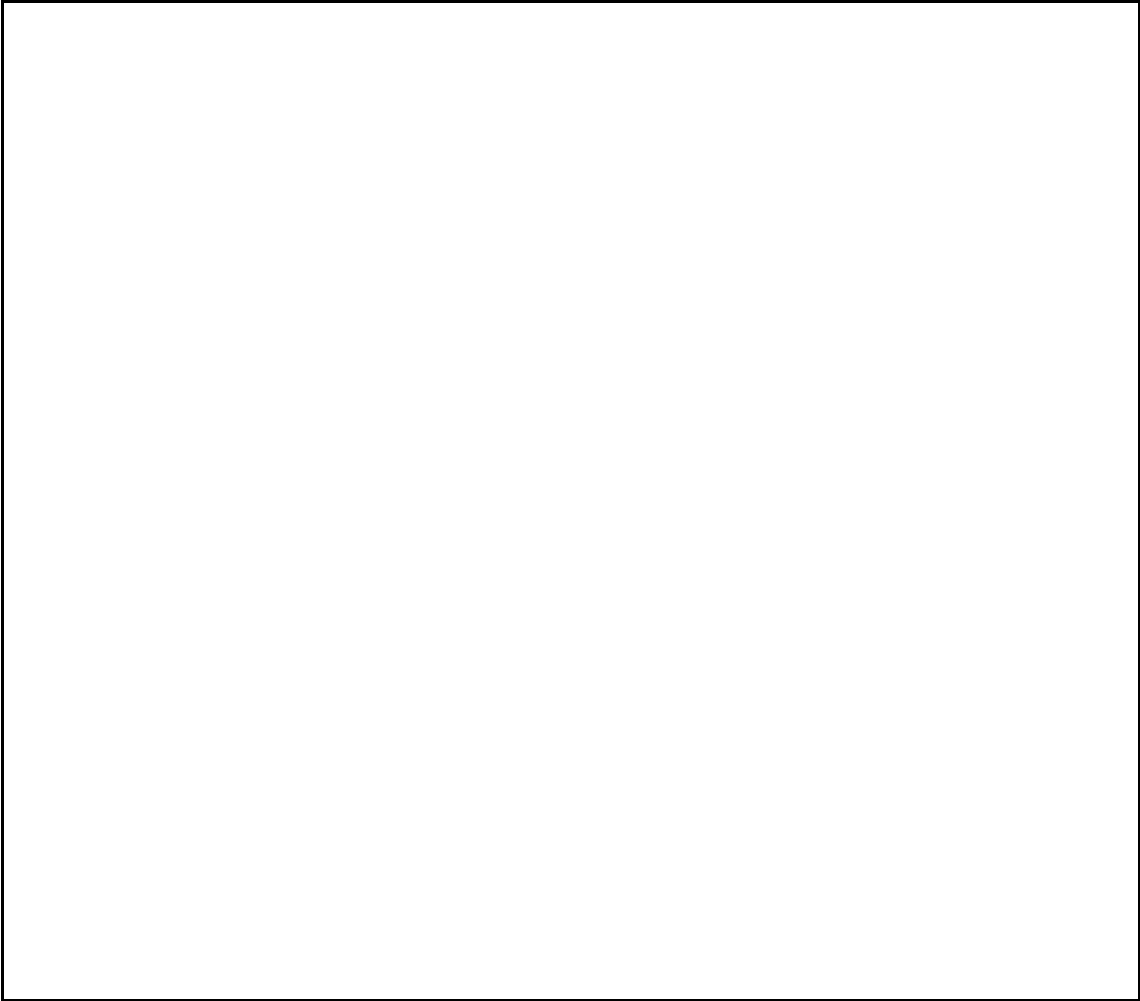
Photograph 2. Vegetated areas of the north of site looking south.



Photograph 3. Dense vegetation on site.



Photograph 4. Dense vegetation on site from the south looking north.

