

Landfill Non-Hazardous Waste

Learning Outcome	Assessment Criteria	Source
1. Understand the legislative and regulatory requirements for a non-hazardous landfill	1.1 Describe the legislative requirements, regulations, codes of practice and guidance applicable to a non-hazardous landfill in terms of: <ul style="list-style-type: none"> - Design - Construction - Operation - Closure - Aftercare 	https://www.daera-ni.gov.uk/articles/regulation-landfills-northern-ireland#:~:text=Article%204%20of%20the%20Landfill,of%20waste%20to%20be%20landfilled. https://www.legislation.gov.uk/nisr/2003/496/contents/made https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31999L0031&from=EN https://www.gov.uk/guidance/landfill-operators-environmental-permits/close-your-landfill-site https://www.gov.uk/government/publications/landfill-epr-502-and-other-permanent-deposits-of-waste-how-to-surrender-your-environmental-permit/landfill-and-deposit-for-recovery-aftercare-and-permit-surrender#aftercare
	1.2 Describe the principles of financial provision for landfill (including when to take an assessment, the timeframe and financial costs associated with aftercare)	https://www.gov.uk/guidance/landfill-operators-environmental-permits/calculate-your-financial-provision
	1.3 Explain the relationship between permit conditions and operating techniques	https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans
2. Understand the requirements for site engineering at a non-hazardous landfill	2.1 Describe the principles of containment	https://www.legislation.gov.uk/nisr/2003/496/schedule/2/made https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#manage-landfill-gas
	2.2 Describe the characteristics of liner and capping designs	https://www.gov.uk/guidance/landfill-operators-environmental-permits/accept-the-right-waste
	2.3 List the elements of site construction that require regulatory approval	Landfill operators: environmental permits - Manage landfill gas - Guidance - GOV.UK (www.gov.uk) https://www.gov.uk/guidance/landfill-operators-environmental-permits/design-and-build-your-landfill-site



		https://www.gov.uk/guidance/landfill-operators-environmental-permits/construction-quality-assurance-cqa
3. Understand the waste reception procedures for a non-hazardous landfill	3.1 Define non-hazardous waste in relation to landfill activities	https://www.netregs.org.uk/environmental-topics/waste/operating-your-landfill-site/wastes-you-cannot-landfill/
	3.2 List the types of waste banned from a non-hazardous landfill	Dispose of waste to landfill - GOV.UK (www.gov.uk)
	3.3 Describe the legislative requirements, codes of practice and guidance applicable to the reception of waste at a non-hazardous landfill	Landfill operators: environmental permits - Accept the right waste - Guidance - GOV.UK (www.gov.uk)
	3.4 Describe the regulatory requirements and organisational procedures for dealing with unauthorised wastes	https://www.daera-ni.gov.uk/sites/default/files/publications/doe/duty-of-care-code-of-practice-june2016.pdf
	3.5 Describe the waste inspection, identification procedures and handling requirements for the types of non-hazardous waste received on site	https://www.daera-ni.gov.uk/publications/waste-summary-returns-form-and-guidance
	3.6 Describe the uses, purposes and processing requirements for documents relating to the reception and validation of non-hazardous waste received on the site	
	3.7 Describe the records required by legislation and by organisational procedures relating to the reception, inspection, and validation of non-hazardous wastes	
4. Understand how to manage a non-hazardous landfill	4.1 Describe the procedures for managing vehicles on a landfill site	HSE: Workplace Transport Safety https://www.hse.gov.uk/topic/workplace-transport Landfill operators: environmental permits - Restore your landfill site - Guidance - GOV.UK (www.gov.uk)



