

Landfill operators: environmental permits

From: **Environment Agency**

(/government/organisations/environment-agency)

Published 30 January 2020

Updated: 17 January 2024 - **See all updates**

Contents

Landfills for inert waste

The environmental permitting requirements for landfills for inert waste and how to comply with your permit.

This guide describes the requirements for landfills for inert waste.

Inert waste is waste that does not undergo any significant physical, chemical or biological transformations.

Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter that it comes into contact with, in a way likely to cause environmental pollution or harm to human health.

The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must:

- be insignificant
- not endanger the quality of surface water or groundwater

This guide includes, or links to, the information you need to apply for and operate under a landfill permit for inert waste.

Application forms

To apply for an environmental permit for a landfill for inert waste, you need to complete and submit:

- [application for an environmental permit: part A about you](https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-a-about-you)
(<https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-a-about-you>)
- [application for an environmental permit \(charges and declarations\): part F1](https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-f1-opra-charges-declarations)
(<https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-f1-opra-charges-declarations>)
- [application for an environmental permit: part B2 new bespoke permit](https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-b2-new-bespoke)
(<https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-b2-new-bespoke>)
- [application for an environmental permit: part B4 new bespoke waste operation](https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-b4-new-bespoke-waste-operation)
(<https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-b4-new-bespoke-waste-operation>)

If you have a point source discharge to controlled water you must also [complete part B6](https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-b6-new-bespoke-water-discharge-activity-and-groundwater-point-source-activity)
(<https://www.gov.uk/government/publications/application-for-an-environmental-permit-part-b6-new-bespoke-water-discharge-activity-and-groundwater-point-source-activity>).

Understand your site

You must understand the environmental setting of your site. [Read the guide for planning the environmental setting of your site](https://www.gov.uk/guidance/landfill-operators-environmental-permits/plan-the-environmental-setting-of-)
(<https://www.gov.uk/guidance/landfill-operators-environmental-permits/plan-the-environmental-setting-of->

[your-site](#)) to find out how to carry out risk assessments and background monitoring.

You must describe your site based on an [environmental setting and site design \(ESSD\) report](https://www.gov.uk/guidance/landfill-operators-environmental-permits/what-to-include-in-your-environmental-setting-and-site-design-report) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/what-to-include-in-your-environmental-setting-and-site-design-report>). This will help you know what risk assessments and management plans you need to provide with your application.

Carry out risk assessments

To find out how to do a risk assessment read the guide for [how to carry out risk assessments for your environmental permit](https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit) (<https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>).

You must show how you have determined the risk posed by your site and that you have carried out an appropriate level of assessment. This must justify the risk assessment methodology you used. The level of assessment required for an inert waste landfill site or waste recovery activity may not be the same as required for a non-hazardous waste landfill site.

If your risk screening shows that the waste will not present a risk to groundwater or surface water, then you will not need to carry out a quantitative hydrogeological risk assessment. However, if your site is in a sensitive area, you will need to carry out a qualitative risk assessment, which may lead to a quantitative risk assessment.

In this guidance, a sensitive area means the site is:

- on or in a principal aquifer or secondary A aquifer
- below the water table – in any strata where the groundwater provides an important contribution to river flow or other sensitive surface water
- in source protection zone (SPZ) 2 or 3
- in an area where groundwater provides a direct pathway to other sensitive receptors such as surface water, habitats sites or wetlands

Check what information you should include in your [hydrogeological risk assessment](https://www.gov.uk/guidance/landfill-operators-environmental-permits/what-to-include-in-your-hydrogeological-risk-assessment) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/what-to-include-in-your-hydrogeological-risk-assessment>).

The Environment Agency will normally object to any proposed landfill site within a SPZ 1. It would be unlikely to grant an environmental permit for an inert waste landfill site in a SPZ 1.

See SPZ and aquifer designations on [MagicMap](https://magic.defra.gov.uk/MagicMap.aspx) (<https://magic.defra.gov.uk/MagicMap.aspx>).

