

## Work Instruction (Appendix 7) Stage 1 and 2 Assessment of new PIR permissions under the Habitats Regulations

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**Purpose:** To provide a technical methodology for the assessment of new PIR permissions under the Habitats Directive.

**Scope:** The scope of this Work Instruction covers part of the four-stage assessment process which must be followed when assessing permissions issued under the Integrated Pollution Control Regulations 1991 SI 472 (as amended), the Pollution Prevention & Control Regulations 2000 SI 1973 under the Habitats Regulations. These are:

- Stage 1 - identification of relevant permissions
- Stage 2 – identification of applications that are likely to be significant

This document is primarily for use by Account Managers in the SPG and PIR Site Inspectors in Area Teams. The process may also involve staff in Fisheries, Recreation and Biodiversity, Water Quality and Waste Regulation teams.

**Related Documents:**

**Update**

[Documentation Relationship Diagram](#)  
[Policy Statement \(181\\_01\) - \(Chapter 1, section 1.1\)](#)  
[Procedure \(182\\_01\) – New and Existing Permissions \(Chapter 1, section 1.2-end\)](#)  
[Standard \(187\\_01\) – Application of Procedure to European Sites and Species \(Chapter 2\)](#)  
[Standard \(188\\_01\) – Application of Procedure to Environment Agency Permissions and Activities \(Chapter 3\)](#)  
[Work Instruction \(183\\_01\) – Taking an Application through the Regulations \(Chapter 4\)](#)  
[References \(Ch6\\_01\) - References for taking an application through the Procedures \(Chapter 6\)](#)  
[Work Instruction \(48\\_02\) - Resolving Disputes \(Appendix 14\)](#)

**Forms**

[Form for recording 'likely significant effect' investigations \(Appendix 11\)](#)  
[Form for recording 'appropriate assessment' investigations \(Appendix 12\)](#)  
[Form for submission of information to the Secretary of State / National Assembly Wales \(Appendix 20\)](#)

If you have any queries relating to the content of this document, or suggestions for improvements, please contact the Document Owner named above.

If any of the terms or acronyms used in this document is unfamiliar you might find the definition in the Glossary, on the Environment Agency's Easinet site:  
 Information Resources > [Glossary of Terms and Acronyms](#).

<b>Title</b>	Work Instruction: (Appendix 7) – Further Guidance on Applying the Habitats Regulations to Integrated Pollution Control (IPC), Pollution Prevention and Control (PPC)		
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## Introduction

This Work Instruction has been written for the Stage 1 and 2 assessment of new permissions with emissions to air issued under the Integrated Pollution Control Regulations 1991 SI 472 (as amended), the Pollution Prevention & Control Regulations 2000 SI 1973 (as amended), and substantial variations of an existing IPC authorisation, under the Habitats Regulations. The should be used in conjunction with this guidance. Specific [IPC/PPC](#) guidance is available to inform decisions made under the Habitats Assessment.

This work instruction is not to be used for the assessment of permissions issued under the COMAH Regulations 1999 SI 473, and existing permissions under the Review of Consents process. For these processes reference should be made to:

Work Instruction: Stage 3 & 4 review of existing PIR Permissions under the Habitats Regulations  
Work Instruction: Assessment of new Control of Major Accident Hazards (COMAH) permissions under the Habitats Regulations

If an IPC/PPC permit application involves a discharge to controlled waters, either directly or via a sewer, it must be assessed in accordance with the [Water Quality Work Instruction](#). If the PPC application is for a waste management activity, it must be assessed in accordance with the [Waste Management Work Instruction](#).

Guidance is still being issued by the Air Quality Technical Advisory Group (AQTAG). Prior to completing your assessment the [AQTAG Easinet](#) pages should be referenced to ensure that the best available information is being used.

This document will now use the term 'permissions' to cover IPC and PPC permits that are under consideration.

## 1.0 Habitats Regulations Assessment Stage 1: Identifying Relevant Permissions

### 1.1 General Principles

- 1.1.1 Stage 1 is an initial screen to filter out those permissions which by virtue of their nature or location could not affect the interest features of the European site.
- 1.1.2 It is essential that applicants are made aware that their application will be subject to the requirements of the Habitats Regulations as early as possible. Applicants should be informed that whilst the Environment Agency, as a competent authority, are responsible for carrying out the assessments and making decisions under the Regulations, the applicant will be required to provide all such information as may be reasonably required for those decisions to be made.
- 1.1.3 The Air Pollution Information System (APIS) ([www.apis.ac.uk](http://www.apis.ac.uk)) provides a comprehensive source of information on air pollution and the effects on habitats and species, as well as background levels of NO<sub>x</sub>, SO<sub>2</sub>, NH<sub>3</sub>, O<sub>3</sub>, N-deposition and acid-deposition.

