

www.defra.gov.uk

LA-IPPC RISK METHOD

APRIL 2005 (Updated July 2013)

Department for Environment, Food and Rural Affairs
Nobel House
17 Smith Square
London SW1P 3JR
Telephone 020 7238 6000
Website: www.defra.gov.uk

© Crown copyright 2007

Copyright in the typographical arrangement and design rests with the Crown.

This publication (excluding the Royal Arms and departmental logos) may be re-used free of charge in any format or medium for research for non-commercial purposes, private study or for internal circulation within an organisation. This is subject to it being re-used accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title of the publication specified.

For any other use of this material please apply for a Click-Use Licence for Public Sector Information (PSI) or core material at:

<http://www.opsi.gov.uk/click-use/psi-licence-information/index.htm>

or by writing to:

Office of Public Sector Information
Information Policy Team
St Clements House
2-16 Colegate
Norwich NR3 1BQ

Fax: 01603 723000

Email: licensing@cabinet-office.x.gsi.gov.uk

Information about this publication and copies are available from:

Local Authority Pollution Policy Team
Atmospheric Quality and Industrial Pollution Programme
Defra
Zone 5F Ergon House
17 Smith Square
SW1P 3JR
Tel; 020 7238 1692
Email: Control.pollution@defra.gsi.gov.uk

This document is available on the Defra website at

<http://www.defra.gov.uk/environment/ppc/localauth/fees-risk/risk.htm>

Published by the Department for Environment, Food and Rural Affairs

LA-IPPC RISK METHOD

Introduction	pages 1 - 2
Environmental impact components 1-4	pages 3 - 7
Operator performance appraisal components 5-7	pages 8 - 11
Overall scoring and determining regulatory effort	pages 12- 13
Classification of activities by Advisory Panel on Risk Ranking	pages 14 - 15
Score sheet	pages 16 - 19

A1.1 Introduction

A1.1.1 Overview of the Risk Assessment Method

This risk assessment method is intended for use by local authorities in determining the relative level of risk associated with activities regulated under the Local Authority Integrated Pollution Prevention and Control (LA-IPPC) regimes. This method also applies to Small Waste Incineration Plant regulated under Schedule 7/7A to the Environmental Permitting (England and Wales) (Amendment) Regulations 2013. The method assigns a level of proposed 'regulatory effort' to individual activities (high, medium or low) according to their relative risks. The method relates to effort expended in regulating activities once they have been permitted (i.e. what is covered by the *subsistence* element of the LA-IPPC fees and charges).

Risk assessment using this method is based upon both the nature of the activity and the way in which it is managed; it is divided into two parts:

1. **Environmental Impact Appraisal (EIA)**, which concerns the potential environmental impacts of an activity according to its type, level of upgrading to meet regulatory requirements, and its location.
2. **Operator Performance Appraisal (OPA)**, which relates to how well the operator manages the potential environmental impact of the activity.

Each of these aspects is evaluated by scoring the activity against a number of different components. These components are listed below, together with guidance on how they should be applied and their implications for regulatory planning. Where a component is not relevant, a score of zero should be awarded. An example score sheet is provided to record the scores for each activity¹.

¹ Each of the possible scoring options is given a unique scoring identifier. Thus, an activity falling into risk rating 'category 2' under component 1 and with highly sensitive receptors less than 100m away can be identified as 1-B, 3-A-x.

A1.1.2 Use of the Risk Assessment Method

Set out below is the proposed approach that local authorities should take in applying the risk assessment method and utilising the results in determining regulatory effort.

Step 1. Desk-based scoring of activities. All of the Part A2 activities under an authority's control should be scored using the risk assessment method, based on information held on file, together with officers' knowledge of the activities concerned. The output will be a series of scores for different attributes and allocation of the activity to a risk category, which is linked to the regulatory effort required by the activity.

Step 2. Use the score sheets during visits to selected installations. Where scheduled visits to installations are undertaken, the scoring should be used as a basis for discussion with operators. Where possible, a copy of the methodology and draft completed score sheet should be provided to the operator prior to the visit. The completed score sheet should be shown to the operator and the scores discussed with them, together with any action that could be taken to reduce their scores and risk category. It is envisaged that this should not add significantly to the length of the visit but should provide a focus for discussion.