Where your ESSD confirms a risk, you must complete [risk assessments](https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit) (<https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>). The assessments must show that any emissions from your site will not cause pollution and that any slopes at your site are stable. These include assessments on the impacts on:

- [slope stability](https://www.gov.uk/guidance/landfill-operators-environmental-permits/how-to-do-a-stability-risk-assessment-landfill-sites-for-inert-waste-or-deposit-for-recovery-activities) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/how-to-do-a-stability-risk-assessment-landfill-sites-for-inert-waste-or-deposit-for-recovery-activities>)
- amenity value – noise, dust and mud emissions
- nature and heritage conservation (habitats) sites
- safeguarded aerodromes – bird strike hazards

To check if your application needs to include the impact on a nature and heritage conservation (habitats) site, complete our [pre-application screening tool](https://www.gov.uk/guidance/get-advice-before-you-apply-for-an-environmental-permit) (<https://www.gov.uk/guidance/get-advice-before-you-apply-for-an-environmental-permit>).

You must provide [management plans](#) to explain how you will manage all the risks you identify.

Financial provision

You must explain and be able to put in place [financial provision for your landfill](https://www.gov.uk/guidance/landfill-operators-environmental-permits/calculate-your-financial-provision) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/calculate-your-financial-provision>).

Protect soil and water

You must:

- plan water management at your site – taking into account the meteorology, hydrology and hydrogeology of the site
- design the surface water drainage system to cope with predicted storm events

You do not need:

- a leachate collection and sealing system
- a landfill gas management system
- an engineered cap

Surface water discharges

Where surface water from your landfill site flows into a watercourse at a single point or it goes to soakaway, you must assess the risk from that discharge. Find out how to do a [surface water risk assessment \(https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit\)](https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit).

Building your site

You must provide construction proposals and a [construction quality assurance \(CQA\) plan \(https://www.gov.uk/guidance/landfill-operators-environmental-permits/construction-quality-assurance-cqa\)](https://www.gov.uk/guidance/landfill-operators-environmental-permits/construction-quality-assurance-cqa) for any:

- [artificial geological barrier](#)
- surface water drainage system
- groundwater monitoring boreholes
- gas monitoring boreholes

[Find out how to create a CQA plan.](#)

You must submit construction proposals and CQA plans to the Environment Agency. You must submit them sufficiently in advance of the programmed work to allow the Environment Agency to assess them.

Geological barriers

You must have a geological barrier. It must:

- extend along the base and up the sides of the site
- provide a barrier to contaminant emissions

Where you plan to rely on the in situ geology to protect soil and groundwater you must:

- show the in situ material will provide a layer equivalent to 1m thick with a permeability of less than or equal to 1×10^{-7} m/s
- include procedures, including a trial pit and hole investigation, in your CQA plan to demonstrate the above equivalence consistently across the whole base and sides of the site

Artificially established geological barriers

Where the natural geology around your site does not provide protection equivalent to a layer 1m thick with a permeability of less than or equal to 1×10^{-7} m/s, you must complete it artificially.

Artificially established geological barriers must be at least 500mm thick.

Where you plan to construct a geological barrier that is less than 1m thick you must carry out an appropriate hydrogeological risk assessment.

You must follow the [guidance for raising the base of your landfill \(https://www.gov.uk/guidance/landfill-operators-environmental-permits/design-and-build-your-landfill-site#raising-the-base-of-a-landfill\)](https://www.gov.uk/guidance/landfill-operators-environmental-permits/design-and-build-your-landfill-site#raising-the-base-of-a-landfill) before you start constructing any part of the landfill itself, such as an artificially established geological barrier.

You must follow the [deposit for recovery guidance \(https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits\)](https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits) if you want to:

- record the recovered waste you use in your engineered structure
- create a sub-base for the geological barrier

If you can demonstrate recovery you can apply to have the recovery of that waste included in your permit.

Construction proposals for artificially established geological barriers

You must submit construction proposals for new cells or development areas to the Environment Agency. A development area is a section of the site where you do not plan to divide your site up into separate cells.

The Environment Agency will normally accept the use of natural clays or mudrocks for constructing the geological barrier. You can also use imported waste materials. You must demonstrate that the waste materials you use are physically and chemically suitable. In either case, follow the [guidance for the specification for highway works \(http://www.standardsforhighways.co.uk/ha/standards/mc/hw/vol1/index.htm\)](http://www.standardsforhighways.co.uk/ha/standards/mc/hw/vol1/index.htm), which sets out the acceptability of materials, testing, layer thickness, compaction and testing.

