

Briefing

Review of Closed Landfill Sites

Purpose of this briefing

Suffolk County Council has carried out an independent review of the environmental monitoring carried out at old landfill sites to check if the monitoring is appropriate and sufficient. The old landfill sites are no longer in use and some of them even pre-date the creation of the County Council in 1974. The purpose of this briefing is to make you aware of the new action we will be taking as a result of the review to make sure that we look after these old landfill sites and Suffolk's environment is protected.

Why are we reviewing the monitoring of closed landfill sites?

It is good practice to carry out periodic reviews of the level of our regular monitoring and we wanted an independent expert to take a look at the level of monitoring to advise us of any adjustments we should make to our current practice.

Have any incidents occurred that put either the public or the environment at risk?

The review did not take place as the result of any incident. The review has taken place to ensure that our monitoring is aligned with current practice and to make further improvement to our monitoring where it is recommended.

Why does the County Council monitor old landfill sites?

When waste decomposes in the ground it creates methane, carbon dioxide and water (i.e. leachate). It is necessary to monitor old landfill sites to ensure that the leachate (water from the landfill) is not escaping from the site in a manner which could environmental harm. In addition it is necessary to ensure that methane gas is not escaping in large concentrations or accumulating in enclosed spaces.

The County Council is currently going through a procurement process to put in place arrangements to treat waste to massively reduce our use of landfill so we do not continue to create these environmental issues on such a large scale in the future. The option the county council currently prefers is Energy from Waste.

What action are we proposing to take?

The review is made up of proposals for some further investigative work and changes to our monitoring regime. There are a number of proposals to increase the frequency of monitoring at particular sites and in a few cases to reduce the monitoring frequency. We will implement the proposals made by the review i.e. increase monitoring and carry out the required investigations. In a few cases where there was not sufficient information available so specific proposals have not been made – we have now established that no land filling was undertaken by the local authorities on these sites.

The table below sets out by District for each landfill site all the action we will be taking.

Babergh Landfill site	Proposed work/changes to monitoring	Additional Comment
Acton - Bears Pit	Gas Continue monthly gas monitoring but monitor additional parameters.	Review previous landfill gas monitoring data. Audit landfill gas management system.
	Water Can reduce groundwater monitoring from quarterly to six monthly (six months short analysis suite, annual long analysis suite).	If the stream is located down gradient of the landfill, sample every six months for the same analysis suite as groundwater. Review previous groundwater monitoring data. Review groundwater abstraction.
Sudbury - Sandy Lane	Gas Review monitoring results	
	Water	As no boreholes, review any data.
Sudbury – Pinecroft Rise	Gas Review monitoring results, if methane levels near houses high continue monthly monitoring and consider remedial options	
	Water None at this stage	
Sproughton – Valley Farm	Gas Quarterly monitoring. Spike survey to be	If no methane within the landfill then site to be reclassified as

	carried out over the landfill area.	medium risk.
	<p>Water</p> <p>Groundwater monitoring to be carried out. 2 rounds in the next 6 months.</p> <p>Surface water monitoring to be carried out at the same time as groundwater monitoring.</p>	Based on the monitoring results, routine monitoring may be required. To be re-scored when monitoring data is available.
Little Waldingfield – Humble Green	<p>Gas</p> <p>Perimeter monitoring to be carried out. Borehole monitoring or spiker bar survey. 2 rounds in next 6 months.</p>	If methane detected in spike holes it may be appropriate to install some permanent landfill gas monitoring boreholes. Site to be re-scored when monitoring data is available.
	<p>Water</p>	If boreholes or data existed would recommend review of data / further monitoring.
Higham – Long Plantation	<p>Gas</p> <p>Spiker bar survey to be carried out over landfill area.</p>	Review monitoring data when available. Reassess risks.
	<p>Water</p> <p>None at this stage</p>	
Hadleigh -	<p>Gas</p> <p>Perimeter monitoring to be carried out. Borehole monitoring or spiker bar survey. 2 rounds in next 6 months.</p>	Review monitoring data when available. Reassess risks.
	<p>Water</p> <p>None at this stage</p>	
Chelmondiston –	<p>Gas</p>	Review monitoring data when available.