### 1.2 Pre-application discussions

- 1.2.1 As part of the IPC/PPC permitting process, there may be pre-application discussions with a potential applicant. To enable the timely supply of relevant data by the applicant, a preliminary assessment will need to be made of whether the proposal is relevant and likely to have a significant effect on a European site. If this is the case, inform the applicant that English Nature (EN)/the Countryside Council of Wales (CCW) will be consulted on the assessment of the permission.
- 1.2.2 The pre-application discussions and preliminary assessment should be used to help identify the information that we will need the applicant to provide in order for the application to be

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determined. The applicant should be made aware of the information available on APIS when carrying out their assessment.

- 1.2.3 For this process reference should be made to [AQTAG04](#) Information requirements when undertaking a preliminary assessment of impacts on designated European Sites. Advice to PPC Applicants

### 1.3 Criteria for 'relevance'

- 1.3.1 Any application for a new permission, or substantial variation to an existing IPC permission will need consideration as to its relevance to a European Site(s) (including Ramsars). Emissions to air may have effects over both long and short ranges. For short-range effects of IPC/PPC permissions the following criteria should be used to identify applications that are relevant and require a Stage 2 assessment.

- Any application within the boundary of a European site
- Any centrally dispatched coal or oil-fired power station within 15km of a European site
- Any standard intensive agriculture installation (up to 10x PPC threshold) within 2km of a European site
- Any large intensive agriculture installation (10-20x PPC threshold) within 5km of a European site
- Any very large intensive agriculture installation (>20x PPC threshold) within 10km of a European site
- Any other application within 10km of a European site

- 1.3.2 Additional sector specific guidance on criteria for 'relevance' is available in the following guidance papers.

- [AQTAG 03](#) Guidance on identifying 'relevance' for the assessment under the Habitats Regulations for PPC chemicals applications
- [AQTAG 12](#) Guidance on identifying 'relevance' for assessment under the Habitats Regulations for PPC Food and Drink applications
- [AQTAG 13](#) Guidance on identifying 'relevance' for assessment under the Habitats Regulations for PPC Surface Treatment applications.
- [AQTAG 14](#) Guidance on identifying 'relevance' for assessment under the Habitats Regulations for PPC installations with combustion processes

- 1.3.3 The local Environment Agency Area may have agreed with EN/CCW site-specific screening criteria for easily identifying permissions that could not affect the European site. These agreed criteria should be used for the assessment. The details for any agreed criteria will be contained within the site dossier held by the Area Habitats Directive Co-ordinator (AHDC).

- 1.3.4 Long-range air pollution is a major component of acid and nitrogen deposition on European sites; hence the long-range effects of major combustion processes are relevant for an assessment beyond 15km. The deposition of pollutants from the top 100 combustion processes in the United Kingdom have been modelled using the FRAME long-range transport model for use in the Critical Loads Database. FRAME models the transport and deposition of sulphur dioxide and oxides of nitrogen, and also considers the transport of these pollutants and ammonia from other regulated and non-regulated sources. Further guidance on the use of Critical Loads Database is given in the Work Instruction: Stage 3 & 4 Assessment of New PIR Permissions.

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## 2.0 Habitats Regulations Assessment Stage 2: Assessing likely significant effect

### 2.1 General Principles

2.1.1 Stage 2 is a second screening exercise and basic risk assessment that will identify those applications that are likely to have a significant effect on the European site(s) either alone or in combination with other plans or projects and will require a Stage 3 Appropriate Assessment.

2.1.2 'Likely significant effect' in this context is 'any effect that may reasonably be predicted as a consequence of a plan or project that may affect the conservation objectives of the features for which a site was designated'<sup>1</sup>. The judgement of likely significant effect must relate to the interest features and their conservation objectives (if there are any) for which the site is designated. Judgements must be made on a case-by-case basis.

### 2.2 Process for assessment of application for new licences

2.2.1 The [Appendix 11](#) (HR01) form will need to be used throughout the Stage 2 process for all new permit applications which have been assessed as relevant in Stage 1. At the end of Stage 2 the form should be completed and sent to EN/CCW for consultation. The statutory timescale for this is 20 working days and, if a likely significant effect is identified then a further 20 working day consultation with EN/CCW will be necessary through the appropriate assessment. **It is therefore essential that the Stage 2 assessment is completed as early in the permitting process as possible.**

2.2.2 The Appendix 11 form is generated using the Habitats Directive database. Sections 1 to 7 of the Appendix 11 form, which are automatically completed in part by the database, should be checked and completed fully with the permit application and European site(s) details. Details of Ramsar sites and their features will need to be added manually. The role of generating the form and completing these sections of the form differs between Areas and the SPG. Within Area it may be divided between the Authorisations team and the Fisheries, Recreation and Biodiversity (FRB) – Area staff should contact the AHDC to find out what the routine practices are in the relevant Area. Within the SPG the role is split between the Technical Administration team, Account Officer and Technical Officer (Habitats).