Construction with waste: artificially established geological barriers

When you plan to build your geological barrier with waste, the waste materials must:

- be physically and chemically suitable
- have a pollution potential less than, or equal to, the natural quality of the surrounding geology
- be below the waste acceptance criteria (WAC) leaching limit values for inert waste – see [section 2.1.2.1 of the Council Decision annex \(https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:011:0027:0049:EN:PDF\)](https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:011:0027:0049:EN:PDF)

You must test this waste as part of your material assessment process. You must include evidence that the material is inert as defined by the [Landfill Directive, article 2\(e\) \(https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A31999L0031\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A31999L0031) and contains no hazardous substances.

The Environment Agency will normally accept a single set of construction proposals to cover constructing the geological barrier for your whole site. Your permit will tell you how often you must review these proposals.

Construction quality assurance for artificially established geological barriers

You must only use cohesive materials that can achieve the required permeability in accordance with the CQA plan.

The CQA plan for constructing an artificially established geological barrier must include:

- how site staff will record compliance with the construction method so that the records can be audited by the CQA engineer or inspector
- CQA procedures to make sure any material used in the geological barrier is physically and chemically suitable – this will depend on the material you intend to use
- CQA procedures to make sure appropriate compaction plant is used to form the geological barrier
- how you will validate the thickness and permeability of the geological barrier
- how you will demonstrate the as-laid thickness of the emplaced geological barrier by trial pit, hole or survey

Read guidance on [CQA personnel qualifications and experience](https://www.gov.uk/guidance/landfill-operators-environmental-permits/construction-quality-assurance-cqa#cqa-personnel-qualifications-and-experience) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/construction-quality-assurance-cqa#cqa-personnel-qualifications-and-experience>).

The Environment Agency requires the following minimum level of CQA supervision. For a site in:

- a secondary A or principal aquifer or SPZ 2 or 3 – the CQA engineer must carry out one visit for each week of engineering works, or one visit per 5,000m³ of material placed, whichever is the most frequent
- a secondary B aquifer – the CQA engineer must carry out one visit for every 2 weeks of engineering works, or one visit per 10,000m³ of material placed, whichever is the most frequent
- unproductive strata – the CQA engineer must inspect the site before construction and again before any waste is deposited

You must [provide the CVs](https://www.gov.uk/guidance/landfill-operators-environmental-permits/construction-quality-assurance-cqa#cqa-personnel-qualifications-and-experience) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/construction-quality-assurance-cqa#cqa-personnel-qualifications-and-experience>) of all office and site-based personnel involved in the construction works. Send these to your [local Environment Agency officer](https://www.gov.uk/government/organisations/environment-agency/about/access-and-opening) (<https://www.gov.uk/government/organisations/environment-agency/about/access-and-opening>) a minimum of 5 working days before the start of the works. You must confirm what role they will perform.

The CQA inspector must meet either of the following route A or route B qualifications and experience, unless agreed in writing with the Environment Agency.

Route A includes a minimum of 6 months supervision of earthworks construction or similar experience.

Route B must normally include both of the following:

- a minimum formal qualification in science or engineering, for example OND, ONC or higher in civil engineering, mining engineering, engineering geology, building, quantity surveying or science with training in soil mechanics
- a minimum of 5 days one-to-one close proximity training as an assistant to an experienced CQA inspector with relevant experience during earthworks and clay liner construction on a landfill contract, followed by mentoring and close supervision by the CQA engineer during the earthworks and clay liner construction works

The inspector must be supervised by a chartered engineer or geologist with more than 5 years experience, which must include earthworks on landfill sites.

Where mentoring and close supervision is to be provided for the proposed works, you must agree this with your local Environment Agency officer. Details of all mentoring and close supervision carried out must be included within the validation report.

The CQA engineer must carry out permeability testing at a minimum frequency of one test per cell or 4 tests per hectare, whichever is greater. You must agree the method you will use to determine the permeability of the geological barrier with the Environment Agency.