	4.2 Describe the implications of 'settlement' and 'compaction' for: <ul style="list-style-type: none"> - Restoration plan - Gas and leachate management 	Landfill operators: environmental permits - How to do a stability risk assessment: landfill sites for hazardous and non-hazardous waste - Guidance - GOV.UK (www.gov.uk) https://www.legislation.gov.uk/nisr/2003/496/schedule/2/made Landfill operators: environmental permits - Monitor and report your performance - Guidance - GOV.UK (www.gov.uk) https://www.daera-ni.gov.uk/articles/regulation-landfills-northern-ireland#:~:text=Article%204%20of%20the%20Landfill,of%20waste%20to%20be%20landfilled GOV.UK - Using Geomembranes in landfill engineering LFE5 LFE4 - Earthworks on landfill sites (publishing.service.gov.uk) https://www.metoffice.gov.uk/weather/guides/observations/how-we-measure-wind Landfill operators: environmental permits - Develop and maintain management plans - Guidance - GOV.UK (www.gov.uk) https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#manage-birds
	4.3 Describe the recommendations for managing landfill stability	
	4.4 Explain when landfill stability may be a problem	
	4.5 Explain why it is important to cover waste with suitable materials	
	4.6 List the types of waste that might damage landfill liners and restoration layers	
	4.7 Describe the procedures for controlling: <ul style="list-style-type: none"> - Mud and other debris - Noise - Dust - Odour - Litter - Vermin 	
	4.8 Explain why it is important to plan the phasing of filling operations	
5. Understand the procedures for managing landfill gas from a non-hazardous landfill	5.1 Explain why it is important to manage landfill gas	https://www.legislation.gov.uk/nisr/2003/496/contents/made https://www.daera-ni.gov.uk/articles/regulation-landfills-northern-ireland https://www.gov.uk/government/publications/management-of-landfill-gas-lftgn-03 https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans Review and investigation of deep-seated fires within landfill sites
	5.2 List the information that should be included in a landfill gas management plan	
	5.3 List the information that should be included in a landfill gas monitoring and sampling plan	



	<p>5.4 Outline the actions to take if a perimeter borehole contains landfill gas components (methane, CO₂) at a range of levels (Including above a compliance limit)</p> <p>5.5 Explain why it is important to collect, utilise and treat landfill gas</p> <p>5.6 Explain why it is important to control landfill gas emissions and manage gas field balancing</p> <p>5.7 Describe the procedures for dealing with deep and shallow fires within a non-hazardous landfill</p>	
<p>6. Understand the procedures for managing leachate from a non-hazardous landfill</p>	<p>6.1 Describe the requirements for managing leachate</p> <p>6.2 Explain why leachate levels must be maintained below a limit</p> <p>6.3 Describe the procedure for dealing with:</p> <ul style="list-style-type: none"> - Leachate above control levels - A breach of compliance limit occurring <p>6.4 Describe the principles of leachate treatment and the associated pollution risks</p> <p>6.5 Describe when a leachate recirculation system may be permitted and any requirements for its use</p>	<p>Landfill operators: environmental permits - Monitor and report your performance - Guidance - GOV.UK (www.gov.uk)</p> <p>https://www.daera-ni.gov.uk/articles/regulation-landfills-northern-ireland#:~:text=Article%20of%20the%20Landfill,of%20waste%20to%20be%20landfilled</p> <p>https://www.gov.uk/government/publications/monitoring-of-landfill-leachate-groundwater-and-surface-water-lftgn-02</p> <p>IPPC S5.03 Guidance for the Treatment of Landfill Leachate Part 1 (sepa.org.uk)</p> <p>A technical assessment of leachate recirculation</p> <p>Landfill operators: environmental permits - Manage leachate - Guidance - GOV.UK (www.gov.uk)</p> <p>Waste Treatment Eippcb (europa.eu)</p>
<p>7. Understand how to monitor groundwater and surface water at a non-hazardous landfill</p>	<p>7.1 Explain why monitoring groundwater and surface water is needed at a non-hazardous landfill site</p>	<p>Monitoring of Landfill leachate, groundwater and surface water: LFTGN 02</p>



	7.2 Differentiate between monitoring for: - Operational performance - Permit compliance limits	
8. Understand the procedure for closure and aftercare of a non-hazardous landfill	8.1 Explain why it is important to develop a restoration and aftercare scheme for a non-hazardous landfill.	No test questions on this AC
9. Understand the main causes of accidents in relation to non-hazardous landfill activities and how to prevent them	9.1 Identify the causes of accidents in relation to non-hazardous landfill activities	https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans https://www.hse.gov.uk/waste/landfillfires.htm ASSESSMENT REPORT (esauk.org) REPORT ISSUE HISTORY - ICoP2 - Landfill Gas.pdf (esauk.org) https://www.esauk.org/application/files/3415/3607/0033/ICoP_5.pdf
	9.2 Identify the methods used to prevent accidents in relation to non-hazardous landfill activities	
	9.3 Describe the dangerous substances and areas of explosive atmospheres that may exist on a landfill site	
	9.4 Outline the operator's responsibilities for area classification and marking zones	
	9.5 Explain how to control ignition sources to reduce fire risk at a non-hazardous landfill site	

