



**Contaminated Land  
Strategic Inspection Report**

**Landfill, North of Holt House Lane, Leziate,  
King's Lynn**

**Reference 022365**

**December 2023**

Environment and Planning  
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# 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 just outside the village of Leziate, King's Lynn has been identified for inspection. 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 quarry which was subsequently used as a landfill between 1968-1989.
- The landfill received planning consent from Norfolk County Council in 1968
- The landfill was licensed by the Environment Agency.
- The waste material landfilled was classified as inert and is assumed to consist of spoil from the mineral processes, waste from West Norfolk Fertilisers Company and builders waste.

The Potential Hazard and the Risk associated with the site has been reassessed. This reassessment indicates a potential low hazard a risk rating of very 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.

## Strategic Assessment

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. This report is a summary report of the strategic inspection carried out following prioritisation of sites in 2013 and is updated based on current information about the site.

Location	The site's location is to the south of the village of Leziate at NGR 567710 318830. The closest postcode is PE32 1EL. The site is shown in Figure 1 in the appendices.
Previous site use	The site is a former quarry which is recorded as having operated as a landfill under licence from the Environment Agency.
Present Site Use	The site is an area of wooded/scrubland as shown in Figure 2.
Prioritisation Score	In the map based screening for priority sites the site was identified due to the potential for a landfill, in a location where humans and property could be present. Initial screening showed that the fill was likely to be inert, so further detailed inspection was not deemed necessary.
Ownership	The site's owners have been consulted and this report will be made available for information.
Geology	The OS Terrain 50 digital height dataset indicates that the site is at 20-30m above ordnance datum (maOD). No superficial geology is recorded at the site. The bedrock is classified as Leziate Member - Sand. (BGS digital geology).
Hydrogeology	The site is on land classified as a moderately productive aquifer with significant intergranular flow (BGS Geo-index). It is not within a Source Protection Zone for drinking water and no private water supplies are recorded within 1km.
Hydrology	The nearest major water features are the lakes at Bawsey Country Park with the nearest one approximately 100m northwest of the site. There is a pond located directly to the north east of the site, presumed associated with the former mineral workings.
Local Authority Pollution Control	One LAPPC process is within 500m of the site. This is Sibelco Minerals & Chemicals, Station Road, Leziate, King's Lynn PE32 1EH for mineral drying and cooling.
Environment Agency data	The Environment Agency records the site as 'Brow of the Hill' The historic landfill data records a licensed issued on 12/03/1978 to West Norfolk Fertilisers for the disposal of Inert wastes between 05/11/1968 and 06/11/1989. The license is reported to have been surrendered on 07/11/1989.

Planning History	<p>Two planning applications exist on the southern boundary of the site, these have been presented below:</p> <ul style="list-style-type: none"> <li>• 2/00/0328/F - Conversion and extension of bungalow to form chalet bungalow with integral garage. (Permitted)</li> <li>• 2/01/0529/O - Sites for residential development. (Refused).</li> </ul>
Environment Agency	<p>Not consulted as not within a source protection zone.</p> <p>The presence of a landfill site was considered during both planning applications above. The Environment Agency accepted at the time that the landfill waste material was situated approximately 130m to the north of residential property on Holt House Lane and the risk from migration of landfill gas was low. The site is reported to have received gas producing wastes from 1968-1976 and builders wastes thereafter.</p> <p>In discussion with a local resident it was reported that the site may have received 'acid slurry'. This can be another description for phosphogypsum, a by-product of fertiliser manufacture.</p>
Norfolk Wildlife Trust	<p>Norfolk Wildlife Trust commented on the 2001 planning application that although the site has no statutory protection it is a semi natural habitat that forms part of a corridor of woodland. The site was reported to contain a variety of trees of varying ages which provide a habitat for a range of common plant and animal species.</p>
Norfolk County Council Records	<p>Norfolk County Council's Planning search indicates that Planning Consent D/2/1968/3443 was granted for Waste Disposal on 5<sup>th</sup> November 1968. No further documents are publicly available.</p>
Historic Maps (E-map Explorer)	<p>Enclosure Map 1800 - 1850 – Not available.</p> <p>Tithe map circa 1840 – the site comprised part of field 36, 28 &amp; 27.</p> <p>Ordnance Survey 1st Ed. 1879-1886 – The site is still depicted as a series of fields. Two ponds or pits are noted on site at the boundary between two fields.</p>
Historic Maps (BCKLWN)	<p>1843 – 1893: The site is as depicted on the 1<sup>st</sup> OS map.</p> <p>1891 – 1912: The site is depicted as shown above.</p> <p>1904 – 1939: The site is notated as sand pit, with the excavation comprising the majority of the site (Figure 3).</p> <p>1919 – 1943: Not available.</p> <p>1945 – 1970: The site is notated as a Pit (disused). Several residential properties are noted to the south of the site along Holt House Lane.</p> <p>1970 – 1996: Not available.</p>
Aerial Photographs	<p>1945 – 1946 MOD Aerial Photograph – The site is generally as depicted schematically in the 1945-1970 map. The mineral extraction works are clearly defined, although it is unclear if works is still on-going.</p> <p>1988 Aerial Photograph – The site appears not to be worked at this</p>