Alternatives to the highway specification for artificially established geological barriers

Where you propose an alternative method of compaction to the [specification for highway works \(http://www.standardsforhighways.co.uk/ha/standards/mc/hw/vol1/index.htm\)](http://www.standardsforhighways.co.uk/ha/standards/mc/hw/vol1/index.htm), such as the use of earthmoving plant, you must provide further evidence that this will meet the permeability requirements of the CQA plan. Such evidence includes:

- constructing a trial pad to prove the proposed method of compaction will result in good interlayer bonding and adequate breakdown of clods
- increased CQA supervision and testing of the trial pad – including trial pitting to confirm good interlayer bonding and the breakdown of clods, and the taking of one undisturbed sample and its permeability determined using the [BS 1377 test \(https://shop.bsigroup.com/ProductDetail?pid=000000000000227786\)](https://shop.bsigroup.com/ProductDetail?pid=000000000000227786) (you have to pay for this test)

Where you propose to use waste to construct the geological barrier there is no need to construct a trial pad for every source you use. Providing the source is physically and chemically suitable, you only need to construct one trial pad for cohesive waste that is below the WAC leaching limit values for inert waste.

Where you propose to use an alternative method of compaction, you will need to construct a further trial pad.

Site records for artificially established geological barriers

You must keep records at the site of all geological barrier construction activities, including:

- a site diary maintained by site staff showing works carried out, CQA visits, non-compliances and remedial actions
- the identity of all material used in the geological barrier – including the source, quantity and dates of delivery
- the results of any chemical testing on geological barrier material
- dates and times when the geological barrier is constructed
- details of any unsuitable materials – including source of material, reasons it was considered unsuitable and action taken
- a plan of the progressive construction of the geological barrier
- thickness of the geological barrier as placed, either by records of the location and depth of the trial pits or isopachyte survey plans

Validation reports for artificially established geological barriers

You must submit a CQA validation report to the Environment Agency to the timescales outlined within your permit to confirm that you have achieved the requirements of your CQA plan.

You cannot dispose of any waste until the Environment Agency has approved the CQA validation report for your landfill engineering.

Depositing inert waste into water

If you want to deposit inert waste into water, as part of a landfill activity, it may be difficult to construct the geological barrier to the standard required. You must:

- make sure groundwater and surface water surrounding the site is not affected by your activity
- make sure your geological barrier provides adequate attenuation capacity
- meet, where applicable, WAC and waste acceptance procedures so that you only accept inert wastes

- use a physically and chemically suitable material for the geological barrier and the sub-grade
- make no direct discharges of pollutants to groundwater – unless this is for an activity allowed under [paragraph 8, schedule 22 of the Environmental Permitting Regulations 2016](http://www.legislation.gov.uk/ukxi/2016/1154/schedule/22/made) (<http://www.legislation.gov.uk/ukxi/2016/1154/schedule/22/made>)

Requirements you must meet to deposit inert waste into water

You must make sure the geological barrier reduces emissions of contaminants from inert WAC compliant waste and does not cause an unacceptable discharge.

You will need to carry out these steps:

1. Your proposal must meet the requirements of the [Environment Agency approach to groundwater protection: section E1 for landfill location](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/692989/Environment-Agency-approach-to-groundwater-protection.pdf) (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/692989/Environment-Agency-approach-to-groundwater-protection.pdf).

The Environment Agency will normally refuse any application for a proposed inert waste landfill site in groundwater SPZ 1.

2. You must demonstrate that the geology to the base and sides of the site achieves or is equivalent to the required standard. This includes appropriate sampling and testing of the geology to the base of the void or adjacent land. You must characterise the depth, properties and consistency of the in situ material where this will form the geological barrier.

3. Where the evidence suggests that the natural geology would not achieve the required standard, or the evidence is inconclusive, you must remove the water from the void and either:

- develop an artificially established geological barrier to the required standard
- augment the standard of the natural geology and deposit sufficient waste to prevent basal heave

You can then allow the water level to rebound. You can do this in phases.

