Information

Landfills and the effects on human health

**EA reports on waste and effects on human health**
**EA reports on landfill – library catalogue**
**EA reports on landfill – publications catalogue**
Science research on landfills
Other government reports on the impacts of waste management on health

Environment Agency reports on waste and effects on human health
(from the internal library catalogue)

A framework to assess the risks to human health and the environment from landfill gas (P271)
(Environment Agency R&D project; P1-283). -
Contact Richard Smith, R&D, Bristol.
Project leader Louise McGoochan, Southern Region.
ISBN 1857052544

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Environment Agency; University of Surrey; Bridges, J W; Bridges, O; Scott, P; Vince, I; WRc; Horth, H; Rees, Y J; Environment Agency. Research and Development; Andrews, K. - Bristol : Environment Agency, 1999. - 40p. -
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Contact Richard Smith, R&D, Westbury.
Project leader Dr Jan Gronow, Head Office.. -
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(Environment Agency science report; P6-011/1/SR1)
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(Environment Agency R&D project)
(British Geological Survey technical report, fluid processes series; WE/95/1)
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Long-term monitoring of non-contained landfills: Burntstump and Gorsethorpe on the Sherwood sandstone (P226)
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Contact Richard Smith, R&D, Bristol
Project manager Jan Gronow, HO. -
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Environment Agency. Research and Development; University of Birmingham. School of Earth Sciences; University of Bradford. Department of Civil Engineering; Tellam, J H; Thornton, S F; Lerner, David N; Kleinert, Ulrike O; Harris, R C. - Birmingham : University of Birmingham, 1997. - 138p. -
(Environment Agency R&D technical report; P183)
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Public domain
Contact Rikki Womersley, R&D, Olton Court
Project manager Bob Harris

Land-based landfill leachate treatment (P228)
Environment Agency. Research and Development; Cranfield University; Shanks and McEwan Group; Leeds-Harrison, P B; Tyrrel, S F; Harrison, K S; Lowe, Mark. - Bristol : Environment Agency, 1999. - 129p. -
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Environment Agency. Research and Development; Peter Dumble Associates; Dumble, Peter; Ruxton, Charles; Thompson, John; Pisolkar, Ellen. - Bristol : Environment Agency, 2001. - 198p. -
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Project manager : Paul Wright, Environmental Protection, Howard House, Bedford. PENS/PR : Alison Foster.
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Development of nucleic acid probe protocols for monitoring microbial activity in landfills
(Environment Agency R&D project; P1-275)
(Environment Agency R&D technical report; P1-275).
Project Manager: Richard Smith. R&D MC: Peter Braithwaite, Head Office.
ISBN 1857057252

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(Environment Agency R&D project; CLO 225)
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Public domain
This document replaces R&D Technical Report P233 which has been withdrawn from availability. Existing copies of P233 should be destroyed.
Contact Richard Smith, R&D, Bristol
ISBN 1857050193

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Contact Richard Smith, Waste R&D, Westbury, HO.
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(Environment Agency R&D project; P1-292)
The effectiveness of liners in inhibiting the migration of landfill gas (P256)
(Environment Agency R&D project; P1-159)
(Environment Agency R&D technical report; P256). - ISBN 1857053427

Development of analytical methods for red list analytes in landfill leachates (P356)
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(Environment Agency R&D technical report; CWM 142/96A)
(Environment Agency R&D project; WTD 11/1/037). -
Project manager : Peter Braithwaite , WOT , PENS contact : Kate McCarthy
Based on consultation draft (Contract WTD 11/1/037) awarded to Dr Robert Eden, Organics Ltd

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Project Manager: Jonathan Smith, Senior Contaminant Hydrogeologist, NGCLC, Solihull; Publishing Officer: Helen Watkinson, Quadrant

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Department of the Environment. Wastes Technical Division (DOE); Aspinwall and Company; Robinson, Howard D. - London : Department of the Environment, 1995. -
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Environment Agency. Research and Development; Department of the Environment (DOE); Environment Agency. Waste Management and Regulation; University of Strathclyde; Energy Technology Support Unit (ETSU); Burton, Simon A Q; Watson-Craik, Irene A; Waste Management Information Bureau. - London : Environment Agency, 1996. - 72p. -
(Technical aspects of controlled waste management research report; CWM/A125/96)
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Contact Richard Smith, R&D, Bristol
Project Manager Jan Gronow, HO. - ISBN 1857050274

The effects of heavy metal speciation on methanogenesis in landfill (P255)