	<p>time and significant number of trees have grown along the northwest portion of the site. It is difficult to tell if the pits are still in existence or if they have been backfilled.</p> <p>1999 Aerial Photograph – The site is generally as depicted above.</p> <p>2006-2009 Aerial photograph – The site appears to have tree cover across the majority of the site. There is a small clearing towards the centre of of the site, and some visible lighter coloured rock or soil in the southern section.</p> <p>2023 Aerial Photograph – (Figure 2) The site is predominantly covered with trees. The small central clearing is visible with some lighter soils or rock in the north and south.</p>
Site Walkover	<p>A site visit was carried out by one of BCKLWN Contaminated Land Officers on 19/07/2013 and the 07/08/2013 and the following was noted. (See photographs No 1-12 in Appendices). A follow up visit was made in 2023 to confirm if any changes had occurred on site.</p> <p>During the first site visit the entrance to the site was noted to be barred by a metal chain link gate. To the west of the gate is a chain link fence, beyond which is a 10-15m steep drop into quarry. The chain link fence has been broken down in one place some waste material was noted to have been dumped over the side into the excavation.</p> <p>To the north of the entrance area the site is split in half, with the eastern half being generally sparsely vegetated with a few trees and the remaining area being densely covered with mosses and lichens. The western side is densely covered with trees. Subsequent to viewing the precipitous drops into the former quarry it was decided that the site visit should be halted until such time as someone was available to accompany the surveyor for health and safety reasons.</p> <p>The second site visit was on the 23/08/2013. Further examination of the eastern side indicated that the lack of vegetation in the east was due to a chalk outcrop near to the surface.</p> <p>The depression to the west was very densely populated with trees and the surface soil appears to be uncontaminated with waste. Although the soil could be spoil from the quarrying either at this site or adjacent sites. Small amounts of fly tipped waste were noted on the site, but no signs of systematic landfilling of wastes were noted.</p> <p>The 2023 visit confirmed that no significant changes had occurred on site. The clearing and lighter coloured areas seen in the most recent aerial photograph appear to be used as an informal BMX track, but this is not considered to be a significant change to site conditions.</p>
Potential Hazard	<p>The site is a former quarry. It is recorded as being operated as a landfill by West Norfolk Fertilisers between 1968 and 1989. West Norfolk Fertilisers was wound up on the 30<sup>th</sup> April 1982 and had ceased production at their King's Lynn site in 1967.</p>