4. At some sites you will not be able to remove the water, for example due to high flow rates, where the water level is close to ground surface, or where water forms part of the final design (for ecological improvements). You must confirm why you cannot remove the water. In these cases you must either a) raise the base of the site above the water level so that you can build the geological barrier to the base and sidewalls – you can achieve this by constructing a sub-grade or sub-base layer with non-waste material or waste that has been recovered, or b) construct the geological barrier beneath the water level – see step 6.

5. You must demonstrate that any material used to create the geological barrier, sub-grade or sub-base layer either:

- has a pollution potential less than or equal to the natural quality of the surrounding geology and water
- is inert as defined by the [Landfill Directive, article 2\(e\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A31999L0031) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A31999L0031>), or is otherwise physically and chemically suitable

6. Where you need to construct the geological barrier beneath the water level, you must give the Environment Agency details of how you will achieve it. The geological barrier will need to provide a continuous barrier to the base and sides of the landfill site at the required thickness and permeability. The design must demonstrate the stability of any sidewall geological barrier above and below the water level. You should normally achieve the required standard with a geological barrier no more than 2m thick.

7. The level of CQA supervision during the placement of the geological barrier must reflect the sensitivity of the site. Your CQA validation report must include evidence to show that the sub-water geological barrier has achieved the required standard.

Protect water quality when you deposit inert waste into water

You must assess the pollution potential of the material you plan to place in water. Based on this risk assessment, the Environment Agency will include limits in your permit on the quality of material you can deposit. This is to make sure there will be no pollution of surface water or groundwater.

Where your permit application is for the final level of waste to be below the water table in the surrounding geology (for example for a wetland), your risk assessment must show that the placement of waste will not affect the water quality:

- within the pond or lagoon
- at any other surface water or groundwater receptor that is connected to the site

The Marine Management Organisation (MMO) regulates deposits in tidal lagoons that are below mean high water spring tides. That includes deposits that start below those levels and extend above them. You must contact the MMO if you plan to deposit waste below mean high water spring tides. [Read guidance on activities that need a marine licence \(https://www.gov.uk/guidance/do-i-need-a-marine-licence\)](https://www.gov.uk/guidance/do-i-need-a-marine-licence).

Operate your inert waste landfill

You must operate your site to comply with your permit conditions.

Accept the right types of waste

You must control the waste you accept at your landfill. This is the most important way of controlling pollution from activities involving inert waste. Read the section on [Accept the right waste: waste acceptance procedures \(https://www.gov.uk/guidance/landfill-operators-environmental-permits/accept-the-right-waste#waste-acceptance-procedures\)](https://www.gov.uk/guidance/landfill-operators-environmental-permits/accept-the-right-waste#waste-acceptance-procedures).

When you apply for a permit you need to include the types of waste you want to dispose of at your landfill.

Producers or holders of waste must classify and describe their waste before they pass it to you. This is so you can decide whether to accept it. This will:

- help reduce the incidence of unauthorised waste arriving at your site
- help minimise delays in processing paperwork at the site entrance
- provide you with evidence that the waste types you accepted were inert when you apply to surrender your permit

[Check the requirements for characterising waste and WAC for landfill](https://www.gov.uk/guidance/dispose-of-waste-to-landfill)

[\(https://www.gov.uk/guidance/dispose-of-waste-to-landfill\)](https://www.gov.uk/guidance/dispose-of-waste-to-landfill).

Higher leaching limit values

Operators of landfills for inert waste may apply to accept waste that has:

- up to 3 times the leaching limit values for the substances listed in section 2.1.2.1 of the Council Decision annex
- up to 2 times the value for total organic carbon as listed in section 2.1.2.2 of the Council Decision annex – this does not apply to dissolved organic carbon, BTEX, PCB and mineral oil

Find more information in [section 2.1 of the Council Decision annex \(https://eur-lex.europa.eu/legal-content/EN/TXT/?](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2003.011.01.0027.01.ENG)

[uri=uriserv:OJ.L_.2003.011.01.0027.01.ENG\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2003.011.01.0027.01.ENG).

You can only apply these higher limits to specific waste streams.

You must tell the Environment Agency which waste you want a higher limit for and where it will come from.