Life cycle inventory development for waste management operations: landfill (P1/392/3)

Integration of monitoring data management systems for landfill sites (P1-428/TR)
Contact Pamela Mardon, R&D. Project manager Mike Baker, Southern Region. - ISBN 1857055470

Ammonia fluxes in landfills
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Bibliography, Glossary and References: figures and tables. - ISBN 1844321592

Monitoring of landfill sites: guidance on monitoring of landfill leachate, groundwater and surface water: main guidance document: draft for internal Agency consultation

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Guidance on the emissions from different types of landfill gas flares, technical review

Anaerobic bioassay test: development of an operational method for landfill co-disposal (P252)

The landfill directive


Landfill engineering: leachate drainage, collection and extraction services
References and Appendices. - ISBN 1857059921

Evaluation of the environmental performance of wastes with respect to their classification under the UK scheme (P1-297/TR)
Appendices, references and tables. - ISBN 1844320146

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The likely medium to long term generation of defects in geomembrane liners
Environment Agency. Research and Development; Edge Consultants; I-Corp International;
Nottingham Trent University; Rapra Technology; Needham, A. - Bristol : Environment Agency, 2004. -
160p. -
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Contact : Project Manager : Jonathan Smith, R&D MC : Peter Braithwaite, Head Office.. -
ISBN 1844321800

Guidance for monitoring trace components in landfill gas
(Environment Agency landfill directive technical guidance note (LFTGN); 04). -
Project manager: Jill Rooksby, Olton Court, Midlands; PR contact: Laura MacDonald, HO
This guidance is based on R&D projects P1-438 and P1-491

Guidance on the management of landfill gas
(Environment Agency landfill directive technical guidance note (LFTGN); 03). -
Project manager: Jill Rooksby, Olton Court, Midlands; PR contact: Laura MacDonald, HO
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Improved definition of leachate source term from landfills. Phase 1 : review of data from European landfills
(Environment Agency science report; P1-494/SR1)
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Project manager: Brian Bone, Olton Court. -
ISBN 1844323269

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Project manager: Jill Rooksby, Olton Court, Midlands; PR contact: Laura MacDonald, HO
This guidance is based on R&D project P1-405

Guidance on gas treatment technologies for landfill gas engines
Environment Agency; Scottish Environment Protection Agency (SEPA); Land Quality Management (LQM). - Bristol : Environment Agency, 2004. - 68p. -
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Project manager: Jill Rooksby, Olton Court, Midlands; PR contact: Laura MacDonald, HO
This guidance is based on R&D projects P1-330
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Environment Agency; Scottish Environment Protection Agency (SEPA); Atkins Environment. - Bristol : Environment Agency, 2004. - (Environment Agency landfill directive technical guidance note (LFTGN); 07). - Project manager: Jill Rooksby, Olton Court, Midlands; PR contact: Laura MacDonald, HO
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Environment Agency; Scottish Environment Protection Agency (SEPA); Entec. - Bristol : Environment Agency, 2004. - (Environment Agency landfill directive technical guidance note (LFTGN); 08). - Project manager: Jill Rooksby, Olton Court, Midlands; PR contact: Laura MacDonald, HO
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Report on the landfill allowances and trading scheme (LATS) 2005/6/

Review and investigation of deep-seated fires within landfill sites
EA Project Manager: Alan Rosevear, Kings Meadow House, Reading

Identification and quantification of groundwater nitrate pollution from non-agricultural sources (P32)

Development of PCR techniques and DNA probes for detection, enumeration and identification of methanogens in landfills (CWM/121/95)

An assessment of infiltration rates through multilayered landfill cover systems

Investigation into the use of capillary barriers as landfill caps, phase 2, experimental cells
Interim guidance on nonwoven protector geotextiles for landfill engineering

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(EnviroAgency R&D project; CLO 210)
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Project manager Louise de Rome, ETSU, Harwell
Contact Richard Smith, R&D, Westbury. -
ISBN 1857050169

Landfill restoration and post closure management : second consultation draft : waste management paper 26E
(DOE Waste Management Paper; 26E). -
WMP 26E is to be revised. Contact Jan Gronow for further details.

