

Horizontal Guidance Note H1

Overview document

This document is out of date and was withdrawn (01/02/2016)



We are the Environment Agency. It's our job to look after your environment and make it **a better place** – for you, and for future generations.

Your environment is the air you breathe, the water you drink and the ground you walk on. Working with business, Government and society as a whole, we are making your environment cleaner and healthier.

The Environment Agency. Out there, making your environment a better place.

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Summary of changes

Below is a summary of changes made to this Annex since the launch in April 2010.

Annex version	Date	Change	Template version
Issue 2.1	December 2011	Responding to issues raised in the 2010 H1 Public consultation and impact of the Waste Hierarchy ¹ . Addition of guidance and modifications when using the Software Tool.	H1 April 2011

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¹ http://www.environment-agency.gov.uk/static/documents/Business/Waste_Hierarchy.pdf

1. Introduction

This guide, written in compliance with the Environment Agency Code of Practice on Guidance on Regulation², will help you assess risks to the environment and human health when applying for a permit under the Environmental Permitting Regulations (EPR). However, this guide does not apply to radioactive substance activities.

It is very important that you understand the permit application process to make sure that you are applying for the right kind of permit and doing the right kind of assessment. You must read the permitting section on our website before you read this guidance, as not everyone applying for a permit will need to use it.

Before we can give you a permit we must be sure that you are going to take the necessary measures to protect the environment and ensure that what you are doing will not pose an unacceptable risk. This guidance will help you explain and justify your choice of measures by helping you to:

- identify potential risks that your activity may present to the environment
- screen out those that are insignificant and don't need detailed assessment
- assess potentially significant risks in more detail if needed
- choose the right control measures, if needed
- report your assessment.

Usually it will be clear from our technical guidance what you need to do to protect the environment. If you carry out the actions and meet the indicative standards set out in technical guidance, it will protect the environment in most cases. But you will always need to check that this is the case by doing a risk assessment for your activities to take local factors into account. You may need to review the measures you propose to use if they do not provide satisfactory protection. You may also want to propose a different way of protecting the environment than set out in the technical guidance. You can do this if you can show that you have assessed the risks and it is justified. In some cases, the technical guidance will say that you need to select the appropriate control measure by assessing the costs and environmental benefits of different options. You can use this guidance for that assessment.

Who is this guidance for?

You should read this guide if you are applying for a new EPR permit (or varying an existing one) and any of the following apply to you:

- there is no suitable standard permit for your activity or you do not wish to apply for one;
- there is a suitable standard permit but you do not meet one of the necessary criteria and need to assess that particular risk further;

² <http://www.environment-agency.gov.uk/business/regulation/107213.aspx>

³ This includes assessment of Best Available Techniques for installations set out in Environment Agency (2008) *Regulatory Guidance Series No. 2 – Understanding The Meaning Of A Regulated Facility*. Available on the Environment Agency website.

- the Environment Agency has advised or required you to carry out a site-specific risk assessment or cost-benefit analysis for your activity.

Are there special arrangements for your activity?

There are special arrangements for some activities that mean those operators will not need to follow all of this guide:

- Farmers who need a permit to discharge waste sheep dip, pesticides or pesticide washings to land should contact the Environment Agency as we may be able to do the assessment for them.
- People who want to discharge less than 15m³/day of treated sewage effluent to ground should contact the Environment Agency as we may be able to do the assessment for them.
- People who wish to apply for a water discharge activity permit for a discharge of sewage or trade effluent to a river may ask us to assess risks for them – but they will still need to read through this guide to check if they need to carry out other assessments too (they will need to assess accident risks at a minimum)

Contact the Environment Agency if you wish to abstract groundwater or surface waters.

The H1 framework does not cover radioactive substances and you should consult our website for guidance on applying for a permit for these

How this guidance is structured

This guide sets out an approach for identifying and assessing risks that is suitable for many types of activity and you will only need to complete the sections that are relevant to you.

It has four steps:

- identify risks from your activity
- assess the risks and check that they are acceptable
- justify appropriate measures to control your risks, if necessary
- present your assessment.

The risk assessments in Step 2 are presented in annexes to this guidance and you can find them on our website. You will only need to complete those that are relevant to you.

Figure 1 shows how the H1 framework is structured.

