

The Revised RBME Risk Model 2022

for determining the Enforcement Category of a licensed facility relative to the risk it poses to the environment

December 2022

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Introduction

The EPA uses a Risk Based Methodology for Enforcement, or “RBME model”, for determining an Enforcement Category for a licensed facility relative to the risk it poses to the environment. In turn, the licensed facility’s Enforcement Category is used to calculate the annual Enforcement Charge which the licensee must pay to offset the costs of the EPA’s regulatory activities.

The revised RBME model came into effect in 2020. The main differences between the new methodology and the previous methodology are that

1. the ‘P’ Enforcement Category, which was previously applied to all licensed Intensive Agriculture operations, has been dropped, and

2. an additional Enforcement Category, 'D', has been added to cater for the relatively lower polluting potential of poultry units and any other licensed activities in other sectors that may have a similar risk profile.

This means that an intensive agriculture site will now be allocated to one of the standard Enforcement Categories.

Each of the major Enforcement Categories A - D are divided into minor subcategories of decreasing risk, e.g. A1, A2 and A3.

Calculating a Licensed Facility's Enforcement Category

The Licensed facility's Enforcement Category is based on a combination of a **Complexity** rating and a **Location** score, which generates the 'Major' category; this may then be adjusted further by reference to the facility's **Enforcement History** and **Accreditation Status**.

Methodology

- The **Complexity** rating reflects the complexity of the activity on site [See Appendix 1].
- The **Location** score, obtained from the EPA's location data (see <http://gis.epa.ie/SeeMaps>), is based on
 - the proximity of the nearest sensitive receptor,
 - the proximity of a protected area, if relevant, and
 - the type of aquifer, if present, and its vulnerability rating [See Appendix 2].
- These scores produce an initial Major Enforcement Category of **A, B, C or D** to each licensed activity.
- For existing licensees, a further assessment is then applied, based on indicators of the site's environmental performance and operator management:
 - the previous 12 months' **Enforcement History** and
 - the site's **Accreditation Status**.

The further assessment may result in lowering or raising the Major category to determine the **Final Enforcement Category**.

The scoring system is outlined following a description of the component parts of the RBME model.

Elements of the Methodology

Complexity

Complexity is a measure of risk based on the type of activities carried out on the site, with more complex operations resulting in a higher Enforcement Category. This is because, in general, we find that more regulatory effort is required to enforce the licence conditions of more complex sites.

Each scheduled activity has been assessed and assigned one of six Complexity grades, ranging from G0 (the least complex) to G6 (the most complex). Where the site carries out an activity which is not considered by the EPA to be typical of the sector (e.g. in terms of size or scale), the EPA will consider a reduction or increase in the assigned grade as appropriate.

Automatic defaults to **A1** (the highest Enforcement Category) for waste transfer stations and incinerators have been removed.

Location

The **Location** attribute uses data from the EPA's GIS databases [see <http://gis.epa.ie/SeeMaps>].

These databases contain a location in Irish Grid (Easting and Northing) for each site, which is normally taken from the licence application, and is often taken at the main gate of the site. We consider the location that the licensee supplied to be accurate unless demonstrated otherwise.

It is important to note that this is a Point location and not a "Polygon" (that is, a 2-dimensional area such as a site boundary), so distances to areas of interest are conventionally measured from that point rather than a site boundary. The bands for applying scores to distances from areas of interest take this convention into account.

The areas of interest used are:

- **Nearest sensitive receptor - nearest one of**
 - House
 - Education
 - Residential health (hospital, nursing home)
 - Note that population density is not accounted for, e.g. 1 house is treated in the same way as 100 houses.

- **Nearest protected site**
 - Protected Sites Datasets
 - Natural Heritage Area (NHA)
 - Special Areas of Conservation (SAC)Special Protection Areas (SPA)
 - These are Polygon datasets, so the nearest point on the protected site boundary to the facility is used

- **Groundwater**
 - The importance of and risk to the area’s groundwater is measured in two ways:
 - Aquifer type
 - Vulnerability

Enforcement History

Enforcement History is derived from selected Indicators of Environmental Performance (complaints, incidents, and non-compliances):

- All **Compliance Investigations** (CIs) over a 12-month period are included; CIs are given a higher weighting relative to other Enforcement History attributes;
- All **complaints**, up to a maximum of 20, that are linked to ‘Medium’ or ‘High’ CIs are counted, whether Open or Closed;
- All **incidents** which are scored at or above ‘Limited’ rating; and
- **Non-compliances** linked to the failure to notify the EPA of incidents receive a higher score than other non-compliances.

Environmental performance determines the minor subcategory (1 to 3) and hence the licensee’s ‘final’ risk rating. Environmental performance is assessed on the Enforcement History for the current year. Licensees are not penalised for prior year poor Enforcement history.