Shotley/Ipswich Rd	Spiker bar survey to be carried out over landfill area.	Reassess risks.
	Water None at this stage	
Stratford St Mary – Leather Jacket Hill	Gas Spiker bar survey to be carried out over landfill area.	Review monitoring data when available. Reassess risks.
	Water None at this stage	

Forest Heath		
Landfill site	Proposed work/changes to monitoring	Additional Comment
Barton Mills – Chalk Hill	Gas Can reduce gas monitoring from monthly to quarterly and monitor additional parameters.	Review previous gas monitoring data.
	Water Can reduce groundwater monitoring from quarterly to six monthly (six monthly short analysis suite, annual long analysis suite).	Review previous groundwater monitoring data.
Herringswell -	Gas Spiker bar survey to be carried out over landfill area.	Review monitoring data when available. Reassess risks.
	Water	If boreholes or data existed would recommend review of data / further monitoring.
Lakenheath – Maids Cross Hill	Gas Spiker bar survey to be carried out over	Review monitoring data when available.

	landfill area.	Reassess risks.
	Water None at this stage.	

Ipswich Landfill site	Proposed work/changes to monitoring	Additional Comment
No sites		

Mid Suffolk Landfill site	Proposed work/changes to monitoring	Additional Comment
Bramford – Blood Hill	<p>Gas</p> <p>Continue monthly gas monitoring but monitor additional parameters.</p>	<p>Review previous landfill gas monitoring data.</p> <p>Audit landfill gas management system.</p>
	<p>Water</p> <p>Continue quarterly groundwater monitoring (quarterly short analysis suite, annual long analysis suite)</p>	<p>Review previous groundwater monitoring data.</p>
Coddenham – The Hollows & Lime Kiln Pit	<p>Gas</p> <p>Continue monthly gas monitoring but monitor additional parameters.</p> <p>Add boreholes 6, 19 and 20 to monthly gas monitoring round.</p>	<p>Review previous landfill gas monitoring data.</p> <p>Review monitoring data from new points when available and review risk classification.</p> <p>SCC to consider installing an active landfill gas management system.</p>
	<p>Water</p> <p>Continue six monthly groundwater monitoring short and long analysis suites)</p>	<p>Review previous groundwater monitoring data.</p> <p>Review sensitive receptors.</p>
Yaxley - ex railway cutting	<p>Gas</p> <p>Perimeter gas monitoring.</p>	<p>Risks to be reassessed when monitoring data available.</p>

	<p>Water</p> <p>None at this stage</p>	
Elmswell – off Warren Lane	<p>Gas</p> <p>Perimeter monitoring to be carried out. Borehole monitoring or spiker bar survey. 2</p>	<p>If methane detected in spike holes it may be appropriate to install some permanent landfill gas monitoring boreholes. Site to be re-scored when monitoring data is available.</p>
	<p>Water</p> <p>If boreholes or wells available, carry out monitoring.</p>	<p>If no boreholes or wells available, suggest data review.</p>
Wetheringsett cum Brockford – ex railway cutting	<p>Gas</p> <p>Perimeter monitoring to be carried out. Borehole monitoring or spiker bar survey. 2 rounds in next 6 months.</p>	
	<p>Water</p> <p>None at this stage</p>	
Woolpit – Heath Road	<p>Gas</p> <p>Perimeter monitoring to be carried out. Borehole monitoring or spiker bar survey. 2 rounds in next 6 months.</p>	
	<p>Water</p> <p>None at this stage</p>	
Stowmarket – Bury Rd	<p>Gas</p> <p>Spiker bar survey to be carried out over landfill area.</p> <p>Stowmarket – Bury Rd</p>	<p>Gas</p> <p>Spiker bar survey to be carried out over landfill area.</p>
	<p>Water</p> <p>None at this stage.</p>	<p>Water</p> <p>None at this stage.</p>