2.2.3 To assess the likely significant effect, a risk assessment consisting of three elements should be completed. The elements are based on answering the following questions:

- I. Is there a potential hazard from the proposal, which could affect the interest features of the site, either directly or indirectly, alone and/or in combination? Are the features sensitive to this hazard?
- II. Is there a pathway such that the potential hazard could affect the interest features of the site alone and/or in combination. What is the exposure of the feature to this hazard?
- III. For each hazard is the potential scale or magnitude of any effect likely to be significant?

2.2.4 Potential hazards are listed in Table 1. This table is not comprehensive and local conditions/circumstances should always be considered. It is important to note that any emission is likely to result in several hazards. For example, emissions of sulphur dioxide could result in toxic contamination as well as acidification.

<sup>1</sup> [English Nature Habitats Regulations Guidance Note 3: The determination of likely significant effect under the Conservation \(Natural Habitats &c.\) Regulations 1994.](#)

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## 2.3 Element I

2.3.1 For Element I the risk-based approach identifies if the application represents a hazard to the interest feature present on the site.

- Is there a potential hazard from the proposal, which could affect the interest features of the site either directly or indirectly, alone or in combination?
- Are the features sensitive to the hazards?

2.3.2 Section 7 of the Appendix 11 form will list the interest features of the European site, section 9 will identify the hazards that the interest features are sensitive to, and that will require consideration. The H1 assessment submitted with the application will list the emissions from the process for consideration under Element 1. APIS should be referred to when determining the hazards associated with the emissions that are being assessed.

## 2.4 Element II

2.4.1 Consideration should be given to the following:

- Is there a pathway by which the potential hazard could affect the interest features of the site alone and/or in combination?
- What is the potential exposure of the feature to this hazard?

2.4.2 The method or pathway by which an impact could occur should be considered, taking into account the specific conditions at the site and whether the hazards identified in Element I could actually have an impact on the site.

2.4.3 Elements I and II have been assessed Section 9 of Appendix 11 should be completed.

2.4.4 Guidance on completing an in combination assessment is available in the [generic work instruction](#) and on the [AQTAG](#) Easinet site.

## 2.5 Element III

2.5.1 Consideration should be given to the following:

- For each hazard, is the potential scale or magnitude of any effect likely to be significant?

2.5.2 Element III should be based on the worst case scenario of the installation operating at the permitted limit. The assessment of significance needs to be made on a quantitative assessment of process contribution at the European site(s) with regard to:

- Critical Levels - threshold for direct effects of pollutant concentrations according to current knowledge. H1/APIS should be used to obtain the critical level for the pollutant for all of the sensitive interest features present at the European site(s)
- Critical Loads - a quantitative estimate of exposure to deposition of one or more pollutants, below which significant harmful effects on sensitive elements of the environment do not occur, according to present knowledge. Critical Loads should be obtained from APIS for all of the sensitive interest features present at the European site(s). Site specific critical loads might be available for the European site(s), and should be confirmed with the AHDC/EN/CCW. Further information on the derivation and setting of Critical Loads is given in [AQTAG07](#)
- Critical Loads are often given as a range, e.g. 10-20kg N/ha/yr for nutrient nitrogen. Local factors may modify feature sensitivity/response to a particular pollutant and hence may inform which part of the critical load range to apply to the European site in question. This should be discussed with the relevant EN/CCW staff. It is important to take site-specific information into account where it is available, however, the effect of such local factors is often poorly understood or not possible to quantify, where this is the case the lower Critical Load range must be used