A poorly performing licensee is penalised by being assigned a higher-risk minor subcategory, whereas compliance with the licence is rewarded with a lower-risk minor sub- category, shown as follows:

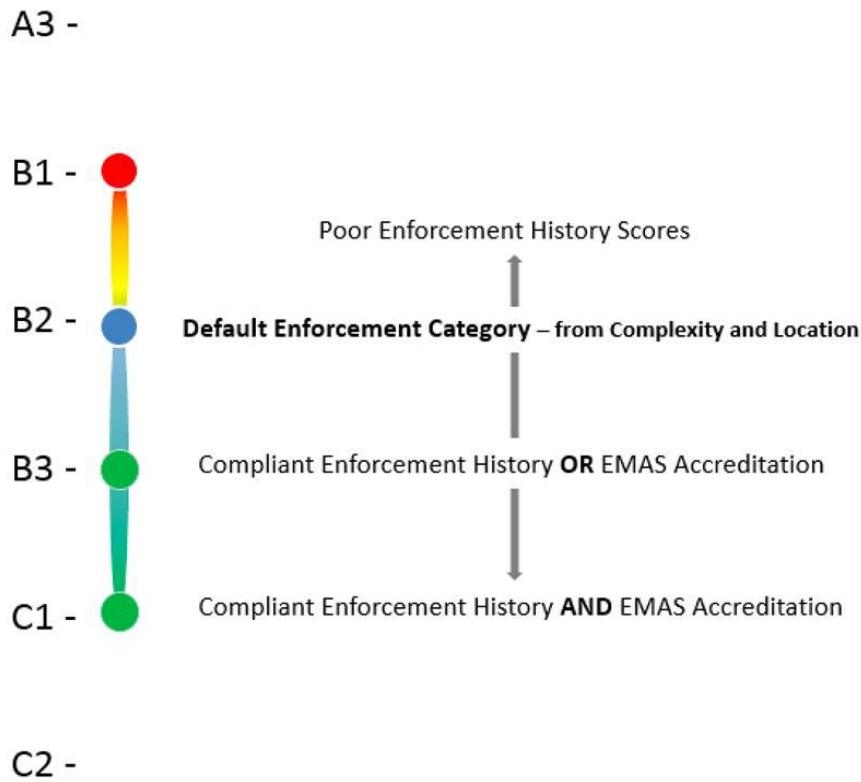


Figure 1 Range of Adjustment of Major Enforcement Category by Enforcement Performance

Operator Management

A credit for **Operator Management** is applied for sites that have EMAS Accreditation, by reducing the Enforcement Category by one Minor category.

Scoring of Attributes

The following schema sets out how the Scores and associated risk bandings for each of the attributes are determined.

Major Enforcement Category

An initial Major Enforcement Category score is calculated using the Complexity and Location information, which puts the site in one of the four Median Subcategories: A, B, C or D.

The Major score is calculated as follows:

- **Complexity**

G0 = -15

G1 = 2

G2 = 10

G3 = 20

G4 = 30

G5 = 40

G6 = 40

- **Location (sum of)**

- Nearest sensitive receptor

- <250m = 4

- <1000m = 3

- Nearest protected site

- <500m = 3

- <1000m = 1

- Ground Water - Aquifer type

- Regional = 3

- Local = 1

- Poor = 0

- Ground Water - Vulnerability

- Extreme = 2

- Extreme (rock near surface or Karst) = 2

- High = 1

- Moderate = 0

- Low = 0

These two scores are added together and applied to the following table to give the Default score:

Major Category	Combined Complexity + Location Score (greater than or equal)
A	35
B	20
C	0
D	-15

The Final Enforcement Category is then calculated from the Major Category, by applying any adjustments deriving from the assessment of the site's **Enforcement History** and **Accreditation Status**.

Scoring of the Enforcement History Attribute

The **Enforcement History** attribute is evaluated over the 12 Calendar month period preceding the assessment and provides for an adjustment of plus 1 or minus 1 Subcategory.

This means that a site will not move outside of its Major Category¹. For example, a site with a Major Category of B can only move to either B1 or B3 based on Enforcement History; it cannot move either upwards to an A or downwards to a C.

The RBME Enforcement History scoring system, which are intended to provide for an assessment of the overall compliance history of the site over the assessment period:

- All Compliance Investigations (CIs) over the 12-month assessment period are included and are given a higher weighting relative to other enforcement history attributes.
- Open CIs and Closed CIs are allocated the same scores for RBME purposes.

Compliance Investigations Score Allocations	
CI Rating*	Points
High	20 points
Medium	10 points
Low	3 points
Note: Only the top 3 highest scoring CIs are counted	

CIs can only be scored as medium/high for odour/noise if a non-compliant odour or noise related issue has been recorded by the OEE during the previous 12 weeks and/or if an action in the CI has not been addressed to the satisfaction of the Agency.