Step 3. Use the scoring to determine regulatory effort. Section A1.4 provides guidance on how the results of the risk assessment method should normally be used in determining the level of resources to be devoted to the subsistence part of regulating each activity.

Step 4. Review scores on a regular basis. Scores for each activity should be reviewed on a regular basis, and at least annually. In particular, scores should be reviewed following visits, any changes to the permit, receipt of complaints or when enforcement action is taken.

A separate assessment should be carried out for every activity which attracts a separate subsistence charge. An installation may include one or more activities covered by this risk assessment method.

A1.2 Environmental Impact Appraisal

A1.2.1 Component 1: Inherent Environmental Impact Potential of Activity

This component of the methodology reflects the fact that certain *activity types* have inherently greater potential environmental impacts than others and may thus require greater regulatory effort.

The Advisory Panel on Risk Ranking (APRR) has rated the various activities, as defined by the relevant SG Note(s), into three categories according to their inherent environmental impact potential. The rating is provided in the Appendix to this method.

Table A1.1: Scoring for Component 1 -Inherent Environmental Impact Potential	
Risk Rating	Score Awarded
(A) Category 1	10
(B) Category 2	20
(C) Category 3	30

A1.2.2 Component 2: Progress with Upgrading

This component of the methodology assesses the extent to which an activity has been upgraded to comply with the BAT requirements set out in the LA-IPPC permit. Not only may activities that have not completed upgrading pose a greater potential risk; they are also likely to require more regulatory effort in monitoring progress with the upgrading. Conversely, where activities exceed current BAT requirements they will pose reduced risks and may require less regulatory effort.

There are four possible classifications for scoring of activities:

- upgrading to meet the requirements of the permit is not yet complete, due to the Guidance Note deadline not yet having been reached;
- upgrading is not yet complete for other reasons, such as variations to the installation and the Guidance Note deadline has passed;
- upgrading is complete and the installation meets all of the current applicable BAT requirements; or
- emissions control not only meets current BAT requirements but goes beyond those requirements, resulting in lower emissions (for example, where improved emissions arrestment plant has been adopted voluntarily in installations already meeting BAT requirements or where Sector Guidance Note requirements are met over a year before the due date).

The nature and extent of upgrading required, or the degree to which BAT is exceeded, may vary considerably amongst activities. However, to ensure objectivity and consistency, the same scores should be awarded on regardless of the magnitude these factors. Past failure to complete upgrading within the required time should not be included in this Component.

Status of Upgrading	Score
(A) Upgrading not complete but deadline for meeting requirements of upgrading programme from SG note has not yet been reached	5
(B) Upgrading not yet complete and deadline for meeting requirements of outstanding upgrading programme from SG note has passed	10
(C) Upgrading complete and meets BAT requirements	0
(D) Emissions control exceeds BAT requirements	-10
(E) Improvement programme not submitted within 6 months of the issue of the permit or such a longer period as may be achieved in the relevant individual period	5

A1.2.3 Component 3: Sensitivity and Proximity of Receptors

This component assesses the extent to which any ‘receptors’ in the vicinity of an activity could be impacted by emissions from the activity. This will be determined by the sensitivity of the receptors in question (their number or the particular importance attached to them) and also by their proximity to the activity. This component is not intended to reflect the nuisance potential of an activity, and thus the potential for complaints (this is included under the ‘Compliance Assessment’ component below), but rather the potential for *physical* harm to the receptors in question.

The sensitivity of receptors is classified as high, medium or low:

- **high** - schools, residential areas, hospitals, designated environmental areas (e.g. SSSIs);
- **medium** - offices, isolated residences, major roads, footpaths/cycle paths, agricultural land; and
- **low** - public open space, minor roads, industrial areas, car parks, derelict land.

The distances used to determine proximity are based upon the distances up to which statutory consultation is required where SSSIs are near to A2 installations (based on AQ17(03)). Whilst in practice the distances at which different receptors are affected will vary according to the receptor and the pollutant in question, these standard distances are used in order to assure simplicity and consistency in application of the method.