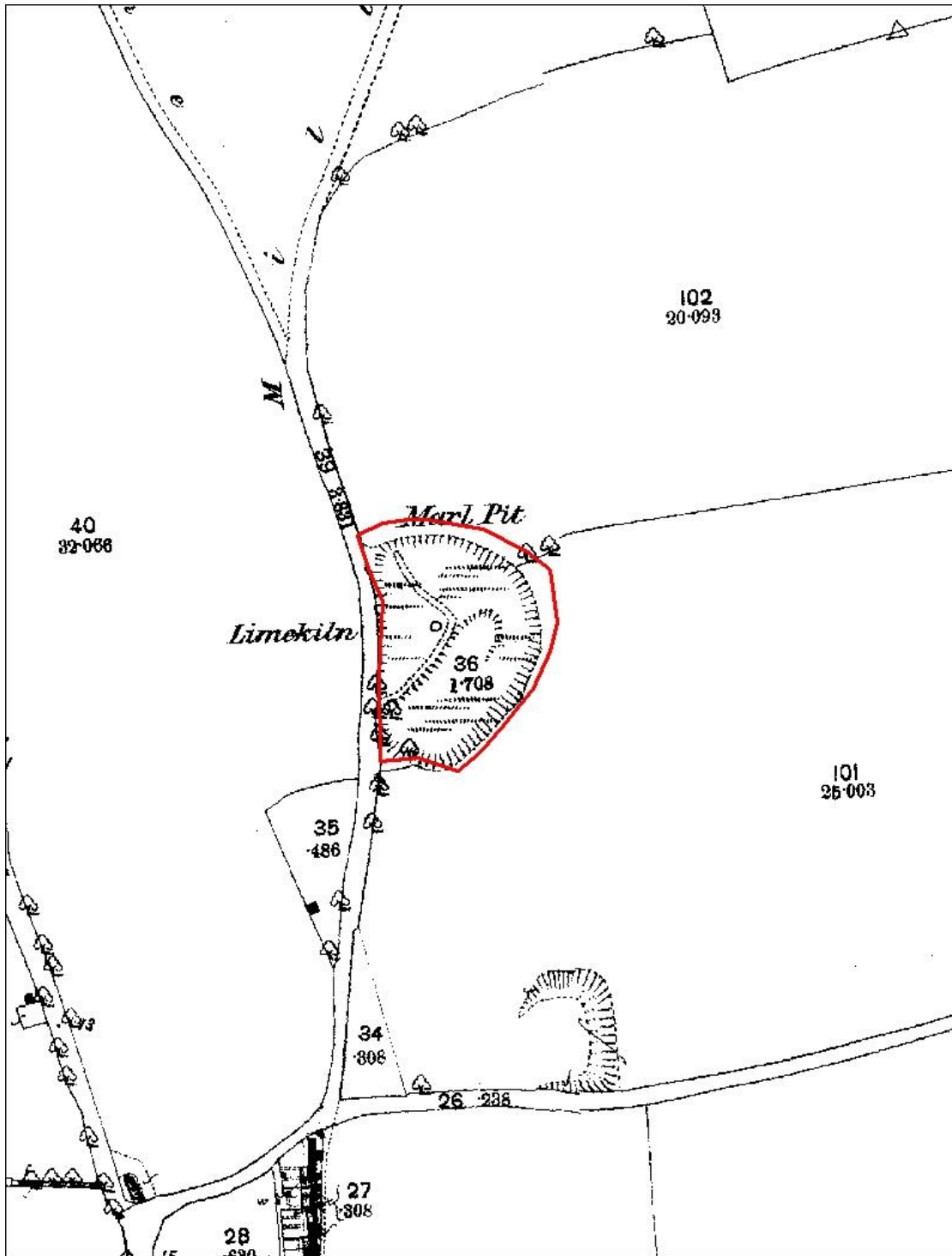


Photograph 5. Gate at the south of site showing use of adjacent land for grazing and fence on the left which prevents access to the site.