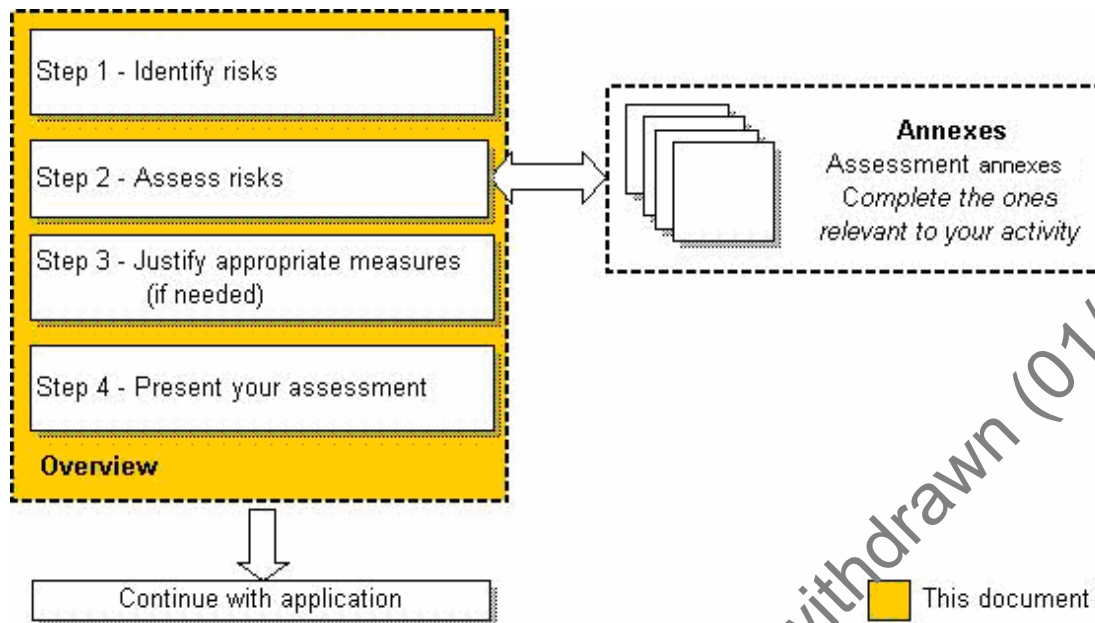


Figure 1 - How the H1 Framework is structured

Every applicant using H1 will need to complete Step 1 and the Step 2 annexes relevant to their activity. Some will need to show that they have chosen appropriate measures to control their risks in Step 3. Everybody using H1 should present their assessment in Step 4.

2. Managing your activities

2.1 – Identify your risks

The first step is to think about how your activity could harm the environment. Everyone will need to complete this step.

We regulate many activities that present different types of risk to the environment, including:

- Odour
- Noise and vibration
- Accidents – accidental harm could result from most activities
- Fugitive emissions to air and water – uncontrolled releases such as dust, volatile organic compounds (VOCs), run-off from operational areas but not controlled releases from point-sources and problems with mud, pests or litter
- Controlled releases to air – planned and managed releases associated with an activity
- Controlled discharges to surface waters - planned and managed releases associated with an activity
- Controlled discharges to ground or groundwater - planned and managed releases associated with an activity
- Global warming potential – some sectors will need to reduce their greenhouse gas emissions (Table 1 will explain if you need to think about this)
- Site waste – may need to be recovered or managed in a controlled manner (Table 1 will explain if you need to think about this)

You need to identify which of these risks are associated with your activity and make sure that you assess them in Step 2. Table 1 indicates which assessments we think you need to complete.

Table 1 – Assessment annexes to complete

Activity	Assessment annexes to complete in Step 2 (1)										
	(a) Amenity and accidents	(b) Intensive farming	(c) Accidents	(d) Surface water (basic)	(e) Surface water (complex)	(f) Air	(g) Site waste	(h) Global warming potential	(i) Landfills	(j) Groundwater	(k) Justifying and cost and benefit analysis of control measures (if needed)
Installations (2)	✓			✓		✓	✓	✓		✓	✓
Landfills				✓		✓			✓	✓	✓
Other waste operations (2)	✓			✓		✓	✓	✓			✓
Discharge of sewage or trade effluents to surface water or to ground			✓		✓					✓	✓
Sewage treatment works (3)			✓		✓					✓	✓
Discharge of waste sheep dips and agricultural pesticides to ground			✓							✓	
Intensive farming		✓									

✓ Complete these modules for your activity

(1) But see below if you think a suggested annex is irrelevant to your activity.

(2) See Introduction for explanation of installations and waste operations.

(3) Sewage effluent discharges can be either a water discharge activity or groundwater activity.

We think that the assessment annexes indicated in Table 1 will be the right ones for most operators but note that:

You need to assess all your risks but you do not need to carry out assessments for risks that are not associated with your activity. The annexes begin with screening steps to make sure that you do not assess risks unnecessarily.