Methods for the determination of red list substances in waste leachates (P242)
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Contact Richard Smith, R&D, Bristol
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(Technical aspects of controlled waste management research report; CWM 062/97C)
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(EnviroAgency R&D project; P1-254)
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Review and guidance on the use of landfill cover materials

The EC Groundwater directive (80/68/EEC) and the Waste Management Regulations, 1994: internal guidance on the interpretation and application of regulation 15 of the Waste Management Licensing Regulations, 1994 (the protection of groundwater with respect to landfill), internal guidance on Regulation 15

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(EnviroAgency R&D project; P1-319). -
Contact Peter Braithwaite, R&D MSO, Bristol.
Project manager Terry Coleman, Head Office/Dr Louise de Rome, ETSU.
ISBN 1857054490

Waste: strategic waste management survey: landfill within the East Midlands planning region

Guidance on the use of geosynthetic clay liners in landfill engineering, approved internal guidance
Rob Marshall, Regional Waste, Warrington

Guidance on the use of geomembranes in landfill engineering, approved internal guidance
Rob Marshall, Regional Waste, Warrington

Landsim 2: groundwater risk assessment tool for landfill design
(Environment Agency R&D technical summary)
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Contact Preter Braithwaite, R&D, Westbury-on-trym, Bristol

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Project Manager: Peter Elliot; R&D MC: Peter Braithwaite, Westbury.. -
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(Environment Agency R&D project; P1-295). -
Project Manager: Louise McGoochan, Southern; PENS Contact: Kate McCarthy, Bristol.

Cation exchange capacity in composite landfill liners worksheet v1.0: user manual
Smith, J W N; Potter, H A B; Environment Agency. National Groundwater and Contaminated Land

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Project Manager: Steve Storey, Southern; R&D Management Co-ordinator: Pamela Mardon. ISBN
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Stability of landfill lining systems: Report No. 2 Guidance (P1-385/TR2)
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Project Manager: Steve Storey, Southern; R&D Management Co-ordinator: Pamela Mardon. ISBN
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Round-up of National & Regional media coverage of the Landfill Tax introduction & Flytipping crack
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<table>
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Correct 13 digit ISBN: 9781844326808  
EA manager: Alan Rosevear, King’s Meadow House, Reading.
Potential gas production from landfilling of inorganic wastes
(Environment Agency science report; SC030144/SR)
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EA Project Manager : Alan Rosevear, King’s Meadew House, Reading. - ISBN 1844326829

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(Environment Agency R&D project; Project P1-352). - Project Manager: Richard Smith ; R&D MC: Peter Braithwaite, Head Office.. - ISBN 1857057104

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Intended publication date: April 2002. - ISBN 1857058429

Characteristics of key contaminants relevant to their natural attenuation in the sub surface : a review of grey literature (P2-247/TR)
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Midlands
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(Environment Agency R&D technical report; P1-438/TR)
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Project manager : Alan Rosevear, WOT, R&D co-ordinator : Peter Braithwaite. -
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Procedure for the determination of the permeability of clayey soils in a triaxial cell using the accelerated permeability test
(Environment Agency R&D technical report; P1-398/TR/2)
(Environment Agency R&D project; P1-398). -
Contact : Project Manager : Mr John Davis, R&D MC: Alastair Picken, Olton Court.
Intended publication date : January 2003.. -
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Validation of the accelerated permeability test as an alternative to the British Standard triaxial cell permeability test
Murray, E J; Murray Rix; Environment Agency. Research and Development. - Bristol : Environment Agency, 2003. - 76p; i. -
(Environment Agency R&D technical report; P1-398/TR/1)
(Environment Agency R&D project; P1-398). -
Contact : Project Manager : Mr John Davis, R&D MC: Alastair Picken, Olton Court.
References and appendices of test results. -
ISBN 1857055225

Hazardous waste management market pressures and opportunities : background paper (P1-484/TR)
(Environment Agency R&D technical report; P1-484/TR)
(Environment Agency R&D project; P1-484). -
Project Manager: Roy Watkinson, Rio House: R&D MSO: James Faulkner, Westbury on Trym. -
ISBN 1844321169

Lansdim report
Author: James Faulkner, Bristol; PENS/PR contact: Fiona Hamilton, Bristol
June 2003

Testing of residues from incineration of municipal solid waste
(Environment Agency science report; P1-494/SR2)
(Environment Agency science project; SC000025). -
Project manager: Brian Bone. -
ISBN 1844323382


Guidance for the recovery and disposal of hazardous and non hazardous waste (other than by incineration and landfill) : integrated pollution prevention contol (IPPC)
(Environment Agency IPPC guidance notes; S5.06). -
ISBN 0113101740
Addressing environmental inequalities: waste management

Interim guidance for inspecting the construction of landfill liners

Environment Agency reports on landfill (from the publications catalogue)

Investigation into the toxicity of landfill discharges to controlled waters
SubTitle: Science Summary
Description: Investigation into the toxicity of landfill effluents using DTA in order to identify the risk posed to controlled waters. To provide an appraisal of the use of DTA within IPPC impact assessments in the regulation of landfill effluents.