	<p>From the site walkover it is unclear where the site has been backfilled. The southern section near the entrance and residential properties has not been landfilled as it remains an excavated hole. Parts of the site are reported to have been used as a landfill. The material landfilled is assumed to be spoil from the mineral processes, waste from West Norfolk Fertilisers Company and builders waste. Therefore, waste material is likely to be largely inert and the hazard is assumed to be minor/low.</p> <p>It should be noted that if the waste contains phosphogypsum, this can contain low levels of naturally occurring radioactive material. However, this would only pose a hazard if there is direct contact with the material and particularly inhalation of phosphogypsum dust.</p>
<p>Summary Conceptual Site Model and Assessment of Risk</p>	<p><b>Human health</b> Access to the site is generally restricted by padlocked gates and barbed wire fencing. Some of the fence in the northern boundary is damaged, but the site does not appear to be regularly accessed. The site surface is well vegetated and in a semi natural state with no evidence of waste materials in surface soils. So, there is little opportunity for direct contact with any fill materials. Therefore the likelihood of the hazards affecting human health is considered to be unlikely, and that the associated risk for human health would be very low.</p> <p><b>Property</b> There is no property on site. The site is covered with trees and is not used for growing crops or grazing. Therefore, the likelihood of the hazards affecting property is unlikely, and that the associated risk for the property would be very low.</p> <p><b>Environment</b> The site does not appear to be actively managed and has generally reverted back to the wild. The vegetation on site appears to be diverse and flourishing. However, the site is not a designated environmental receptor as set out in statutory guidance. The likelihood of hazards affecting the environment is unlikely, and the associated risk for the environment would be very low.</p> <p><b>Ground/surface water</b> The site is on land which is classified as being a principal aquifer but is not within a source protection zone. The material which was landfilled is assumed to be spoil from the mineral processes, waste from West Norfolk Fertilisers Company and builders waste. As such there is not expected to be significant contamination within the material migrating into groundwater. Therefore the likelihood is assumed to be unlikely and the risk very low.</p> <p>The material landfilled is not expected to be highly contaminated and contact by a vulnerable receptor is considered to be very limited. Therefore the overall risk is low while any waste material remains undisturbed.</p>

Conclusions & Recommendations

The Borough Council considers that based on information available at the time of this strategic inspection, no significant source of contamination was indicated and no relevant contaminant linkage has been established. On the basis of this assessment the land is unlikely to be considered to be Contaminated Land as defined in Part 2A EPA 1990 and the site will not be prioritised for detailed inspection.

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.

It should be noted that if the waste historically deposited by West Norfolk Fertilisers contains phosphogypsum, this can contain low levels of naturally occurring radioactive material. Which can pose a hazard if there is direct contact with the material and particularly inhalation of phosphogypsum dust.

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.



## Appendices

### 2013 Photographs



Photograph 1. The main entrance.



Photograph 2. The side of the site adjacent to a field.



Photograph 3. A chalk outcrop on site.



Photograph 4. Chalk outcrop adjacent to a mineral excavation.



Photograph 5. Wooded areas of the site.



Photograph 6. An area of open space within the site.





Photograph 7. A former enclosure on site.



Photograph 8. A depression on the site.



Photograph 9. An old tank on site.



Photograph 10. The wooded section of the site.



Photograph 11. An old bath tub sunk into the ground.



Photograph 12. Unknown machinery on site.