Scores are awarded according to a combination of the sensitivity of receptors and their proximity to the emission source. The highest possible score is awarded, which may not necessarily be the score for the most sensitive receptor. For example, where there is a high sensitivity receptor 300m away and a medium sensitivity receptor 150m away, the respective scores are 5 and 10 and the latter is the score awarded.

Table A1.3: Scoring for Component 3 - Sensitivity and Proximity of Receptors			
	Sensitivity of Receptors		
Proximity to Emission Source	(x) High	(y) Medium	(z) Low
(A) < 100m	20	12	5
(B) 100 - 250m	12	10	3
(C) 250 - 500m	5	3	1
(D) >500m	0	0	0

Note: Distances should be measured from the installation itself, rather than the site boundary. In the case of incineration (not cremation) distances from the installation should be multiplied by a factor of 4.

Mobile plant. Some mobile plant tends to be operated in fixed locations and can therefore be rated as above. For the remainder ('genuinely' mobile plant), there are two main typical locations: either those normally operated in quarry-based situations or those normally operated on demolition and construction sites. We recommend that authorities should, unless more specific knowledge is available, assume a score of 5 for quarry-based 'genuinely' mobile plant; and should assume a score of 10 – to reflect the higher likelihood of proximity to sensitive receptors in built-up areas – for demolition/construction-related plant. It is additionally recognised that authorities may wish to inspect any plant newly operating in their district, so plant which moves a good deal may be subject to more frequent inspection, although the individual visits may not amount to a full inspection.

A1.2.4 Component 4: Other Targets

An additional 10 points should be scored if there are particular pollution problems relating to emissions to air, water, land and/or other relevant environmental considerations, in the local area to which the activity is a potential contributor. Such examples may include where an Air Quality Management Area or a Ground water Protection Zone has been established for a pollutant that is emitted from the activity in question.

	Score
(A) Other pollution problems in the local area to which activity is a potential contributor	10
(B) No such pollution problems	0

A1.3 Operator Performance Appraisal

A1.3.1 Component 5: Compliance Assessment

This section relates to any incidence of non-compliance that has occurred in the twelve months immediately preceding the assessment or review of the assessment. Compliance is assessed in terms of individual incidents; a single incident that led to a number of justified complaints should be scored as being one incident². For each incident, a score is awarded according to the level of regulatory action required. If there has been no non-compliance, a score of zero is awarded.

For example, a hypothetical activity received three justified complaints on three separate occasions around eight months ago from local residents. The emissions leading to the justified complaints were caused by repeated failures of a bag filter, which was remedied by the operator replacing the filter bags. The activity also received an enforcement notice nine months ago in relation to a failure to record emissions in the log book. The score would be 30 points for the justified complaints and 15 points for the enforcement notice, giving a total of 45 points.

- The maximum possible score under normal operating conditions is 55* points; for example, a score of 55 points will be awarded even where there have been more than ten incidents leading to justified complaints. This is to ensure that scores for non-compliance do not distort the overall scores.
* *Maximum rises to 80 only if compliance assessment condition F is breached*
- Only pollution related incidents should be included under this component.
- All incidents that have occurred within the twelve months immediately preceding the assessment or review of the assessment should be included.
- Where a justified complaint has been received but no incident leading to non-compliance has occurred, no score should be awarded. The operator should not be penalised under this component if they are in compliance with the permit and the general/residual BAT condition.

Scale of Non-Compliance	Score
(A) Incident leading to justified complaint but no breach of any specific permit condition or of the general/residual BAT condition	0 points
(B) Incident leading to a justified complaint*	10 per incident
(C) Breach of permit not leading to formal action	10 per incident
(D) Incident leading to formal caution, Enforcement Notice or prosecution	15 per incident
(E) Incident leading to a Prohibition Notice or Suspension Notice	20 per incident

² For example, where the same instance results in (B) an incident leading to a justified complaint and (C) is a breach of a permit not leading to a formal action, then the correct way to score is to record it only once under (C).