*Appendix B:  
Drawings*







Borough Council of  
King's Lynn &  
West Norfolk

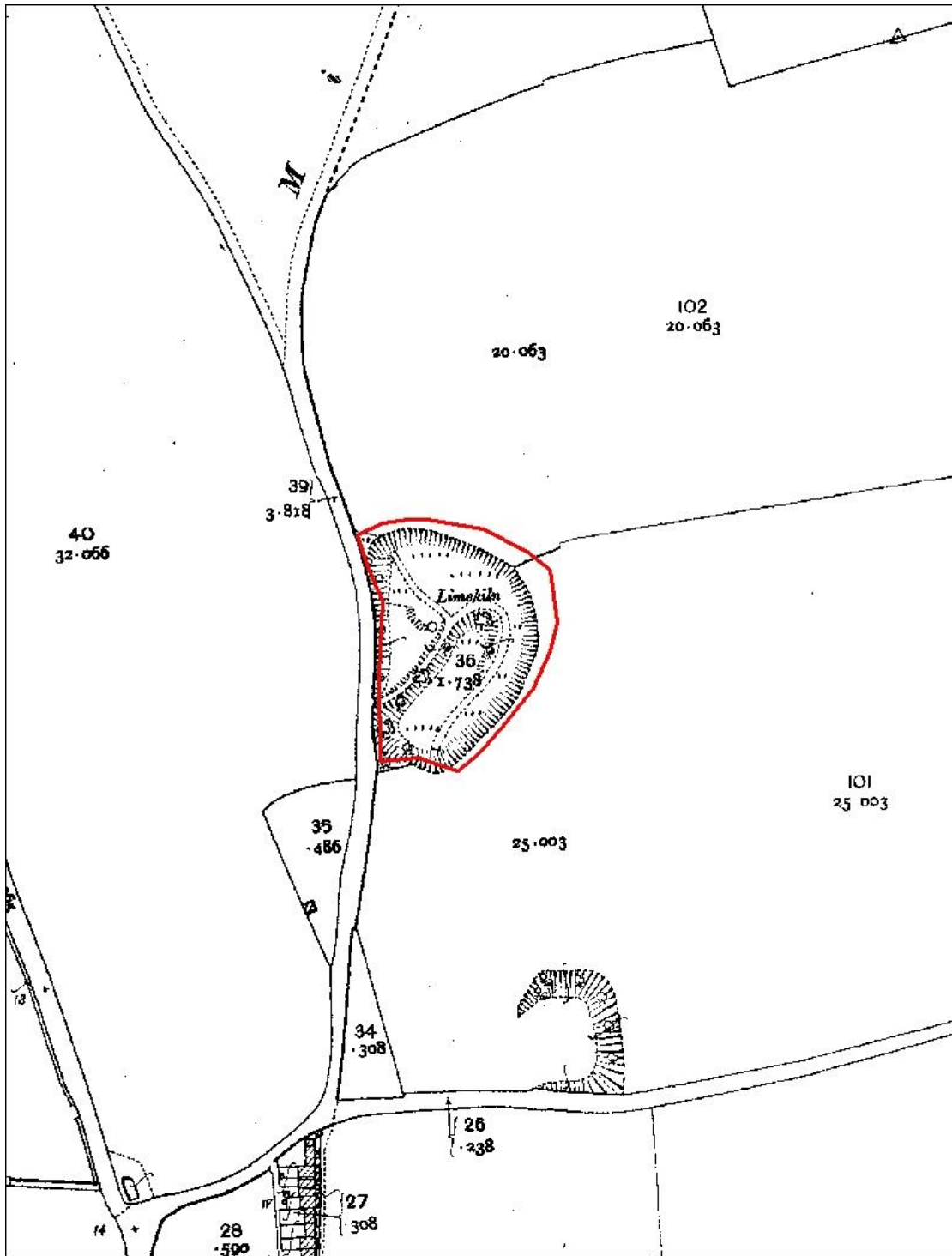


Map  
Historical Maps  
1843-1893  
© Crown copyright and database rights 2018 Ordnance Survey 100024314

Project / Details  
Mill Road,  
Bumham Overy Town

Drawn by	Date	Scale
AMW	June 2024	1:2,100
Drawing / Reference Number		
022134/04		





Borough Council of  
King's Lynn &  
West Norfolk

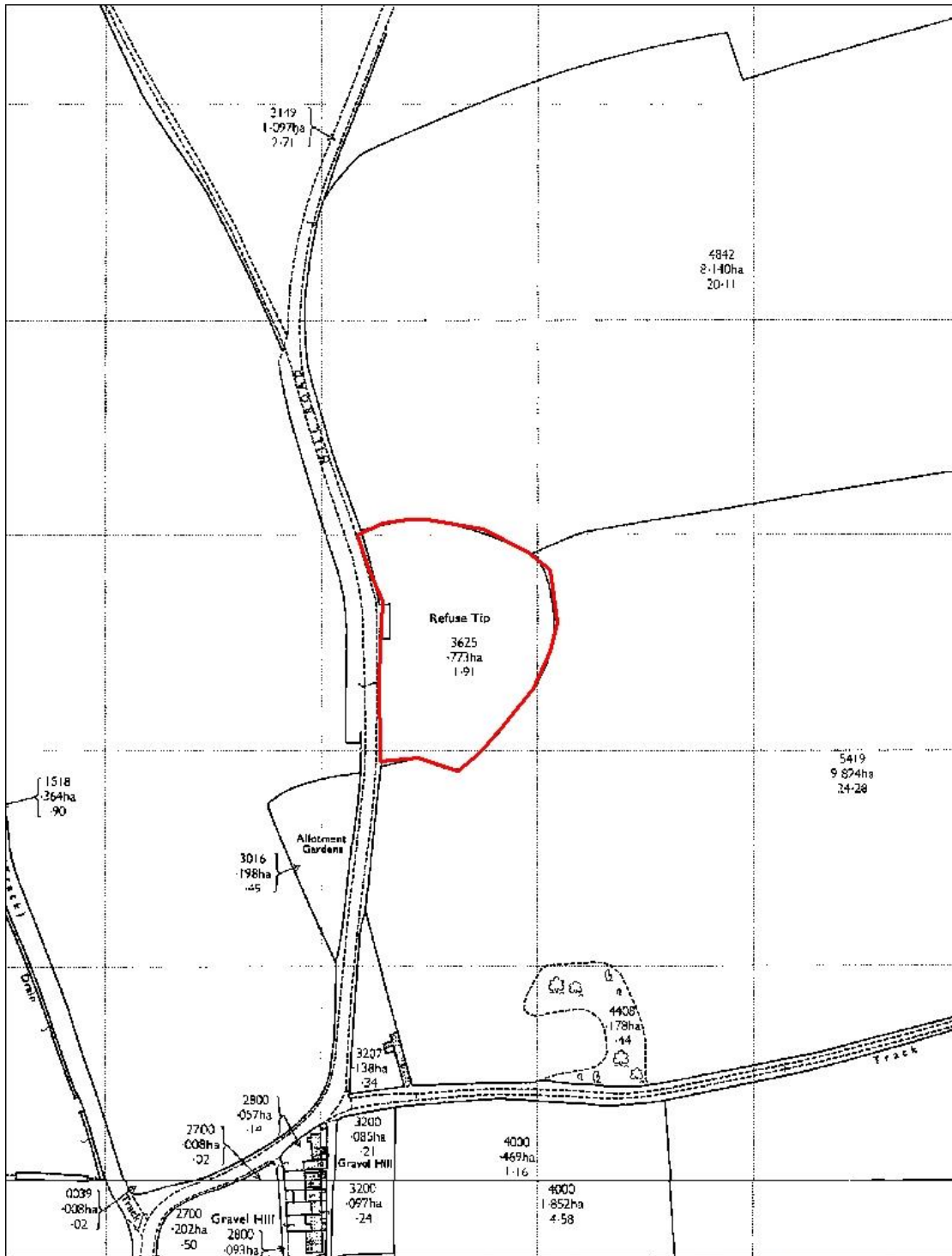


Map  
Historical Maps  
1891-1912  
© Crown copyright and database rights 2016 Ordnance Survey 100024314

