REVISED GUIDELINES
ON THE INFORMATION
TO BE CONTAINED IN
ENVIRONMENTAL IMPACT
STATEMENTS

DRAFT
SEPTEMBER 2015

Note re hyperlinks and footnotes:

The footnotes in this draft will be further edited and formatted. Text shown in ‘linked’ format will be actively linked within the document or to external content. Hyperlinks and footnotes will be reviewed and refined before these Guidelines are finalised.’
ENVIRONMENTAL PROTECTION AGENCY

The Environmental Protection Agency (EPA) is responsible for protecting and improving the environment as a valuable asset for the people of Ireland. We are committed to protecting people and the environment from the harmful effects of radiation and pollution.

The work of the EPA can be divided into three main areas:

Regulation: We implement effective regulation and environmental compliance systems to deliver good environmental outcomes and target those who don’t comply.

Knowledge: We provide high quality, targeted and timely environmental data, information and assessment to inform decision making at all levels.

Advocacy: We work with others to advocate for a clean, productive and well protected environment and for sustainable environmental behaviour.

Our Responsibilities

Licensing
We regulate the following activities so that they do not endanger human health or harm the environment:
- waste facilities (e.g. landfills, incinerators, waste transfer stations);
- large scale industrial activities (e.g. pharmaceutical, cement manufacturing, power plants);
- intensive agriculture (e.g. pigs, poultry);
- the contained use and controlled release of Genetically Modified Organisms (GMOs);
- sources of ionising radiation (e.g. x-ray and radiotherapy equipment, industrial sources);
- large petrol storage facilities;
- waste water discharges;
- dumping at sea activities.

National Environmental Enforcement
- Conducting an annual programme of audits and inspections of EPA licensed facilities.
- Overseeing local authorities’ environmental protection responsibilities.
- Supervising the supply of drinking water by public water suppliers.
- Working with local authorities and other agencies to tackle environmental crime by co-ordinating a national enforcement network, targeting offenders and overseeing remediation.
- Enforcing Regulations such as Waste Electrical and Electronic Equipment (WEEE), Restriction of Hazardous Substances (RoHS) and substances that deplete the ozone layer.
- Prosecuting those who flout environmental law and damage the environment.

Water Management
Monitoring and reporting on the quality of rivers, lakes, transitional and coastal waters of Ireland and groundwaters; measuring water levels and river flows.
Monitoring and reporting on Bathing Water Quality.

Monitoring, Analysing and Reporting on the Environment
- Monitoring air quality and implementing the EU Clean Air for Europe (CAFÉ) Directive.
- Independent reporting to inform decision making by national and local government (e.g. periodic reporting on the State of Ireland’s Environment and Indicator Reports).

Regulating Ireland’s Greenhouse Gas Emissions
- Preparing Ireland’s greenhouse gas inventories and projections.
- Implementing the Emissions Trading Directive, for over 100 of the largest producers of carbon dioxide in Ireland.

Environmental Research and Development
- Funding environmental research to identify pressures, inform policy and provide solutions in the areas of climate, water and sustainability.

Strategic Environmental Assessment
- Assessing the impact of proposed plans and programmes on the Irish environment (e.g. major development plans).

Radiological Protection
- Monitoring radiation levels, assessing exposure of people in Ireland to ionising radiation.
- Assisting in developing national plans for emergencies arising from nuclear accidents.
- Monitoring developments abroad relating to nuclear installations and radiological safety.
- Providing, or overseeing the provision of, specialist radiation protection services.

Guidance, Accessible Information and Education
- Providing advice and guidance to industry and the public on environmental and radiological protection topics.
- Providing timely and easily accessible environmental information to encourage public participation in environmental decision-making (e.g. My Local Environment, Radon Maps).
- Advising Government on matters relating to radiological safety and emergency response.
- Developing a National Hazardous Waste Management Plan to prevent and manage hazardous waste.

Awareness Raising and Behavioural Change
- Generating greater environmental awareness and influencing positive behavioural change by supporting businesses, communities and householders to become more resource efficient.
- Promoting radon testing in homes and workplaces and encouraging remediation where necessary.