Total	(Max. 55)
Where Facility has been on Reduced Charges due to Mothballing or Reduced Operating Levels	
(F) Failure to notify the regulator of restart or increase in level of operation to above the threshold requiring a permit at the installation in accordance with acceptance letter	25
Total (Applies only where condition F has been breached)	80
* <i>Unjustified complaints may be e.g. those considered by the inspector to be unreasonable or which cannot be clearly linked to an incident at the installation.</i>	

A1.3.2 Component 6: Monitoring, Maintenance and Records

This component concerns the monitoring activity required to be undertaken by the operator, the maintenance programme for pollution control equipment (as specified in the permit), and the record keeping undertaken by the operator

Where any of the elements is not applicable, a score of zero should be awarded. Where the authority has chosen to undertake monitoring itself, operators should not be awarded an adverse score (unless they have failed to meet **their own** obligations).

Table A1.6: Scoring for Component 6 - Assessment of Monitoring, Maintenance and Records			
Criterion	Score		
	(x) Yes	(y) No	(z) N/A
(A) All monitoring undertaken to the degree required in the permit? ¹	0	10	0
(B) Monitoring requirements reduced because results over time show consistent compliance?	-5	0	0
(C) Activity operation modified where any problems indicated by monitoring?	0	10	0
(D) Fully documented and adhered to maintenance programme, in line with permit?	0	10	0
(E) Full documented records as required in permit available on-site?	0	5	0
(F) All relevant documents forwarded to the authority by date required? ¹	0	10	0
Total score	(-5 to 45)		
<i>¹ These aspects relate to the operator's performance within the <u>twelve months</u> immediately preceding the assessment or review of the assessment. Failure to monitor to the degree required or to forward documents on time more than twelve months ago should be excluded.</i>			

A1.3.3 Component 7: Management, Training and Responsibility

This component assesses whether documented procedures for implementing all aspects of the permit are in place, with responsibility allocated to particular staff members. The extent of documentation may vary, particularly for smaller installations.

Within IPPC, an 'effective' system of management is a key technique for ensuring that all appropriate pollution prevention and control techniques are delivered reliably and on an integrated basis.

Points are awarded where an effective environmental management system is in place. Guidance on what constitutes an effective management system is provided in the management section of each Sector Guidance note.

Table A1.7: Scoring for Component 7 - Assessment of Management, Training and Responsibility			
Criterion	Score		
	(x) Yes	(y) No	(z) N/A
(A) Documented procedures in place for implementing all aspects of the permit?	0	5	0
(B) Specific responsibilities assigned to individual staff for these procedures?	0	5	0
(C) Completion of individual responsibilities checked and recorded by the company?	0	5	0
(D) Documented training records for all staff with pollution control responsibilities?	0	5	0
(E) Trained staff on site throughout periods where potentially polluting activities take place?	0	5	0
(F) Is an 'effective' environmental management system in place?	-5	0	0
Total	(-5 to 25)		
<p><i>Note: In relation to the last criterion, when the relevant SG Note has been updated to include guidance on 'effective' management systems, activities should be scored zero (0) if such a system is in place and five (+5) if such a system is not in place.</i></p> <p><i>These revised scores are effective immediately for installations covered by a relevant published SG note</i></p>			

A1.4 Overall Scoring and Determining Regulatory Effort

A1.4.1 Overall Scoring

The overall score for an activity is obtained by summing the scores for each component.

The table below summarises the maximum possible scores under each of the components. The total maximum score is 175.

Table A1.8: Overall Maximum Scores		
Assessment Component	Minimum Score	Maximum Score
<i>Environmental Impact Appraisal</i>		
1. Inherent Environmental Impact Potential of Activity	10	30
2. Progress with Upgrading	-10	10
3. Sensitivity and Proximity of Receptors	0	20
4. Other Targets	0	10
<i>Operator Performance Appraisal</i>		
5. Compliance Assessment	0	55(80*)
6. Monitoring, Maintenance and Records	-5	45
7. Management, Training and Responsibility	-5	25
Total	-10	195 (220*)

* Higher maxima only apply if compliance assessment condition F is breached

A1.4.2 Determining the Level of Regulatory Effort

The result of the risk assessment can then be used to determine the appropriate level of 'regulatory effort' to be devoted to the *subsistence* aspects of an activity. The total score awarded places the activity in one of three *regulatory effort categories*, as follows:

1. An activity scoring less than 40 points is categorised as 'Low'.
2. An activity scoring between 40 and 80 is 'Medium'.
3. One scoring over 80 points is 'High'.