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- Environmental Assessment Levels (EAL) - interim values to be used where Critical Levels are not available should be obtained from the H1 screening tool, ensuring that EALs for ecological receptors are used where available. APIS is also a source of alternative EALs for ecological receptors
- 2.5.3 The significance of the effect of an emission will depend on both the contribution of the process, and the ambient concentration/deposition to the relevant EAL, Critical Level or Critical Load for each substance. Any emission that is less than the significant release rate given in H1 would not generally be considered to have a significant effect on the habitat or feature. Where emissions are above the significant release rate, the process outlined below should be followed. APIS must
- 2.5.4 The process contribution (PC) should be predicted for each substance for both long- and short-term effects **within** the European site(s). Where more than one European site is being considered the assessment should be made against the most sensitive features. It might not be appropriate to only consider the closest European site if the features present have a low sensitivity to the hazards associated with the process.
- 2.5.5 The judgement of whether a permission is likely to have a significant effect should be made either 'alone or in combination with other plans and projects'. Both the alone and in combination assessment should be made in the context of the prevailing environmental influences on the site.
- 2.5.6 The Air Quality Monitoring and Assessment Unit (AQMAU) are developing an ammonia screening tool for use when assessing PPC applications for intensive agricultural installations. Guidance is also being written on the deposition of ammonia from intensive agriculture installations. Both are expected by the end of March 2006.

## 2.6 Long-term effects

- 2.6.1 Where the concentration within the emission footprint in any part of the European site(s) is less than 1% of the relevant long-term benchmark (EAL, Critical Level or Critical Load), the emission is **not likely to have a significant effect alone or in combination irrespective of the background levels**.
- 2.6.2 However, this 1% rule can not be applied to assessments on disturbance from noise, when appropriate the guidance given in [AQTAG09](#) (currently Environment Agency only guidance) should be followed.
- 2.6.3 Where the concentration within the emission footprint in any part of the European site(s) is greater than 1% of the relevant long-term benchmark (EAL, Critical Level or Critical Load), **do not automatically conclude 'cannot conclude no likely significant effect'**. Where the Process Contribution (PC) is greater than 1% of the relevant long-term benchmark, further consideration should be given to the PC in combination with background levels.
- 2.6.4 The predicted environmental concentration (PEC) is calculated by adding the predicted process contribution to the appropriate background concentration (obtained from APIS) and to any additional contribution which could be made from existing authorised processes currently operating below permitted limits. For existing installations being permitted under PPC any 'double counting' of emissions should be taken into consideration.
- 2.6.5 Where the PEC within the emission footprint in any part of the European site(s) is less than 70% of the relevant long-term benchmark (EAL, Critical Level or Critical Load), the emission is **not likely to have a significant effect**.
- 2.6.6 Where the PEC within the emission footprint in any part of the European site(s) is greater than 70% of the relevant long-term benchmark (EAL, Critical Level or Critical Load), the emission is **we cannot conclude that the emission is not likely to have a significant effect** at this Stage.

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## 2.7 Short-term effects

- 2.7.1 In the majority of cases, standards or benchmarks for the protection of vegetation or ecosystems are based on long-term exposures. However, short-term exposure to high concentrations can sometimes be significant, for example for hydrogen fluoride and ammonia (see APIS for further information).
- 2.7.2 In H1 the threshold for short-term significance is 10% of the EAL, Critical Level or Critical Load, this figure may therefore generally be used in assessments being mindful of exceptions.
- 2.7.3 Generally, where the concentration within the emission footprint in any part of the European site(s) is less than 10% of the relevant short-term benchmark (EAL, Critical Level or Critical Load), the emission is **not likely to have a significant effect alone or in combination**.
- 2.7.4 Where the concentration within the emission footprint in any part of the European site(s) is greater than 10% of the relevant short-term benchmark (EAL, Critical Level or Critical Load), we **cannot conclude that the emission is not likely to have a significant effect**.

## 2.8 In combination effects

2.8.1 Your assessment must consider the 'in combination' impact of all permissions, plans or projects that affect the European site(s). A work instruction and standard letter for consultation with other competent authorities is available ([Appendix 23](#)). The letter should be sent out in order to undertake the in combination assessment with their significant permissions and plans/projects. Within the SPG an appendix to the standard consultation letter should be used for relevant competent authorities that are being consulted under the PPC Regulations, and will be carried out by the Technical Administration team. This process may not be required if, for example:

- There are no common hazards between the application and other competent authorities' permissions and plans/projects
- Or
- The application is considered too small to have an in combination effect
- Or
- There is existing recent information from previous consultations (e.g. from the review of consents)

2.8.2 The assessment should also consider the combined effects of:

- Emissions from the process, especially VOCs, NO<sub>2</sub>, SO<sub>2</sub> and O<sub>3</sub> (toxic contamination) and NO<sub>2</sub> and NH<sub>3</sub> (nutrient enrichment)
- Background levels of the emissions from the process
- Other IPC/PPC permissions
- Other functions permissions

2.8.3 The [AQTAG](#) page should be referred to for guidance on in combination effects between aerial pollutants, and overlapping and discrete effects on the same feature, which is expected in March 2006. APIS must also be referred to when determining in combination effects, and should be used to obtain background levels of pollutants.