Management and structure of the EPA
The EPA is managed by a full time Board, consisting of a Director General and five Directors. The work is carried out across five Offices:
- Office of Climate, Licensing and Resource Use
- Office of Environmental Enforcement
- Office of Environmental Assessment
- Office of Radiological Protection
- Office of Communications and Corporate Services

The EPA is assisted by an Advisory Committee of twelve members who meet regularly to discuss issues of concern and provide advice to the Board.
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- To be included during final revisions. -
1. INTRODUCTION

1.1 INTRODUCTION

The Environmental Protection Agency is required by the EPA Act under which it was established to “prepare Guidelines on information to be contained in environmental impact statements”\(^1\).

The Act goes on to state that:

“Regard shall be had, in the preparation of an environmental impact statement in respect of development to which this section applies”\(^2\) to these Guidelines and “A competent authority\(^3\) to which an environmental impact statement is submitted in respect of development to which this section applies shall, in considering the said statement, have regard”\(^4\) to these Guidelines.

In 1994\(^5\) when the first Draft Guidelines were produced, few could have imagined the central role that EIA would play in decision-making. Since that time, Environmental Impact Assessment (EIA) has taken up an increasingly significant part of the material examined at Oral Hearings before an Bord Pleanála (for the purposes of planning consent procedures) and has had a high rate of appearance in European Court of Justice proceedings - while an increasing number of Judicial Reviews\(^6\) seek to contest the adequacy of the EIA process for projects. EIA has also taken up an increasing role in relation to other consent processes such as Waste Licensing, Forestry, Agriculture and Industrial Emissions Licencing. This background points to the importance of having authoritative and agreed standards for the information that should be available to decision-makers as part of the overall EIA process.

Furthermore, at a time of ever-increasing emphasis – both social and legal\(^7\) – on the need for meaningful public participation in decisions relating to environmental issues, it is more important than ever to ensure that such information is available in a format that is clear, concise and accessible to the greatest number of people – and certainly to a wider audience than the professional, experts and officials who are involved in Environmental Impact Assessment.

The preparation of these updated Guidelines has involved extensive consultation. Participants in this consultation included government departments, national agencies, local government, non-governmental organisations, members of the public, developers and bodies representing various professional, industrial and sectoral groups. While many suggestions were made, there was a general consensus on the need to ensure that these Guidelines would be clear and concise to provide practical and specific guidance. Many consultees suggested that more use should be made of diagrams, graphs and tables – to provide easily understood step-by-step guidance.

This part – the Guidelines - concentrates on the principles and associated practice of preparing EISs. More specific information is provided in the accompanying Advice Notes for preparing Environmental Impact Statements including greater detail on individual specialist environmental topics and on the likely ranges of effects from different project types.

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1 Environmental Protection Agency Act, 1992 as amended, Section 72 (1)(a)
2 Environmental Protection Agency Act, 1992 as amended, Section 72 (3)(a)
3 The term “competent authority” means the Minister or State Authority to which an EIS is required to be submitted, ref Section 72 (8) of the EPA Act, 1992
4 Environmental Protection Agency Act, 1992 as amended, Section 72 (3)(b)
5 The first draft guidelines were produced in 1995 and they were updated in 2002
6 Case law on Judicial Reviews
The Guidelines also need to be useful and relevant over a period of time during which the relevant Directives, regulations, legal interpretations, specialist guidance and practice are liable change. The Guidelines take account of the revised EIA Directive (2014/52/EU) that has yet to be incorporated into Irish law.

The status of revised Directive 2014/52/EU and the differences between it and the current EIA Directive 2011/92/EU are described in Appendix II. The key changes in the Irish context include:

- Inclusion of demolition
- Additional screening procedures
- Addition of mandatory assessment of alternative
- Incorporation of mitigation and monitoring measures in consent
- Co-ordination of procedures under EIA and other Directives
- Specific inclusion of items to scope of EISs, where relevant, including use of natural resources, climate change effects (of, and on, a project), land take, biodiversity, the marine environment and risks to human health, cultural heritage or the environment (due for example to accidents or disasters).

Compliance with the revised Directive will require nothing less than is required under the existing Directive and will ensure that an EIS will meet the updated requirements, which Ireland is required to transpose into domestic legislation by April 2017.

The digital copy of these Guidelines contains interactive links to specific legal and other relevant information that is available elsewhere. A dedicated online webpage provides further onward links to relevant information, including information on relevant Directives and legislative material.