- Annex (a) Amenity and Accidents contains assessments on odour, noise, fugitive emissions, accidents that are generally applicable to installations and waste operations. Annex (b) Intensive Farming similarly contains a range of assessments that are generally applicable to that sector.
- Check if there are special arrangements for your sector, as discussed in the Introduction, as we may then be able to help you complete your assessment.

- If you would like to apply for a standard permit for your activity but do not meet one of the necessary criteria, you only need to look at that particular risk because we will already have assessed the others for you. All the risk assessments for the standard permits are available at <http://www.environment-agency.gov.uk/research/library/consultations/110788.aspx>
- There are two annexes (d and e) on discharges to surface waters. Although you may use whichever approach suits you best, we recommend that you start with the simplest approach likely to give you a good enough assessment. The basic approach in Annex (d) is relatively precautionary and suitable for most installations, except for operators who need to carry out more sophisticated assessments, such as sewage treatment works, combined sewage overflow and water treatment works. In which case Annex (e) should be used.
- Operators who need to complete a BAT assessment will need to complete Annex (k), which will help them bring together their risk assessments and evaluate control options.
- When compiling an application for an EPR permit applicants should be mindful of the Waste Hierarchy,⁴ so that any waste produced may be disposed of in an environmentally friendly manner. Recovery and disposal of site waste features in Annex G and disposal of waste to landfill in Annex H.

You should carry on to Step 2 when you are clear which assessments you need to carry out for your activity.

2.2 – Assess your risks

You should now carry out assessments of all the risks associated with your activity, as discussed in Step 1. These assessments are presented in separate annexes to this document and are available on our [website](#)

For reference, the complete list of available assessment annexes is:

- (a) Amenity and accident risks from installations and waste operations
- (b) Intensive farming
- (c) Accidents (note that Annexes (a) (b) and (i) also include accident assessments tailored to those sectors)
- (d) Surface water (basic)
- (e) Surface water (complex)
- (f) Air emissions
- (g) Disposal or recovery of waste produced on site
- (h) Global warming potential
- (i) Landfills
- (j) Groundwater
- (k) Justifying and cost-benefit analysis of control measures

⁴ http://www.environment-agency.gov.uk/static/documents/Business/Waste_Hierarchy.pdf

You should now complete the assessment annexes for your activity as shown in Table 1. You should then carry on with Step 3 below when you have finished them.

2.3 – Justify appropriate measures

You will need to show us that you have managed risks from your activity appropriately for us to issue you with a permit. In most cases, it will be enough for you to implement the indicative control measures set out in Technical Guidance Notes and show that the residual risk is acceptable (i.e. through the risk assessments you carried out in Step 2).

In some cases, you may need to carry out an options appraisal or cost-benefit analysis to justify your choice of control measures:

- if risk assessment shows that risks from your activity are not acceptable and you need to look at costs and benefits of further measures to control the risk
- if the Technical Guidance Note gives several possible techniques to control a particular risk and you need to do a costs and benefits assessment to select the most appropriate one for your local situation
- if you want to justify using a different technique or emission limit value from that in the Technical Guidance Note.

If one of these cases applies to you and you need to choose control measures to manage your risks, Annex (k) Justifying and cost-benefit analysis of control measures gives advice on how to do this, including:

- identifying which control measures have the best environmental performance
- how to trade-off different environmental impacts in comparing control options
- cost-benefit analysis to justify your choice of measures if they are not the ones with the best environmental performance.

Note that you will need to have assessed risks from all your candidate control options before you can work through Annex (k).

If you are happy that you have carried out your assessments properly and have shown that all the risks are insignificant, you do not need to do any further assessment and should present your assessment as set out in Step 4.

2.4 – Present your assessment

When you are happy that you have completed your detailed assessment and shown that you have appropriate measures in place to control your activity's risks, you should present your assessment to support your permit application. You will need to present enough detail to show us that you have worked through this guidance and identified and assessed all your risks properly.

A well presented risk assessment should:

- clearly identify the site and activity that you have assessed
- describe the limits of your assessment, in particular if you are assessing all the risks from your site or only those that are not covered by a standard permit
- identify the risks from your activity
- identify receptors that could be affected (give a reference number for the plan that shows receptors around the site)
- report each assessment that you have undertaken (some assessment annexes give guidance on how they should be presented or templates for you to fill in)
- justify your choice of control measures if you have carried out a cross-media assessment or economic analysis (for installations and waste operators)

You should bear in mind that risk assessment is important throughout the life of your site. If we grant you a permit and you begin to operate your site it is possible that problems will occur. If this happens we will have to return to your risk assessment and the actions necessary to protect the environment. We may stop you operating under your permit if problems persist.