The table below gives an indication of the amount of regulatory effort that could be devoted to the activity in question, depending upon the regulatory effort category.

Table A1.9: Determination of Regulatory Effort from Scores		
Overall Score	Regulatory Effort	
	Category	Hours per Year
Less than 40	Low	35-55 (45)
40 to 80	Medium	50-70 (60)
Over 80	High	65-85 (75)

** Based on average regulatory time per activity estimated as 62 hours per year*

Regulatory effort refers to the time taken to regulate an activity that is dependent upon the activity's characteristics. This includes both time spent on inspections and time spent at the office preparing for inspections, writing reports and reviewing data supplied by operators. The average regulatory time spent per activity is estimated to vary from 50-70 hours per year.

Where an activity requires 'high' regulatory effort, this may imply longer and/or more frequent visits. Where 'low' regulatory effort is required, this may imply shorter and/or less frequent visits. Inspectors will need to judge for each activity how the estimated regulatory time can best be spent to maximise the efficiency of regulation. Note that it is not intended that application of the risk-based method should lead to a significant reduction in overall regulatory effort; rather effort should be prioritised towards those activities posing the greatest risk of environmental pollution.

Appendix: Classification of Activities by Advisory Panel on Risk Ranking (APRR)

Table A1.10, below, provides a ranking of activities based on their inherent environmental impact potential. Activity categories are placed in one of the following three categories, taking into account potential for contained and/or fugitive emissions, for health impacts, for environmental impacts and potential for 'offensiveness' impacts:

Category 1 Activities with an inherent environmental impact potential that was lower/below average when compared with other A2 activities.

Category 2 Activities with an inherent environmental impact potential that was medium/average when compared with other A2 activities.

Category 3 Activities with an inherent environmental impact potential that was higher/above average when compared with other A2 activities.

Table A1.10: Risk Rating of LA- IPPC Activities According to APRR

Guidance note - activity	Category
SG1(03) - Particleboard	3
SG2(03) - Glass	1
SG3(03) - Ferrous	3
SG4(03) - Non-ferrous	1 <ul style="list-style-type: none"> • no scrap melted, • sand moulds not used, • no process water emissions
	3 <ul style="list-style-type: none"> • all other installations
SG5(03) - Galvanising	2
SG6(03) - Surface treatment using organic solvents	2 <ul style="list-style-type: none"> • treatments other than organic solvents (e.g. acids, phosphates) prior to solvent activity, • abatement used,
	3 <ul style="list-style-type: none"> • CMRs (carcinogenic, mutagenic or reproductive toxins) used
	2 <ul style="list-style-type: none"> • all other installations
SG7(04) - Ceramics	2 <ul style="list-style-type: none"> • tableware

	1	<ul style="list-style-type: none"> heavy clay, kilns with aggregated net input less than 2 MW
SG8(04) - Rendering		3
SG9(0X) - Roadstone coating		2
SG10(0X) - Incineration (animal carcase)		3
Gas refining*		1
Rubber (tyre manufacture)*	1	<ul style="list-style-type: none"> carbon black not used
	2	<ul style="list-style-type: none"> all other installations
Cement and lime#		1
Slag grinding#		1

* No sector guidance note produced

Guidance for *Cement and lime* and *Slag grinding* is provided by the Environment Agency Sector Guidance Note IPPC S3.01 'Guidance for the Cement and Lime Sector' as published under EA S3.01.