Following this Introduction, the document is organised into three parts to provide guidance on:

1. The role of EISs in the EIA process and fundamental considerations in the preparation of an EIS, including: consideration of alternatives, avoidance of effects, mitigation and monitoring, provision of relevant information, public participation and objectivity.
2. The key activities involved in the preparation of an EIS, namely screening, scoping, consultation, consideration of alternatives, establishing the baseline, impact assessment, impact mitigation and assessing residual impacts.

### 1.1 THE PURPOSE OF THE GUIDELINES

The Guidelines have been drafted with the primary objective of improving the quality of EISs with a view to facilitating compliance (with the Directive) and thereby contributing to a high level of protection for the environment through better informed decision-making processes. They are written with a focus on the obligations of developers who are preparing EISs, but are also intended to provide all parties in the EIA process including competent authorities and the public at large with a standard to measure whether EISs are fit for their purpose, – i.e. to provide adequate and relevant information to inform decisions about whether to grant or refuse permission.

The Guidelines emphasise the importance of the methods used in the preparation of an EIS because they contribute to its quality by ensuring that the information used is adequate and relevant.
The Guidelines will assist all parties who contribute to deciding what the focus of EISs should be (scoping) and will improve clarity on the adequacy of concise EISs that focus on likely significant effects. This should help to reduce the time, effort and expense required to prepare and evaluate EISs. More importantly it should make the overall process clearer and easier to understand and should make it easier for the public to participate.

Adherence to the Guidelines will result in better environmental protection by ensuring that the EIA process identifies effects as early and as accurately as possible and better informs decision-making processes. This will help ensure that projects fit better with their physical, biological and human surroundings and contribute to improved protection of the environment, which is the objective of the EIA Directive.

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**Article (32) of Directive 2014/52/EU**

Data and information included by the developer in the environmental impact assessment report, in accordance with Annex IV to Directive 2011/92/EU, should be complete and of sufficiently high quality.

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2. CONTEXT AND GENERAL APPROACH

2.1 INTRODUCTION

Before commencing it is important to clarify two terms. EIA stands for the process of Environmental Impact Assessment. The Environmental Impact Statement [EIS] is the document that the EIA process is based on. These two terms are described below, separately and in detail.

This section gives an overview of the EIA process and explains the role that an EIS\(^\text{10}\) plays in this (ref. Figure 2.2). These fundamental considerations can often serve as useful references when trying to deal with new or difficult when trying to deal with unfamiliar or challenging aspects of EIS preparation. It is worthwhile setting them out here before delving into the practical details of how to prepare an EIS.

As stated in section 1, the primary purpose of these Guidelines is to set out what information needs to be contained in EISs as well as the methods used in preparing them. However, as EISs are an integral part of the EIA process it is necessary to know about that process. This helps to understand where the information presented in an EIS comes from, why it is included and what the purpose of the EIS is.

2.2 WHAT IS AN ENVIRONMENTAL IMPACT STATEMENT?

An EIS is defined in the EIA regulations\(^\text{11}\) as:

“A statement of the effects, if any, which proposed development, if carried out, would have on the environment”.

This EIS is prepared by the developer and is submitted to a competent authority (CA) as part of a consent process. The CA uses the information provided to assess the environmental effects of the project and determine if consent should be granted.

The EIS consists of a systematic analysis and assessment of a proposed project in relation to the receiving environment. This is carried out at a stage in the design process where changes can still be made to avoid adverse effects. This process can also be used by stakeholders and affected parties during the design process to evaluate the acceptability of the project and its effects. This often results in the modification of the project to avoid or reduce effects through redesign.

The EIA Directive\(^\text{12}\) describes what an EIS is to contain as follows:

“the developer shall include at least:

a) a description of the project comprising information on the site, design, size and other relevant features of the project;

b) a description of the likely significant effects of the project on the environment;

c) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;

d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;

e) a non-technical summary of the information referred to in points (a) to (d); and

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\(^\text{10}\) The revised EIA Directive uses the term environmental impact assessment report rather than environmental impact statement. For the purposes of these guidelines the term of environmental impact statement (EIS) is used as this is the term used in the current regulations and is the term in common use for this kind of report. If the term is changed in any future change to the regulations then where the guidelines refer to an environmental impact statement or EIS, this can be taken to be the same as an environmental impact assessment report.

\(^\text{11}\) S.I. No 349 of 89 (Art. 3 (1)

\(^\text{12}\) Article (5) 1 of Directive 2014/52/EU
f) any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.”