# Figures

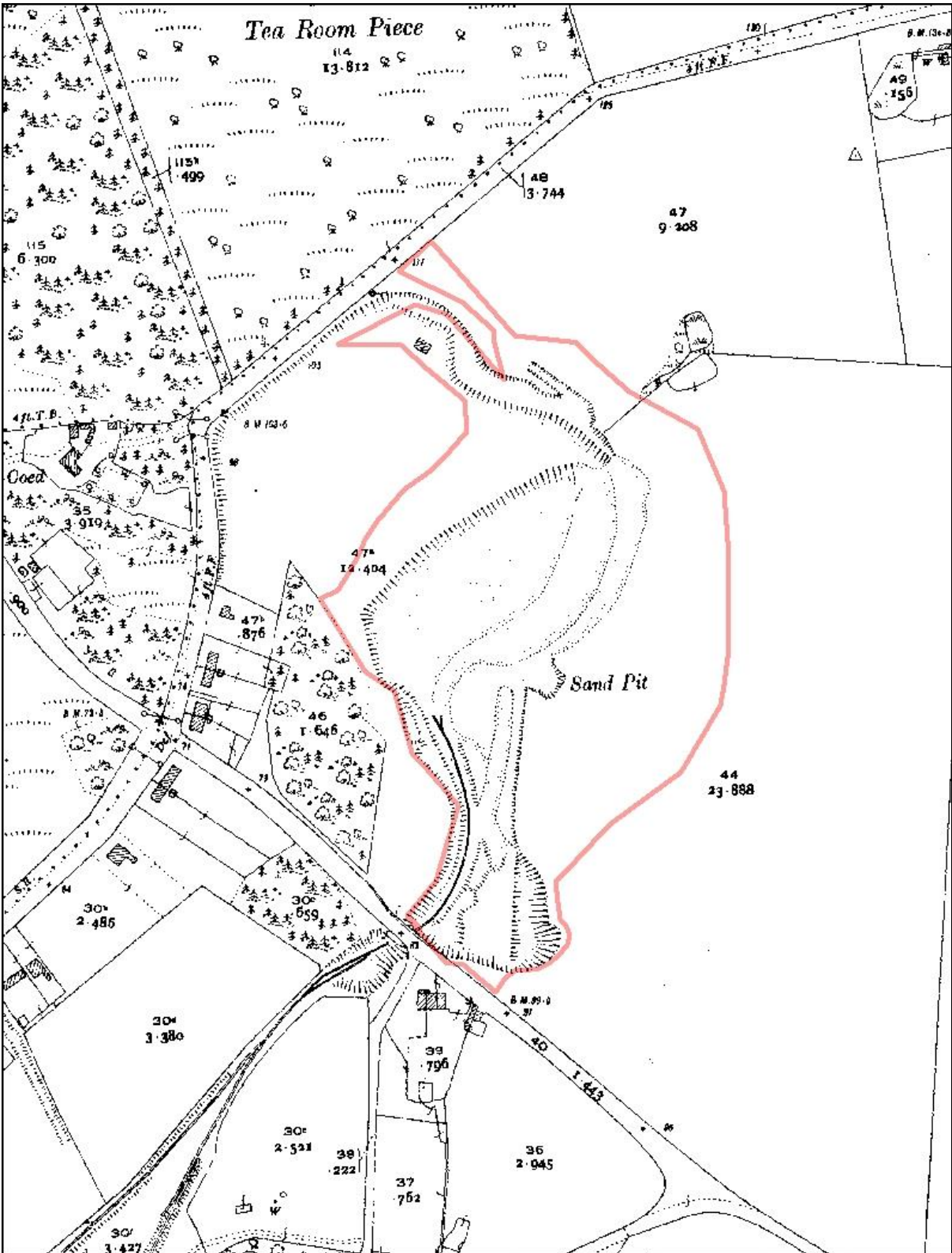


<p>Borough Council of <b>King's Lynn &amp; West Norfolk</b></p> 	Title		Project / Details		Drawn by	Date	Scale
	North of Holt House Lane		Location		FAP	October 2023	1:5,000
	© Crown copyright and database rights 2016 Ordnance Survey 100024314				Drawing / Reference Number		
				Fig 1			




Borough Council of <b>King's Lynn &amp; West Norfolk</b> 	Title <b>North of Holt House Lane</b>	Project / Details <b>Aerial photograph</b>	Drawn by <b>FAP</b>	Date <b>October 2023</b>	Scale <b>1:2,500</b>
	© Crown copyright and database rights 2016 Ordnance Survey 100024314		Drawing / Reference Number <b>Fig 2</b>		





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



Title  
**North of Holt House Lane**

Project / Details  
**Historical Map 1904-1939**

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Drawn by  
**FAP**

Date  
**October 2023**

Scale  
**1:2,500**

Drawing / Reference Number  
**Fig 3**