St Edmundsbury Landfill site	Proposed work/changes to monitoring	Additional Comment
Gt Whelnetham – ex railway cutting northernmost length	Gas Review data and if methane concentrations close to receptors increase monitoring to monthly and consider remedial options. If not, monitor quarterly.	Review monitoring results.
	Water Monitoring to be carried out , 2 rounds in the next 6 months.	Based on the monitoring results routine monitoring may be required. Site to be re-scored when monitoring data available.
Ingham	Gas Perimeter gas monitoring to be carried out.	If monitoring data shows no impact site can be re-classified as medium risk.
	Water Monitoring to be carried out, 2 rounds in the next 6 months.	Based on the monitoring results routine monitoring may be required. Site to be re-scored when monitoring data available.
West Stow	Gas Spiker bar survey to be carried out over landfill area.	Review monitoring data when available. Reassess risks.
	Water Monitoring to be carried out, 2 rounds in the next 6 months.	Based on the monitoring results routine monitoring may be required. Site to be re-scored when monitoring data

		available.
Nowton -	Gas Spiker bar survey to be carried out over landfill area.	Review monitoring data when available. Reassess risks.
	Water None at this stage	
Dalham – Denham Pit	Gas Spiker bar survey to be carried out over landfill area.	Review monitoring data when available. Reassess risks.
	Water If boreholes or wells available, carry out monitoring.	If no boreholes or wells available, suggest data review.
L. Whelnetham – ex railway cutting – middle length	Gas Spiker bar survey to be carried out over landfill area.	Review monitoring data when available. Reassess risks.
	Water None at this stage.	

Suffolk Coastal Landfill site	Proposed work/changes to monitoring	Additional Comment
L. Bealings – Sinks Pit	<p>Gas</p> <p>Continue weekly gas monitoring but monitor additional parameters.</p>	<p>Review previous landfill gas monitoring data.</p> <p>Audit landfill gas management system.</p> <p>Review previous landfill gas monitoring data.</p>
	<p>Ground Water</p> <p>Continue quarterly groundwater monitoring (quarterly short analysis suite, annual long analysis suite)</p> <p>Surface Water</p> <p>Continue quarterly monitoring.</p>	<p>Review previous groundwater monitoring data.</p> <p>Review groundwater interception system and discharge consent.</p> <p>Review previous surface water monitoring data.</p>
Foxhall II	<p>Gas</p> <p>Continue weekly gas monitoring but monitor additional parameters.</p>	<p>Review previous landfill gas monitoring data.</p> <p>Audit landfill gas management system.</p>
	<p>Ground Water</p> <p>Continue quarterly groundwater monitoring (quarterly short analysis suite, annual long analysis suite)</p> <p>Surface Water</p>	<p>Review previous groundwater monitoring data</p> <p>Review previous surface water</p>

	Continue quarterly monitoring.	monitoring data.
Farnham – Palan’s Grove ?	Gas Perimeter gas monitoring to be carried out.	Risks to be reassessed when monitoring data available.
	Water None at this stage	
Westleton – Westleton Heath	Gas Perimeter gas monitoring to be carried out.	Risks to be reassessed when monitoring data available.
	Water None at this stage.	
Woodbridge – Haugh Lane	Gas Perimeter monitoring to be carried out, 2 rounds in the next 6 months.	If methane detected in spike holes it may be appropriate to install some permanent landfill gas monitoring boreholes. Site to be re-scored when monitoring data is available.
	Water If boreholes or wells available, carry out monitoring.	If no boreholes or wells available, suggest data review.
Cookley -	Gas Spiker bar survey to be carried out over the landfill area.	Review monitoring data when available. Reassess risks.
	Water None at this stage	
Aldeburgh - off Saxmundham Rd	Gas Spiker bar survey to be carried out over the landfill area.	Review monitoring data when available. Reassess risks.

	Water None at this stage.	
Aldeburgh - Marshes	Gas Spiker bar survey to be carried out over the landfill area.	Review monitoring data when available. Reassess risks.
	Water None at this stage.	
Kessingland – Marsh Lane	Gas Spiker bar survey to be carried out over the landfill area.	Review monitoring data when available. Reassess risks.
	Water None at this stage.	
Pettistree	Gas Spiker bar survey to be carried out over the landfill area.	Review monitoring data when available. Reassess risks.
	Water None at this stage.	