Clear, concise, unambiguous information is essential throughout an EIS. A systematic approach, standard descriptive methods and the use of replicable assessment techniques and standardised impact descriptions contribute to ensuring that all likely significant effects are adequately considered and clearly communicated.

The revised EIA Directive uses the term environmental impact assessment report rather than environmental impact statement. For the purposes of these Guidelines the term of environmental impact statement (EIS) is used as this is the term used in the current regulations and is the term in common use for this kind of report. If any future change to the regulations alters the wording then where the Guidelines refer to an environmental impact statement or EIS, this can be taken to be the same as an environmental impact assessment report.

2.3 THE RELATIONSHIP BETWEEN AN EIS AND THE EIA PROCESS

EIA is a process for anticipating the effects on the environment caused by a project. For the purposes of these Guidelines, the term project is used to encompass the terms development, works and activity, as used in the relevant regulations.

Where significant effects are identified, these can then be avoided or reduced during the design process. The process can also contribute to improving environmental protection by identifying improvements – as well as mitigation measures. EIA is defined in the Directive as follows:

“environmental impact assessment” means a process consisting of:

i) the preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);

ii) the carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;

iii) the examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;

iv) the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and

v) the integration of the competent authority’s reasoned conclusion into any of the decisions referred to in Article 8a.”

Figures 2.1 and 2.2 illustrate how EIA is a systematic analysis of the proposed project in relation to the existing environment during a consent process.

EIA usually commences at the project design stage where it is determined whether an EIS is required or not (screening). If one is required, then the scope of the study is determined (scoping), after which the EIS is prepared as part of the consent application.

Once the developer applies for consent, the CA examines the EIS, circulating copies to statutory consultees while also making it available to the public. The CA then makes its decision to refuse or grant permission or to seek additional information, having regard to the information contained in the EIS, among other factors.

The EIA can continue after the consent stage. Assessment of the implementation of mitigation and monitoring measures contained in the EIS can be examined. This can happen during the construction, operation and, where relevant, the decommissioning stages of a project.

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13 These are the terms used for projects which are subject to requirement for EISs under the Planning and Development, Foreshore and Industrial Emissions legislation (link these regulations references to). The term development has been adopted as this is used in the EPA Act which requires the preparation of these guidelines.

14 Article (1) (a) (g) of Directive 2014/52/EU
It is important to note that details of processes and associated roles, titles and terminology may vary. These Guidelines advise on general principles and methods only. All parties to the EIA need to take responsibility for being aware of requirements under relevant regulatory procedures.

EIA contributes the environmental basis for the decision-making process. It is integrated into consent processes. This helps to ensure that consent decisions are made in knowledge of the environmental consequences of the project. The consent decision usually refers to elements of an EIS. For example, mitigation of measures referred to in the EIS can be used as a basis for conditions attached to a grant of consent. Adverse effects identified in the EIS can also be used as reasons for a decision to refuse.

In addition to its own consideration of the information presented in the EIS, the CA takes account of other environmental information submitted by by the applicant, statutory bodies, and the public during the formal consent process. The information in the EIS is also used by other parties to evaluate the acceptability of the project and its effects and to inform their submissions to the CA.

### 2.1 Environmental Impact Statement

#### Basic EIS Structure and Processes

The diagram illustrates that preparation of an EIS is a process with a number of clear and distinct stages. The first stage consists of a compilation of facts – i.e. the description of the existing environment and the description of the proposed development. The second stage consists of predictions of likely effects – this may be carried out a few times as the design is improved to eliminate excessive adverse effects. The final stage consists of the assessment of the environmental effects as part of a consent process which may decide to grant, condition, refuse or see additional information.
2.2 Environmental Impact Statement
The Position of an EIS within the EIA Process

Figure 2.2 The Position of an EIS within the EIA Process
2.4 FUNDAMENTAL PRINCIPLES

EIA provides a system of sharing information about the environment so that problems can be foreseen and prevented during the design and consent stages. This protects the environment and informs decision-making.

The fundamental principles which should be followed when preparing an EIS are:

- Anticipating, avoiding and reducing significant effects
- Assessing and mitigating effects
- Maintaining objectivity
- Ensuring Clarity and Quality
- Providing relevant information to decision makers
- Facilitating better consultation.