Investigation and quantification of gas produced from landfills of inorganic wastes
SubTitle: Science Report P1-516/2b
Description: This report outlines methods for monitoring gas emissions from landfills for hazardous and inorganic waste. It suggests that these sites may generate gas and operators should consider conducting site-specific surveys and simulations to demonstrate safe operating procedures.

The Development of LandSim 2.5
SubTitle: GW/03/09
Description: Report on development of the LandSim 2.5 groundwater risk assessment tool for landfill design. Includes scoping report on changes from LandSim2.02, and supporting data.

Case study 1: Improved site management can help the waste sector adapt to climate change
SubTitle: Case Study 1
Description: Case study of one of three major recommendations from Science project SC030305

Case study 2: Improved site-level assessment of risks can help the waste sector adapt to climate change
SubTitle: Case Study 2
Description: Case study of one of three major recommendations from Science project SC030305

Case study 3: Improved strategic assessment of risks can help the waste sector adapt to climate change
SubTitle: Case Study 3
Description: Case study of one of three major recommendations from Science project SC030305
Summary: How we are Adapting to Climate Change
SubTitle: Science Summary
Description: This is a summary of science project SC030305, which looked at Agency data on extreme climatic events to see what lessons could be learned from the waste industry.

Hydrogeological Risk Assessments for Landfill
SubTitle: Report LFTGN01
Description: guidance document

Pollution Inventory discharges to sewer or surface water from landfill leachate
Description: This report repeats the initial landfill leachate analysis exercise that was documented in report ISBN no 1 857 05862 3 ...but for the new substances added to the PI reporting list in 2002.

Treatment of non hazardous wastes
Description: This is a two part guidance document on the Landfill Directive requirement to treat non hazardous wastes being sent to landfill. Part A deals with the regulatory requirements and Part B provides useful examples of how business can treat comply with new rules.

Updating the landfill leachate Pollution Inventory reporting tool
Description: This report repeats the initial landfill leachate analysis exercise that was documented in report ISBN no 1 857 05862 3 ...but for the new substances added to the PI reporting list in 2002.

Scoping report on Pollution Inventory reporting for emissions to groundwater from landfills and subsequent reporting tool
Description: This report describes a staged approach to assessing the significance of potential emissions of PI substances from landfills to groundwater compared to surface water emissions. Some modelling with Landsim is included.

Fact sheet for general business on landfill rules
SubTitle: Landfill directive guidance and factsheets
Description: Fact sheet for general business on landfill rules

Fact sheet for landfill operators on landfill rules
SubTitle: New Landfill Rules Factsheets
Description: Fact sheet for landfill operators on landfill rules

Guidance on diverting liquid away from landfill
SubTitle: New Landfill Rules Guidance
Description: Guidance on diverting liquid away from landfill

Landfill New Rules Factsheets for (No.3) waste carriers
SubTitle: new rules on treating non hazardous waste to landfill
Description: The product is a factsheet to give practical advice about the new rules that will stop the landfilling of untreated waste

Landfill New Rules Factsheets for (No.4) Inert Waste
SubTitle: new rules on treating non hazardous waste to landfill
Description: The product is a factsheet to give practical advice for anyone who produces, manages of landfills inert waste

Landfill New Rules Factsheets for (No.5) Contaminated Soil, &
SubTitle: new rules on treating non hazardous waste to landfill
Description: The product is a factsheet that tells you about new rules that mean you must treat contaminated soil if you plan to send it landfill

Landfill New Rules Factsheets for (No 6) Municipal Waste
SubTitle: new rules on treating non hazardous waste to landfill
Description: The product is a factsheet to give practical advice to local authorities involved in the disposal on municipal solid waste (MSW) at landfills

Report on the Landfill Allowances and Trading Scheme 2007/08
SubTitle: LATS report 2007/08
Description: The Landfill Allowances and Trading Scheme runs from 2005 to 2020. The Environment Agency is the monitoring authority for scheme in England. We are required to present yearly results to Defra in the form of an annual report. This report covers the scheme year 2007/08.
## Science research on landfills

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<td>Integration of Monitoring Data Management Systems for Landfill Sites</td>
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