Project / Details  
Mill Road,  
Bumham Overy Town

Drawn by	Date	Scale
AMW	June 2024	1:2,100
Drawing / Reference Number		
022134/03		





Borough Council of  
King's Lynn &  
West Norfolk

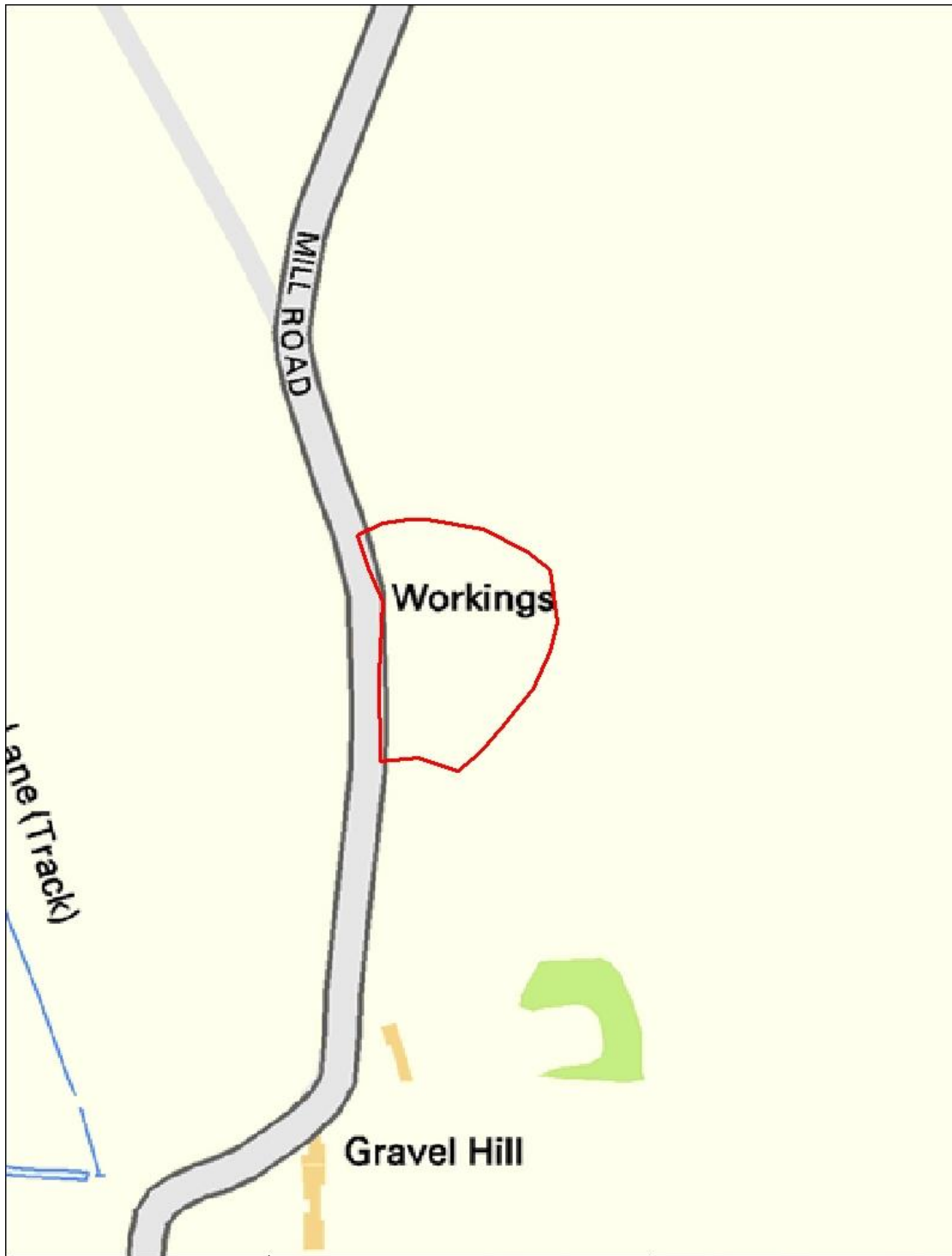


Map  
Historical Maps  
1945-1970  
© Crown copyright and database rights 2016 Ordnance Survey 100024314

Project / Details  
Mill Road,  
Bumham Overy Town

Drawn by	Date	Scale
AMW	June 2024	1:2,100
Drawing / Reference Number		
022134/02		





Borough Council of  
King's Lynn &  
West Norfolk



Map  
OS Mapping  
© Crown copyright and database rights 2016 Ordnance Survey 100024314