- All complaints linked to Medium or High CIs, irrespective of Open or Closed status, are counted, up to a ceiling of 20 complaints, over the 12 months of the assessment period.

Complaints Score Allocation

1 point per complaint*

- Complaints must be linked to a Medium or High CI to count towards the score; the maximum score for complaints is 20.

¹There is one rare exception to this; it is possible that a site with an excellent enforcement history who also has EMAS accreditation (see operator management below) could possibly drop one Major Category. Further details of this exception are discussed later

Operators of licensed facilities are required to notify the EPA on any occasion where there is a breach of a licence condition. The EPA receives a large number of incidents each year and these are categorised as Minor, Limited, Serious, Very Serious or Catastrophic. The vast majority of incidents reported to the EPA are minor. Points are assigned based on the category of the incident. All incidents which are scored at or above ‘Limited’ rating

Incidents Score Allocation	
Catastrophic	30 points
Very Serious	20 points
Serious	10 points
Limited	5 points
Minor	No score

The EPA issues a notification of non-compliance (NC) to a facility when a license condition is breached. Points are assigned based on the number of non-compliances recorded by the EPA. A greater weighting is applied if a non-compliance is issued for not notifying the EPA of an incident.

Non-Compliances Score allocation	
Non-Compliance with licence	1 point
NC for non-notification of an incident	5 points

Note that **Prosecutions** are no longer used as an Enforcement History attribute, as it was in the previous system. The recent review concluded that this was inappropriate, as the reason for the prosecution would, in most cases, already be accounted for in the site’s Enforcement History. The inclusion of an additional score for the prosecution was considered to be effectively a double penalty for the same set of breaches. Furthermore, the licensee was already penalised by way of the prosecution itself, which likely included a financial penalty.

This Table sets out the RBME Enforcement History Assessment threshold values against which the site’s Enforcement History score for the period of the assessment are evaluated.

Major Enforcement Category	RBME Enforcement History Assessment Threshold Scores (greater than or equal to)
A2	25
B2	15
C2	5
D2	5

How the Enforcement History threshold values are applied

With reference to the threshold values in the above Table:

- ✓ **An Enforcement History score between zero and two is considered to be compliant performance and will result in no change in the minor subcategory of 3.**
- ✓ **An Enforcement History score that is greater than two and the threshold for the Major risk category is assigned to a minor subcategory 2.**
- ✓ **An enforcement history score that is equal or above the relevant thresholds is considered poor performance and is assigned to the minor subcategory 1.**

Major Risk Rating	Minor Sub-Category 1	Minor Sub-Category 2	Minor Sub-Category 3
A	≥ 25	$3 \geq 24$	$0 \geq 2$
B	≥ 15	$3 \geq 14$	$0 \geq 2$
C	≥ 5	$3 \geq 4$	$0 \geq 2$
D	≥ 5	$3 \geq 4$	$0 \geq 2$

Adjustment for EMAS accreditation

The **Operator Management** attribute is simply applied by reducing the Major Enforcement Category by one category for sites that have EMAS accreditation.

This adjustment is applied IN ADDITION TO any adjustment on the basis of enforcement history, either up or down.

For example,

- a site with an interim category of A2 and EMAS accreditation will have a category adjustment down to A3.
- a site with an excellent enforcement history (a Zero Enforcement History score) who also has EMAS accreditation could possibly drop one Major category. For example, a site with a Major risk category of B2 could drop to B3 based on Enforcement History, and drop a further Major Risk category for EMAS accreditation giving it a final rating of C1.
 - The exception to this is a D3 site with EMAS accreditation – it's already at the lowest Enforcement Category; it is performing at the top of the RBME assessment system – well done!
- Conversely, a site with a poor enforcement history but which who also has EMAS accreditation could increase by one Sub-category on Enforcement History and then drop by one Sub-category for EMAS, leaving its Major risk rating unaltered.

The table below shows some examples for further illustration of how the RBME scoring system operates:

Major Enforcement Category	Enforcement History Score	Final Enforcement Category without EMAS	Final Enforcement Category with EMAS
A2	28	A1 ↑	A2 ↘
A2	19	A2 ←	A3 ↓
A2	0	A3 ↓	B1 ↓↓
B2	15	B1 ↑	B2 ↘
B2	9	B2 ←	B3 ↓
B2	2	B3 ↓	C1 ↓↓
C2	10	C1 ↑	C2 ↘
C2	3	C2 ←	C2 ←
C2	1	C3 ↓	D1 ↓↓
D2	10	D1 ↑	D2 ↘
D2	3	D2 ←	D3 ↓
D2	0	D3 ↓	D3 ←