You must provide a risk assessment to show these higher values will not increase the risk of pollution. The Environment Agency must include the waste with the appropriate limits in your permit.

Sample and test the waste you accept: level 3 verification

You must sample and test relevant characteristics to make sure the waste you accept is as described in the paperwork. This is known as a level 3 waste assessment or on-site verification.

You must use a compliance leaching test for the substances the producer identified in their basic characterisation.

For homogeneous waste, you must sample and test each waste stream or waste source once a year. Homogenous means the waste generally contains the same or similar components.

For heterogeneous and new wastes, you must sample and test each waste stream or waste source 3 times a year. Heterogeneous means the waste generally contains a wide range of different components.

The Environment Agency will accept statistical analysis of data sets where you believe that a result is due to analytical uncertainty or is not representative of all the waste you have accepted. You can use the techniques described in the [Environment Agency's technical guidance WM3 \(https://www.gov.uk/government/publications/waste-classification-technical-guidance\)](https://www.gov.uk/government/publications/waste-classification-technical-guidance).

You must keep the sample for at least one month. You must store it in conditions that minimise changes to its characteristics, for example in a refrigerator. You must make a sample available to the Environment Agency who may require it for compliance assessment.

You should keep the analysis results as supporting evidence for your permit surrender application.

Failed waste samples

If your sample testing shows you should not have accepted the waste, you must report this to the waste producer so that they can review and refine

their basic characterisation. You must remove any waste you are not permitted to accept.

You must notify your local Environment Agency officer of failed samples. If you do not remove the waste, you must explain to them what effect this waste will have on your site's impact on the environment.

Management plans

Management plans

(<https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans>) describe how you will operate and monitor your activity. Your permit application must include:

- an accident management plan
- a water management plan

Where your ESSD confirms a risk, you must provide additional management plans with your permit application. These include a:

- habitats management plan
- bird strike management plan
- dust management plan
- mud management plan
- noise management plan

Accident management plan

You must always provide an accident management plan as part of your permit application.

Your plan must include the potential hazards presented by a landfill. These include:

- waste slippage and other instability
- failure of a geological barrier
- acceptance of unauthorised wastes
- vandalism
- extreme weather conditions, such as flash floods or freezing temperatures

You must include procedures for each accident scenario that clearly sets out:

- the name of the person or position that is responsible for managing any emergencies – normally the technically competent manager
- who you will notify and contact – for example, regulators and emergency services, including phone numbers and contact names
- what actions you will take and who will do them
- the monitoring you will carry out
- what you must report and who you will report it to
- what criteria identify the end of the emergency action
- how you will review your emergency response and the performance of your accident management plan

You must train all site-based staff on how to implement the response for each emergency scenario.

Water management plan

You must develop a [water management plan](https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#surface-water-groundwater) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#surface-water-groundwater>) for your landfill.

Mud management plan

Where your ESSD confirms a risk, you must develop a [mud management plan](https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#manage-mud) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#manage-mud>) for your landfill.

Dust management plan

Where your ESSD confirms a risk, you must develop a [dust management plan](https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#manage-dust) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#manage-dust>) for your landfill.

Noise management plan

Where your ESSD confirms a risk, you must develop a [noise management plan](https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#manage-noise) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#manage-noise>) for your landfill.

Habitats management plan

Where your ESSD confirms a risk you must develop a [habitats management plan](https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#habitats) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/develop-and-maintain-management-plans#habitats>) for your landfill.

Bird strike management plan

If your site is within a specified distance of a [safeguarded aerodrome](https://www.gov.uk/government/publications/safeguarding-aerodromes-technical-sites-and-military-explosives-storage-areas) (<https://www.gov.uk/government/publications/safeguarding-aerodromes-technical-sites-and-military-explosives-storage-areas>) or military airfield you must provide a management plan that describes how you will prevent birds from accumulating at your site. If you have already provided this information to the local planning authority the Environment Agency will accept the same plan.

Monitoring

You must follow the [guidance for monitoring and reporting your performance](https://www.gov.uk/guidance/landfill-operators-environmental-permits/monitor-and-report-your-performance) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/monitor-and-report-your-performance>).