Project / Details  
Mill Road,  
Bumham Overy Town

Drawn by	Date	Scale
AMW	June 2024	1:2,100
Drawing / Reference Number		
022134/01		





Borough Council of  
**King's Lynn &  
West Norfolk**



Map  
**Aerial Photography  
1940s**

© Crown copyright and database rights 2016 Ordnance Survey 100024314

Project / Details

**Mill Road,  
Bumham Overy Town**

Drawn by

**AMW**

Date

**June 2024**

Scale

**1:2,100**

Drawing / Reference Number

**022134/08**



## Appendix C: NCC Documents

NORFOLK COUNTY COUNCIL  
DEPARTMENT OF PLANNING AND TRANSPORTATION

WASTE MANAGEMENT SECTION

**Site:** BURNHAM OVERY STAITHE  
**NGR:** TF 84 3432 TF 843 432  
**Previous Use:** (PRE 1974 OPERATED BY DOCKING RURAL DISTRICT COUNCIL)  
**Status:** FORMER LANDFILL  
**Site Owner:** HOLKHAM HALL ESTATES  
**Site Operator:** NORFOLK COUNTY COUNCIL  
**Lease Agreement:** TERMINATED IN OCTOBR 1991  
**Planning Permission Ref.:** NO PERMISSION  
**Licence Ref:** NO  
**Operational From:** PRE 1974 **To:** FEB 1986  
**Surface Area:** 1.08 ha  
**Air Space:** 10800 TONNES PUTRESCIBLE WASTE  
**Depth of Fill:** **Min:** **Max:** **Average:**  
**Waste Categories:** COLLECTED DOMESTIC & TRADE CONSTRUCTION & DEMOLITION WASTES, CESSPOOLCONTENTS/SEWAGE SLUDGE  
**Input Rate:**  
**Delivered By:**  
**Operations:**  
**Cover Source:**

**ENVIRONMENTAL DATA**

**Description of Original Site Base:**

**Solid Geology:** UPPER CHALK

**Superficial Deposits:**

**Geological Structure:**

Surface Water:

Groundwater:

Typical level m AOD:

Flow Direction:

Gradient:

NRA Aquifer Classification:

Previous SI Data:

Monitoring Schedule:

No. of Water Monitoring Points:

- Surface Water:

- Groundwater:

- Leachate:

Frequency of Monitoring:

- Surface Water:

- Groundwater:

- Leachate:

No. of Gas Monitoring Points:

(4 - PROPOSED BUT NEVER INSTALLED)

Frequency of Monitoring:

REINSTATEMENT:

1. Capping Material:

Thickness:

2. Subsoil Depth:

3. Topsoil Depth:

4. Landscaping Scheme:

5. Surface Drainage:

DEPARTMENT OF THE ENVIRONMENT  
 Review of sites for waste disposal  
 and/or treatment 1972-1973

(1) Name and Address of site  
 STAITHE ROAD  
 BURNHAM OVERY.

5  
 8 4 3  
 3 4 3 2

(2) Local Authority	Progress of Survey							Copies to DOAGS
	TO	LA	IGS	RA	LA	DOE		
DOCKING R.D.C	ON	20/3/73	27/7/73	27/6/73				

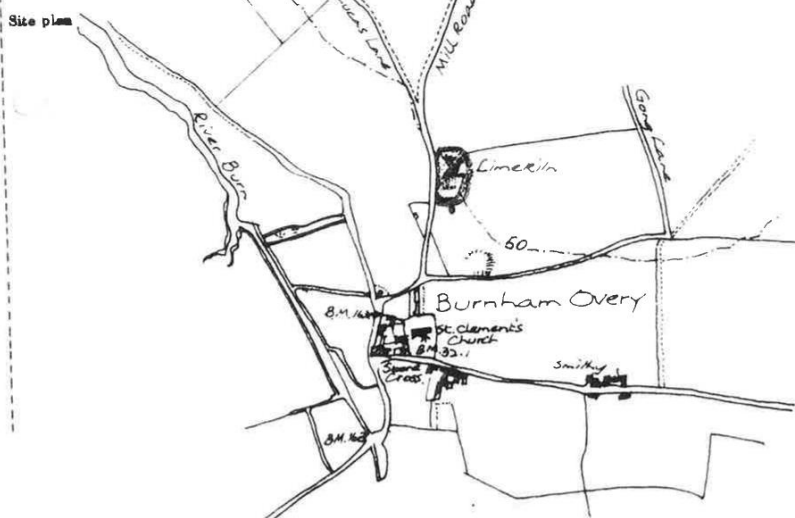
CLASSIFICATION	
Current Uses	Final Use
OPERATION LA <input checked="" type="checkbox"/>	Residential Education
Private DISPOSAL LA <input checked="" type="checkbox"/>	
Private Plg permission PP with conditions Deemed <input checked="" type="checkbox"/>	Industrial Offices Warehouses
Reclaimed	Hospital
TREATED	
Pulverised	Open Space
Compost	Allotment
C Rejects	Other use <input checked="" type="checkbox"/>
IPR Ash	Whiteland
IPR Screen	Water
UNTREATED	
Collected <input checked="" type="checkbox"/>	S Disposal
Delivered <input checked="" type="checkbox"/>	
INDUSTRIAL	
Fac Rub L	
" " SI	
" " So	Road Acc
Inert L	Car Park
" " SI	
" " So	
Toxic L	Waterway
" " SI	
" " So	
Qty L	
" " SI	
" " So	TIP
OTHER	
C & D	Greenbelt
Cesspool <input checked="" type="checkbox"/>	Agric
	N Park
	ACNB
TIPPING	Scenic A
CP Controlled	Nature Res
Part <input checked="" type="checkbox"/>	
Un <input checked="" type="checkbox"/>	
AQUIFERS	
None	Caravan
Some	Camp
Season	
WATER	
Ground	
Surface	

Brief description of site  
 Disused CHALK PIT  
 NEAREST HOUSE 400 yd

2163  
 River Authority area in which site lies EAST SUFFOLK & NORFOLK  
 INSTITUTE OF GEOLOGICAL SCIENCES Geology of site  
 Solid Deposits  
 Upper Chalk } 400+  
 Middle " }  
 Lower " }  
 One-inch sheet (geological) 130  
 Six-inch sheet TF 84SW  
 Ref: Old Series Maps.  
 Reliability Categ: 4.