## 2.9 Concluding Stage 2

2.9.1 In order to make the final conclusion about likely significant effect the FRB/Technical Officer (Habitats) should be consulted. The information in the Appendix 11 form must clearly show how the decision regarding the effects on the sensitive features has been made, including the results of the H1 assessment and the details of any models used. Guidance on the minimum requirements for an Appendix 11 ([AQTAG02](#)) should be followed as best practice. This will ensure that the **impact assessment attached to the Appendix 11 form is in a format such**

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that EN/CCW Conservation Officers can understand the results without lengthy  
discussion and explanation.**

- 2.9.2 The completed Appendix 11 form is then sent to the relevant EN/CCW local office. If EN/CCW disagree with the Environment Agency's judgement of likely significant effect, a meeting may need to be arranged with the relevant functional staff, AHDC/Technical Officer (Habitats) and EN/CCW to try and resolve the matter. Where an agreement cannot be reached the dispute resolution procedure should be followed, as set out in [Appendix 14](#). Any comments returned by EN/CCW should be included in the decision document for the permit.
- 2.9.3 Where it can be concluded that the application is not likely to have a significant effect alone and/or in combination, the application can be determined following the Environment Agency's standard [IPC/PPC](#) policy and procedures. If the proposal is likely to have a significant effect alone/and in combination an appropriate assessment should be completed.
- 2.9.4 Guidance on completing an Appropriate Assessment is available in the Work Instruction: Stage 3 and 4 Assessments of New PIR Permissions.

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Table 1: IPC /PPC Sensitivity Matrix																																														
Hazard	SPA /Ramsar bird species groups									SAC/Ramsar species groups									SAC/ Ramsar habitat groups																											
	3.10 Birds of open sea and offshore rocks	3.9 Birds of estuarine habitats	3.8 Birds of coastal habitats	3.7 Farmland Birds	3.6 Birds of lowland freshwaters & their margins	3.5 Birds of lowland dry grassland	3.4 Birds of lowland wet grassland	3.3 Birds of lowland heaths & breccks	3.2 Birds of woodland & scrub	3.1 Birds of uplands	2.12 Marine mammals	2.11 Coastal plants	2.10 Amphibia	2.9 Mammals of riverine habitats	2.8 Mammals wooded habitats	2.7 Invertebrates of wooded habitats	2.6 Non-migratory fish and invertebrates of rivers	2.5 Anadromous fish	2.4 * Liverworts	2.3Vascular plants, grassland	2.2 Vascular plants, lower plants and invertebrates, wet habitats	2.1 Vascular plants of aquatic habitats	1.13 Submerged marine habitats	1.12 Estuarine and intertidal habitats	1.11 * Coastal habitats sensitive to abstraction	1.10 * Coastal habitats	1.9 * Upland	1.8 * Dry heathland habitats	1.7 * Dry Grassland	1.6 * Dry woodlands	1.5 *Standing waters not acidification sensitive	1.4 * Standing Waters acidification sensitive	1.3 Riverine habitats	1.2 * Bogs and wet habitats, acidification sensitive	1.1 * Fens and wet habitats not acidification sensitive											
Toxic contamination	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3							
Nutrient enrichment		3	3		3	3			3		3	3	3	3		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3						
Acidification					3			3	3			3	3	3		3	3	3	3	3	3	3					3	3					3	3	3	3										
Changes in salinity regime		3	3		3				3	3	3		3			3	3				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3					
Changes in thermal regime		3	3		3					3			3			3	3					3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3				
Habitat loss	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3				
Physical damage by IPC/PPC Processes	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3				
Smothering		3	3	3	3	3	3	3			3	3		3	3	3		3	3	3	3				3	3	3	3	3	3	3	3	3	3						3	3	3	3			
Turbidity	3	3	3		3						3	3				3	3				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3			
Siltation		3	3		3							3				3	3				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
Entrapment	3	3	3										3			3	3																													
Disturbance (noise)		3	3	3	3	3	3	3	3	3	3	3	3	3																																

**Note** This matrix is not comprehensive and is based on the judgement of staff in the Environment Agency, EN and CCW. 3 indicates that at least one of the features in the group is potentially sensitive to the hazard. There may be other hazards and sensitivities, which will vary according to circumstances.

Interest features have been grouped to facilitate sensitivity assessment. \* indicates that the group contains priority habitats or species. The features within each group are listed in Appendix 13. It is recommended that a more specific multi-functional sensitivity matrix be drawn up for each European site. Possible impacts associated with these hazards are addressed in this Work Instruction.