Risk Assessment Method for LA-IPPC Score Sheet

Name of permitted installation _____ SG Note _____

Name of person with whom score sheet discussed _____ LA Reference _____

Inspector's Name _____ Date _____

Environmental Impact Appraisal

Component 1 – Inherent Environmental Impact Potential		
APRR Risk Rating Category	Possible Scores	Score Awarded
(A) Category 1	10	
(B) Category 2	20	
(C) Category 3	30	

Component 2 - Progress with Upgrading		
Status of Upgrading	Possible Scores	Score Awarded
(A) Upgrading not complete but deadline for meeting requirements of upgrading programme from SG note has not yet been reached	5	
(B) Upgrading not yet complete and deadline for meeting requirements of outstanding upgrading programme from SG note has passed	10	
(C) Upgrading complete and meets BAT Requirements	0	
(D) Emissions control exceeds BAT Requirements	-10	
(E) Improvement programme not submitted within 6 months of the issue of the permit	5	

Component 3 - Sensitivity and Proximity of Receptors				
<i>Proximity to Emission Source</i>	Sensitivity of Receptors			Score Awarded
	(x) High	(y) Med	(z) Low	
(A) < 100m	20	12	5	
(B) 100 - 250m	12	10	3	
(C) 250 - 500m	5	3	1	
(D) >500m	0	0	0	
<i>Note: Distances should be measured from the installation itself, rather than the site boundary.</i>				

Component 4 - Other Targets		
	Possible Scores	Score Awarded
(A) Other air pollution problems in the local area to which installation is a potential contributor	10	
(B) No such air pollution problems	0	

Total Score for Environmental Impact Appraisal	Range 0 to 70	
---	----------------------	--

Operator Performance Appraisal

Component 5 - Compliance Assessment		
Scale of Non-Compliance	Possible Scores	Scores Awarded
(A) Incident leading to justified complaint but no breach of specific permit condition or of general/residual BAT condition	0	
(B) Incident leading to a justified complaint*	10 per incident	
(C) Breach of permit not leading to formal action	10 per incident	
(D) Incident leading to formal caution, Enforcement Notice or prosecution	15 per incident	
(E) Incident leading to a Prohibition Notice	20 per incident	
Total score	(Max. 55)	
Where Facility has been on Reduced Charges due to Mothballing or Reduced Operating Levels		
(F) Failure to notify the regulator of restart or increase in level of operation to above the threshold requiring a permit at the installation in accordance with acceptance letter	25	
Total (Applies only where condition F has been breached)	(Max 80)	
* <i>Unjustified complaints may be e.g. those considered by the inspector to be unreasonable or which cannot be clearly linked to an incident at the installation.</i>		

Scoring for Component 6 - Assessment of Monitoring, Maintenance and Records				
Criterion	Possible Scores			Score Awarded
	(x) Yes	(y) No	(z) N/A	
(A) All monitoring undertaken to the degree required in the permit?	0	10	0	
(B) Monitoring requirements reduced because results over time show consistent compliance?	-5	0	0	
(C) Activity operation modified where any problems indicated by monitoring?	0	10	0	
(D) Fully documented and adhered to maintenance programme, in line with permit?	0	10	0	
(E) Full documented records as required in permit available on-site?	0	5	0	
(F) All relevant documents forwarded to the authority by date required?	0	10	0	

Total score	(-5 to 45)	
--------------------	-------------------	--

Component 7 - Assessment of Management, Training and Responsibility				
Criterion	Possible Scores			Scores Awarded
	(x) Yes	(y) No	(z) N/A	
(A) Documented procedures in place for implementing all aspects of the permit?	0	5	0	
(B) Specific responsibilities assigned to individual staff for these procedures?	0	5	0	
(C) Completion of individual responsibilities checked and recorded by the company?	0	5	0	
(D) Documented training records for all staff with pollution control responsibilities?	0	5	0	
(E) Trained staff on site throughout periods where potentially polluting activities take place?	0	5	0	
(F) Is an 'appropriate' environmental management system in place?	-5	0	0	
Total score	(-5 to 25)			

Total Score for Operator Performance Appraisal	Range -10 to 125(150)	
---	------------------------------	--

OVERALL SCORE FOR THE ACTIVITY	Range -10 to 195(220)	
REGULATORY EFFORT CATEGORY * high >80, medium 40-80 and low <40	LOW, MED, HIGH	