This document is out of date and was withdrawn (01/02/2016)

3. Annexes

The H1 framework covers bespoke risk assessment to support a permit under the Environmental Permitting Regulations. As shown in Figure 1, it has a number of annex documents that give advice on risk assessments for Step 2.

Available annexes are:

- (a) Amenity and accident risks from installations and waste operations
- (b) Intensive farming
- (c) Accidents
- (d) Surface water (basic)
- (e) Surface water (complex)
- (f) Air emissions
- (g) Site waste
- (h) Global warming potential
- (i) Landfills
- (j) Groundwater
- (k) Justifying and cost-benefit analysis of control measures

You can find these on our website or here: <http://environment-agency.resultspage.com/search?p=Q&ts=ev2&wch1+annexes>

Other guides that you might find useful if you are applying for a permit under the Environmental Permitting Regulations include:

Environment Agency. 2010. How to Comply with your environmental permit. EPR 1.00 Available on our website.

You can find general advice on risk assessment in:

DETR, Environment Agency and IEH. 2000. Guidelines on Environmental Risk Assessment and Management. London: Stationery Office. Also available online at:

<http://www.defra.gov.uk/environment/quality/risk/eramguide/index.htm>

H1 Software Tool

The H1 software tool can be used to help quantify the impact of proposed releases from regulated activities. Changes in the regulatory standards applied to a number of listed substances and issues raised through our public consultation mean that modifications were required to the tool. These have now been completed and the tool is available via:

[Environment Agency - Horizontal guidance](#)

The following table gives guidance on the functionality of the software tool.

Annexes

General instructions

Save	The software will always automatically save your changes as you switch between the input screens. To make a copy of the H1 software tool and save it under a different name you need to copy and paste the H1 software tool within Windows Explorer.
Print preview	You can preview any page before printing it off. To preview a page select print preview from the File menu on the menu bar.
Print	You can print a selection of pages by clicking on the print button on the menu bar or selecting print from the File menu. This will automatically print off the page that currently appears on your screen.
Import	New facility. Upload a previous Software Tool data file to save time in data re-entry.

Working with the database

Help	Click on the yellow "?" button in the menu bar next to the print button. This will bring up a help window, which you can move to a convenient position on the screen, by clicking and dragging. It is advised to keep the help window open while working through the edit screens of the software. The Help window includes two tabs, one for help specific to the page you are currently working on and the other for help specific to the edit box your cursor is currently placed in. The help messages will update automatically as you tab through the various input boxes and change input screen. You can close the help window at any time by clicking on the cross in the top right hand corner of the help window.
Edit screens	Generally each edit screen will display the following: <ol style="list-style-type: none"> 1. Header bar → Title of edit screen followed, where applicable, by the name of the option and release point currently selected; 2. General menu bar → includes print feature in the File menu; 3. H1 software tool menu bar → includes print button, help button, navigator buttons to switch between edit screens, "Go to" drop-down menu, where applicable "Option" drop-down menu and "Release point" drop-down menu; 4. Edit screen header row, displaying module number and title; 5. Basic edit screen-specific input instructions; 6. Row displaying the titles for the edit boxes; 7. Row displaying units for the edit boxes; 8. Row displaying data examples for the edit boxes; 9. Edit boxes; 10. Where applicable "Add" / "Delete" buttons to add or delete inventory lines; 11. Where applicable comments box.
Entering data	When you are entering data into the H1 software tool, it is advised to use the tab key on your keyboard to jump between data edit boxes. By hitting the shift and the tab key on your keyboard simultaneously you can jump backwards in the edit boxes. Alternatively you can use your mouse pointer to place the cursor in the required edit box.
Go to	A quick way to jump between input screens is to select the required input screen from the "Go to" drop down menu, which is displayed in the menu bar of each input page.
Options and release points	The very top header bar on your edit screen will always indicate to you which option / release point you are currently entering data for. If applicable, you can select between different options and release points from the drop down menus displayed to the right of the "Go to" drop down menu
Adding and deleting inventory lines	When you first visit an edit screen, generally no inventory lines will display. You can add or delete an inventory line by clicking on the "Add" / "Delete" buttons displayed in the bottom left hand corner of the edit screen.
Units	Always ensure that you enter your data in the correct units, i.e. the units displayed above the edit boxes.

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