Disused chalk pit; sides and floor of pit in Upper Chalk which is probably hydraulically linked to the alluvium of the River Burne which flows 1/3 mile west of the pit.

Pollution risk to major/aquifer(s): a) None ..... b) Some  ..... c) Serious .....  
 RIVER AUTHORITY (a continuing use of site acceptable with regard to  
 a) Ground water ..... b) Surface water .....



(9) Original surface elevation of a point marked on diagram in feet AOD = 72  
 (10) Approximate maximum original depth at tip:- 65 FT  
 (11) Site area: 3 acres  
 Scale:- 1:10000



DOCKING RURAL DISTRICT COUNCIL

2163

W. B. JENKINS, C.S.I.B., C.R.S.I., M.A.P.H.I.  
SENIOR PUBLIC HEALTH INSPECTOR  
TEL DOCKING (048 58) 106-9

PUBLIC HEALTH DEPARTMENT  
COUNCIL OFFICES  
DOCKING  
KING'S LYNN  
NORFOLK

OUR REF. WBJ/JP YOUR REF.

ENC.

28th March, 1974

Dear Sirs,

Department of the Environment Circular 37/72  
Review of Waste Disposal Facilities

In accordance with guidance notes accompanying the above Circular, I enclose completed copies of forms relating to refuse tips in this Council's area.

Yours faithfully,



Institute of Geological Science,  
Hydrological Department,  
Exhibition Road,  
South Kensington,  
London,  
S.W.7.

SEE ALSO GT. OUSE

## *Appendix D: Risk Assessment Methodology*

Land contamination: risk management guidance from the Environment Agency<sup>3</sup> provides the technical framework for applying a risk management process when dealing with contaminated land.

The Borough Council's Contaminated Land Strategy has identified priority sites based on mapping and documentary information. The Contaminated Land Inspection Report collates all the existing information on the site and develops a conceptual site model to identify and assess potential pollutant linkages and to estimate risk.

The risk assessment process focuses on whether there is an unacceptable risk, which will depend on the circumstances of the site and the context of the decision. The Council has used a process adapted from CIRIA C552, Contaminated Land Risk Assessment, a guide to good practice<sup>4</sup> to produce the conceptual site model and estimate the risk of harm to defined receptors. This involves the consideration of the probability, nature and extent of exposure and the severity and extent of the effects of the contamination hazard should exposure occur.

The probability of an event can be classified as follows:

- Highly likely: The event appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution;
- Likely: It is probable that an event will occur, or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term;
- Low likelihood: Circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term;
- Unlikely: Circumstances are such that it is improbable the event would occur even in the long term.

The severity of the hazard can be classified as follows:

- High: Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short term risk to an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Contaminated Land Statutory Guidance, April 2012');
- Medium: Chronic damage to human health ('significant harm' as defined in 'Contaminated Land Statutory Guidance, April 2012'), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Contaminated Land Statutory Guidance, April 2012');

---

<sup>3</sup> [www.gov.uk/guidance/land-contamination-how-to-manage-the-risks](http://www.gov.uk/guidance/land-contamination-how-to-manage-the-risks)

<sup>4</sup> [www.brebookshop.com/samples/142102.pdf](http://www.brebookshop.com/samples/142102.pdf)

- Low: Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Contaminated Land Statutory Guidance, April 2012'). Damage to sensitive buildings, structures or the environment.
- Minor: Harm, though not necessarily significant harm, which may result in financial loss, to expenditure to resolve. Non-permanent human health effects (easily prevented by use of PPE). Easily repairable effects of damage to buildings, structure and services.

Once the probability of an event occurring and hazard severity has been classified, a risk category can be assigned from the table below:

		Hazard			
		High	Medium	Low	Minor
Probability	High Probability	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low Probability	Moderate risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk
Very High Risk		<p>There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening</p> <p>This risk, if realised, is likely to result in a substantial liability.</p> <p>Urgent investigation (if not undertaken already) and remediation are likely to be required.</p>			
High Risk		<p>Harm is likely to arise to a designated receptor from an identified hazard.</p> <p>Realisation of the risk is likely to present a substantial liability.</p> <p>Urgent investigation (if not undertaken already) if required to clarify the risk and to determine the potential liability. Some remedial work may be required in the longer term.</p>			
Moderate risk		<p>It's possible that harm could arise to a designated receptor from an identified hazard. However, it is relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that harm would be relatively mild.</p>			
Moderate/Low risk		<p>It is possible that harm could arise to a designated receptor from an identified hazard. However, if any harm were to occur it is more likely that harm would be relatively mild.</p>			
Low Risk		<p>It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.</p>			
Very Low Risk		<p>There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is unlikely to be severe.</p>			

*Determination of contaminated land  
Contaminated Land Statutory Guidance, April 2012*