Site restoration

You must follow the [guidance for restoring your landfill](https://www.gov.uk/guidance/landfill-operators-environmental-permits/restore-your-landfill-site) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/restore-your-landfill-site>).

Closure and aftercare plan

Closure is the ongoing process between the time you stop accepting waste for disposal and 'definite

closure' when the Environment Agency agrees the site can enter the aftercare phase.

You must maintain a closure and aftercare management plan until you surrender your permit.

This plan must include details of the deposited waste and all infrastructure at the site involved in managing, maintaining and monitoring waste.

Your closure and aftercare plan must consider how you will:

- close the landfill or parts of the landfill
- manage, maintain and monitor the landfill during the aftercare phase
- determine when the deposited waste is stable to establish the [completion criteria for permit surrender](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)
(<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>)

This must include the measures you will put in place, and the timing or conditions for implementing those measures.

Develop a closure and aftercare plan

You must include a plan and annotated cross sections that show the development of the landfill over time. This must include the:

- sequence of the development, operation and closure of individual areas, cells or phases
- development of the surface water management system
- location of groundwater and landfill gas monitoring boreholes
- phasing of the placement of restoration soils

You must include a plan showing the surface contours of the site at post-settlement levels. These must be consistent with the levels used in your stability and any hydrogeological risk assessment.

You must complete individual phases to final contours before moving onto the next phase, except where the stability of the waste depends on the support provided by the waste in adjacent cells or phases.

You must include regular inspections of the surface of the landfill for any evidence of slope instability.

Topographical surveys

You must do a [topographical survey](https://www.gov.uk/guidance/landfill-operators-environmental-permits/monitor-and-report-your-performance#topographical-surveys) (<https://www.gov.uk/guidance/landfill-operators-environmental-permits/monitor-and-report-your-performance#topographical-surveys>) every year.

Where there is a history of waste or slope instability, you may need to provide further evidence to demonstrate the landform is stable.

At landfills for inert waste, the Environment Agency expects annual surveys for at least 2 years after they accept definite closure to demonstrate that the waste mass is stable. Providing it is stable, you do not need to carry out further topographical surveys unless your routine inspections identify problems with either the waste or slope stability. If you identify stability problems you must restart annual topographical surveys.

You must get written agreement from the Environment Agency before you stop topographical surveys.

Your permit specifies the information you must record during the operational and aftercare phases.

You should keep the survey data to confirm that the waste is stable in the long term. You can use this to support your permit surrender application.

Review your closure and aftercare plan

You must review your closure and aftercare plan at least every 4 years.

You must update the plan as changes occur.

You must apply to vary your permit conditions if, following that review, you want to change:

- compliance limits
- monitoring frequency
- monitoring substances

Close your landfill

When you stop disposing of waste at your landfill you must send the Environment Agency a closure report.

Find information on closure reports in [close your landfill site \(https://www.gov.uk/guidance/landfill-operators-environmental-permits/close-your-landfill-site\)](https://www.gov.uk/guidance/landfill-operators-environmental-permits/close-your-landfill-site).

Aftercare monitoring

Where required by your permit, you must continue monitoring when your site is in aftercare. This is to confirm that the waste is stable physically and chemically.

At landfills for inert waste, the Environment Agency will normally accept 2 years of aftercare monitoring that shows you are compliant with your permit.

You may use this monitoring data and any data you collected during the operational phase to support your permit surrender application. Read guidance on [how to surrender your environmental permit \(https://www.gov.uk/government/publications/landfill-epr-502-and-other-permanent-deposits-of-waste-how-to-surrender-your-environmental-permit/landfill-and-deposit-for-recovery-aftercare-and-permit-surrender\)](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).

Where required by your permit you must send the Environment Agency a performance report. You must normally do this every 3 years.

Your performance report must consider progress towards the completion criteria. Where your permit requires you to review your hydrogeological risk assessment (HRA), you must review your completion criteria at least every 6 years against actual monitoring data.

If your aftercare monitoring shows that you are not compliant with your permit during aftercare, you:

- will need to monitor your site for longer
 - may need to do work to prevent or minimise any emissions
-
-

OGI

All content is available under the Open Government Licence v3.0, except where otherwise stated

© Crown copyright