Waveney		
Landfill site	Proposed work/changes to monitoring	Additional Comment
Wangford – Hill farm Pits	Gas Continue monthly gas monitoring but monitor additional parameters. Install an additional gas monitoring borehole between the landfill site and Hill Farm.	Carry out more detailed risk assessment to assess the risks to Hill Farm. Audit gas monitoring system.
	Groundwater Continue quarterly groundwater monitoring (quarterly short analysis suite, annual long	Review previous groundwater monitoring data

	<p>analysis suite)</p> <p>Surface Water</p> <p>Continue quarterly groundwater monitoring (quarterly short analysis suite, annual long analysis suite)</p>	<p>Review groundwater abstractions.</p> <p>Carry out monitoring of the River Wang.</p>
Oulton – Camps Heath	<p>Gas</p> <p>If elevated methane concentrations recorded close to receptors increase monitoring to monthly. If not continue quarterly.</p>	<p>Review monitoring results.</p>
	<p>Water</p> <p>None at this stage.</p>	
Oulton – Holly Hill	<p>Gas</p> <p>Continue monthly monitoring</p>	<p>Review monitoring results. Audit landfill gas management system.</p>
	<p>Water</p> <p>If boreholes or wells available, carry out monitoring.</p>	<p>If no boreholes or wells available, suggest data review.</p>
Homersfield – Long Plantation	<p>Gas</p> <p>Perimeter monitoring to be carried out, 2 rounds in the next 6 months.</p>	<p>If methane detected in spike holes it may be appropriate to install some permanent landfill gas monitoring boreholes. Site to be re-scored when monitoring data is available.</p>
	<p>Water</p> <p>Monitoring to be carried out, 2 rounds in the next 6 months.</p>	<p>Screen to be refined if data available on waste depth and water level. Based on the monitoring results, routine monitoring may be required. Sites to be re-scored when monitoring data is</p>

		available. If no boreholes or wells available, suggest review data.
Beccles – Fen Lane	Gas Perimeter monitoring to be carried out, 2 rounds in the next 6 months.	If methane detected in spike holes it may be appropriate to install some permanent landfill gas monitoring boreholes. Site to be re-scored when monitoring data is available.
	Water None at this stage.	
Southwold – Blyth Rd	Gas Perimeter monitoring to be carried out, 2 rounds in the next 6 months.	If methane detected in spike holes it may be appropriate to install some permanent landfill gas monitoring boreholes. Site to be re-scored when monitoring data is available.
	Water None at this stage.	
Lowestoft – Park Hill farm	Gas Perimeter monitoring to be carried out, 2 rounds in the next 6 months.	If methane detected in spike holes it may be appropriate to install some permanent landfill gas monitoring boreholes. Site to be re-scored when monitoring data is available.
	Water None at this stage.	

Holton – Holton Park	Gas Perimeter monitoring to be carried out, 2 rounds in the next 6 months.	If methane detected in spike holes it may be appropriate to install some permanent landfill gas monitoring boreholes. Site to be re-scored when monitoring data is available.
	Water None at this stage.	

North Cove -	Gas Perimeter monitoring to be carried out, 2 rounds in the next 6 months.	If methane detected in spike holes it may be appropriate to install some permanent landfill gas monitoring boreholes. Site to be re-scored when monitoring data is available.
	Water None at this stage.	
Ilketshall St John	Gas Perimeter monitoring to be carried out, 2 rounds in the next 6 months.	If methane detected in spike holes it may be appropriate to install some permanent landfill gas monitoring boreholes. Site to be re-scored when monitoring data is available.
	Water None at this stage.	

Outside of Suffolk County boundary Landfill site	Proposed work/changes to monitoring	Additional Comment
Shudy Camps (Cambs) ex railway cutting	Gas Perimeter gas monitoring to be carried out.	Risks to be reassessed when monitoring data available.
	Water None at this stage	
Kennett (Cambs) – Halfmoon Plantation Pits	Gas Perimeter gas monitoring to be carried out.	Risks to be reassessed when monitoring data available.
	Water Groundwater monitoring to be carried out, 2 rounds in the next 6 months.	Based on the monitoring results, routine monitoring may be required. Site to be re-scored when monitoring data available.

What about the landfill sites which are still in use?

Modern landfill sites are strictly regulated by the Environment Agency and subject to higher levels of regulation. The contractors who run these landfill sites have to secure an Environment Agency licence to be able to operate and the County Council does not have the monitoring role.

Next steps

We propose that meetings take place with technical officers from each District to brief them about the monitoring arrangements for the landfill sites in their area and discuss with them the order and prioritisation of the above actions.

The proposed further investigative work has been commissioned and will start immediately. The new monitoring frequencies will be implemented from the start of the new financial year and then reviewed to consider whether further action is needed when we have the results of the investigations.

February 2009

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Bryn Griffiths will ensure any questions you may have are answered by the relevant officers.