**Human Health**

<b>Category</b>	
<b>1</b>	<p>The local authority should assume that a significant possibility of significant harm exists in any case where it considers there is an unacceptably high probability, supported by robust science-based evidence that significant harm would occur if no action is taken to stop it. For the purposes of this Guidance, these are referred to as “Category 1: (water)” cases.</p> <p>Land should be deemed to be a Category 1: Human Health case where:</p> <ul style="list-style-type: none"><li>(a) The authority is aware that similar land or situations are known, or are strongly suspected on the basis of robust evidence, to have caused such harm before in the United Kingdom or elsewhere; or</li><li>(b) The authority is aware that similar degrees of exposure (via any medium) to the contaminant(s) in question are known, or strongly suspected on the basis of robust evidence, to have caused such harm before in the United Kingdom or elsewhere;</li><li>(c) The authority considers that significant harm may already have been caused by contaminants in, on or under the land, and that there is an unacceptable risk that it might continue or occur again if no action is taken. Among other things, the authority may decide to determine the land on these grounds if it considers that it is likely that significant harm is being caused, but it considers either: (i) that there is insufficient evidence to be sure of meeting the “balance of probability” test for demonstrating that significant harm is being caused; or (ii) that the time needed to demonstrate such a level of probability would cause unreasonable delay, cost, or disruption and stress to affected people particularly in cases involving residential properties.</li></ul>
<b>2</b>	<p>Land should be placed into Category 2 if the authority concludes, on the basis that there is a strong case for considering that the risks from the land are of sufficient concern, that the land poses a significant possibility of significant harm, with all that this might involve and having regard to Section 1. Category 2 may include land where there is little or no direct evidence that similar land, situations or levels of exposure have caused harm before, but nonetheless the authority considers on the basis of the available evidence, including expert opinion, that there is a strong case for taking action under Part 2A on a precautionary basis.</p>
<b>3</b>	<p>Land should be placed into Category 3 if the authority concludes that the strong case described in 4.25(a) does not exist, and therefore the legal test for significant possibility of significant harm is not met. Category 3 may include land where the risks are not low, but nonetheless the authority considers that regulatory intervention under Part 2A is not warranted. This recognises that placing land in Category 3 would not stop others, such as the owner or occupier of the land, from taking action to reduce risks outside of the Part 2A regime if they choose. The authority should consider making available the results of its inspection and risk assessment to the owners/occupiers of Category 3 land.</p>

## Human Health

Category	
<b>4</b>	<p>The local authority should consider that the following types of land should be placed into Category 4: Human Health:</p> <ul style="list-style-type: none"> <li>(a) Land where no relevant contaminant linkage has been established.</li> <li>(b) Land where there are only normal levels of contaminants in soil, as explained in Section 3 of this Guidance.</li> <li>(c) Land that has been excluded from the need for further inspection and assessment because contaminant levels do not exceed relevant generic assessment criteria in accordance with Section 3 of this Guidance, or relevant technical tools or advice that may be developed in accordance with paragraph 3.30 of this Guidance.</li> <li>(d) Land where estimated levels of exposure to contaminants in soil are likely to form only a small proportion of what a receptor might be exposed to anyway through other sources of environmental exposure (e.g. in relation to average estimated national levels of exposure to substances commonly found in the environment, to which receptors are likely to be exposed in the normal course of their lives).</li> </ul>

## Controlled Waters

Category	
<b>1</b>	<p>This covers land where the authority considers that there is a strong and compelling case for considering that a significant possibility of significant pollution of controlled waters exists. In particular this would include cases where there is robust science-based evidence for considering that it is likely that high impact pollution (such as the pollution described in paragraph 4.38) would occur if nothing were done to stop it.</p>
<b>2</b>	<p>This covers land where:</p> <ul style="list-style-type: none"> <li>(i) The authority considers that the strength of evidence to put the land into Category 1 does not exist; but</li> <li>(ii) nonetheless, on the basis of the available scientific evidence and expert opinion, the authority considers that the risks posed by the land are of sufficient concern that the land should be considered to pose a significant possibility of significant pollution of controlled waters on a precautionary basis, with all that this might involve (e.g. likely remediation requirements, and the benefits, costs and other impacts of regulatory intervention). Among other things, this category might include land where there is a relatively low likelihood that the most serious types of significant pollution might occur .</li> </ul>
<b>3</b>	<p>This covers land where the authority concludes that the risks are such that (whilst the authority and others might prefer they did not exist) the tests set out in Categories 1 and 2 above are not met, and therefore regulatory intervention under Part 2A is not warranted. This category should include land where the authority considers that it is very unlikely that serious pollution would occur; or where there is a low likelihood that less serious types of significant pollution might occur.</p>

## Controlled Waters

### Category

- |          |   |
|----------|---|
| <b>4</b> | This covers land where the authority concludes that there is no risk, or that the level of risk posed is low. In particular, the authority should consider that this is the case where: (a) no contaminant linkage has been established in which controlled waters are the receptor in the linkage; or (b) the possibility only relates to types of pollution described in paragraph 4.40 above (i.e. types of pollution that should not be considered to be significant pollution); or (c) the possibility of water pollution similar to that which might be caused by “background” contamination as explained in Section 3. |
|----------|---|



## A Future Without Rubbish

### Burnham Overy Parish Council historic landfills awareness

#### BOPC environmental responsibility

At the January 2023 BOPC meeting, Burnham Overy Parish Council (BOPC) publicly declared it

“has responsibility for our environment beyond legal and regulatory requirements: it also recognises that local authorities are uniquely placed to tackling the CEE (Climate and Ecological Emergency) due to their inherent proximity to residents.

It aims to lead by example in the reduction of waste, pollution and CO2e emissions, while both reducing harm to and enabling/encouraging the regeneration of biodiversity. Burnham Overy Parish council commit to

- becoming more aware of our environmental impact
- striving to reduce it through the actions that it takes
- having regard to wildlife, biodiversity, and appropriate land use Burnham Overy Parish Council will now try to consider the environmental impact of all decisions and this commitment will form an integral part of the Parish Council strategy and operating methods.”

This was ‘minuted’ and published here.<sup>1</sup>

#### Agreed actions

The first official step since BOPC declared a CEE was to “try to consider the environmental impact of all decisions and this commitment will form an integral part of the Parish Council strategy and operating methods”. This will be reported forthwith, and at the next scheduled meeting.

The second (more specific) action was for Luke Douglas-Home CEnv, of A Future without Rubbish CIC to research and analyse BOPC’s risk regarding ‘Historic landfills’; in regard of their geographical location, their contents, and the current estimated effects of climate and ecological change on their integrity<sup>1</sup>. The landfills relevant to BOPC are listed in end note 1.

This was minuted here<sup>2</sup> and is on the next meeting’s agenda, for the 13<sup>th</sup> March 2023.

<sup>1</sup> <https://burnhamovery-pc.gov.uk/wp-content/uploads/simple-file-list/policies/Climate-and-Ecological-Action-Plan-Jan-23.pdf>

<sup>2</sup> [https://burnhamovery-pc.gov.uk/wp-content/uploads/simple-file-list/Minutes/Minutes-2023/Minutes-09\\_01\\_23.pdf](https://burnhamovery-pc.gov.uk/wp-content/uploads/simple-file-list/Minutes/Minutes-2023/Minutes-09_01_23.pdf)



# A Future Without Rubbish

## Historic landfills in BOPC

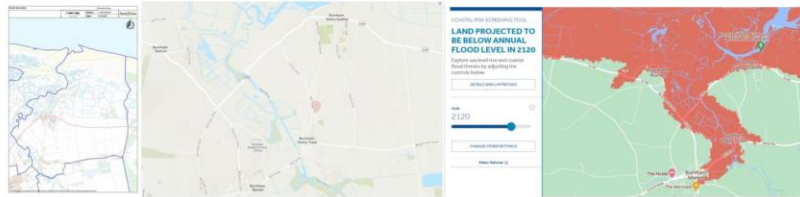
The context: around the coast of England there are approximately 1,215 historic coastal landfill sites, of which the details are known.

There are many in Norfolk. There are many that are unknown too, and sites are being discovered annually<sup>3</sup>. All are most commonly described as “pollution timebombs” as they can pose a serious risk to public and environmental health, due to the unknown quantity of their contents. Coastal settlements have a heightened risk status, for obvious reasons, and therefore it was deemed imperative that BOPC have this work carried out as soon as possible.

**A note on risk:** if we care about the existential value of our natural world, or even only the challenges we are creating for future generations, then our primary consideration must be on evaluating risk. This doc is just an initial risk analysis for BOPC.

## **Process**

To identify sites that pose to risk for BOPC, we first consulted the exact parish council boundaries (shown in Figure 1 below - thank you Sarah Raven!) Next, we established the location of recorded historic landfill sites (Figure 2, marked in red stripes) and lastly we examined current estimations on flooding and erosion risk over the next few decades (the areas in red in Figure 3 are projected to be below annual flood levels for 2120).



**Fig 1** BOPC boundaries

**Fig 2** Historic Landfill site location, according to the EA

**Fig 3** Expected flood levels risks to 2120

Also, we then researched, available data on its contents and ownership, to analyse further the risk and responsibilities for BOPC and local council residents.

<sup>3</sup> <https://www.thecourier.co.uk/fp/business-environment/environment/2819748/50-year-old-landfill-unearthed-as-perthshire-forest-spills-saucy-secret/>



## A Future Without Rubbish

### Findings

Only one 'very low risk' site for BOPC was found from the available data, with the following details:

1. The **Licence holder name and address**: Edward Douglas Coke, of The Rural District Council of Docking, Norton Hall, Burnham Norton, Kings Lynn, Norfolk
2. The **site operators name and address**: Docking Rural District Council of Council Office, Station Road, Docking, Norfolk.
3. **First inputs** into it, were 31/12/1970, 1:00 AM
4. **Last inputs** into it, were 31/12/1986, 12:00 AM
5. **Environment Agency reference number**: EAHL03380
6. **Address**: Staithe Road, Burnham Overy
7. **Risk contents**: unknown (although regulators recommend treating unknown sites as hazardous until proven otherwise).
8. **Risk – flooding and erosion**: according to the current estimates of coastal flooding and erosion is not likely to flood up until 2050 at least.

### Suggested next steps

The good news is that as there is no immediate risk to the integrity of the site, no physical action is currently required. The following three recommendations, however, should be implemented for BOPC to become as knowledgeable as possible about the one known historic landfill site in the parish:

1. To ask the Borough Council (WNKLBC) to update their records with the Environment Agency, as Edward Coke died at least 10 years ago, we believe. For them to report when this is done, or if it is not being done and the reasons for that.
2. To ask the responsible person (updated from above) as to their plans for management of this site and their knowledge of contents, if any.
3. To put out to residents this information and to enquire from them and landowners in particular whether they are aware of any other (as yet unknown) sites in the parish, or neighbouring parishes.

The budget for these steps would have to be agreed, but given that more research is required we would suggested waiting until further information is and funds are available, and so no further costs should be incurred on this for BOPC.

The best way to assess the potential risk of this site is to acquire better knowledge about its contents, but as it is not immediately threatened, this would be a longer-term suggestion. Any more details about the risks of historical landfills can be discussed in the 13<sup>th</sup> March meeting.

END