2.4.1 ANTICIPATING, AVOIDING AND REDUCING SIGNIFICANT EFFECTS

The purpose of EIA is to anticipate and avoid adverse effects. Throughout the EIA process anticipation of effects is the most effective step in avoiding adverse effects.

Anticipation works best when applied in the earliest stages of a project. This involves forming a preliminary opinion, usually in the absence of complete data on the approximate magnitude, character duration and significance of the likely effects. Relevant experience and expertise are particularly helpful for early anticipation of effects. The use of relevant guidance material, such as the supporting material provided in these Guidelines, in the preparation of EISs, can also be helpful for this early anticipation of effects, particularly for those who do not have extensive experience or expertise.

Then, once effects are anticipated, potential ways to avoid them are explored. Impact avoidance is principally achieved by consideration of alternatives. Where significant adverse effects are identified then alternative options are identified and evaluated. The objective is to adopt the combination of options that presents the best balance between avoidance of adverse environmental effects and achievement of the objectives that drive the project.

Alternatives may be identified at many levels and stages during the evolution of a project, from project concepts and site locations, through site layouts, technologies or operational plans and on to mitigation and monitoring measures. The alternatives that are typically available for consideration at the earlier stages in the evolution of a project generally represent the greatest potential for avoidance of adverse effects.

At its most effective, avoidance of effects can lead to an EIS which predicts ‘no significant adverse effects’. To avoid misinterpretation of this statement it is very important for the EIS to provide transparent and objective evidence of the evaluation and decision making processes which led to the adoption or selection of the final project configuration. These can include avoidance and mitigation measures. Such evidence clearly highlights the considerations of environmental effects that influenced the evaluation of alternatives and the development of mitigation measures.

2.4.2 ASSESSING AND MITIGATING EFFECTS

Assessment during the project design typically involves a process of repeated steps involving design and re-design to try to get the best fit with a wide range of environmental factors. Each stage of the conception of the project is assessed, with questions such as ‘is this the best site/route?’; ‘is this the best way to build this?’ or ‘is this the appropriate technology’ asked from the beginning until the design is completed. These stages will usually need to take account of range of environmental issues – asking questions such as ‘is this effect on this receptor significant or not’.

The best form of mitigation involves changing the design to avoid the problem altogether – by re-siting or by selecting different technologies or processes. Mitigation can also be used to reduce unavoidable problems. This can require a dialogue between designers and competent experts.
throughout the design with the designers improving ('mitigating') the design in response to assessment by the specialists. The EIS, particularly the consideration of alternatives section, records the key outcomes of these explorations.

### 2.4.3 MAINTAINING OBJECTIVITY

Objectivity has two components. The first is derived from the rigour of the assessment and analysis – ensuring that replicable work is carried out using high quality scientific information using recognised methods that are presented in a fully transparent manner.

The second is to ensure that credibility of the EIS is not undermined by any perception of bias or subjectivity in assessments by experts appearing to lack appropriate competency, objectivity or independence.

### 2.4.4 ENSURING CLARITY AND QUALITY

Clear, concise, unambiguous communication is essential throughout an EIS. A systematic approach, standard descriptive methods and the use of replicable assessment techniques and standardised impact descriptions contribute to ensuring that all likely significant effects are adequately considered and clearly communicated.

Adherence to the process, structure and content set out in the Directive ensures a systematic approach that is transparently supported by evidence supplied by competent experts throughout. The structure of clearly separating data (descriptions of the existing environment and the project) from predictions (impacts and mitigation measures) provides the basis of the exercise of expert judgement by Competent Authorities in their assessment of the likely conformity of effects with standards and objectives.

### 2.4.5 PROVIDING RELEVANT INFORMATION TO DECISION MAKERS

An EIS is prepared before a consent decision is made. This enables the CA to reach a decision in the full knowledge of the project’s likely significant impacts on the environment, if any. Information should be relevant, complete and legally compliant\(^\text{15}\). It should also be appropriate to the requirements of the consent procedure and the scale of the project. The information should be systematically assessed and presented.

### 2.4.6 FACILITATING BETTER CONSULTATION

Good practice in preparing EISs involves clear and focussed consultation with various parties at key stages in the assessment process.

Statutory consultation requirements concern decisions by competent authorities taking account of feedback from public consultation along with observations and submissions from other authorities with specific environmental responsibilities.

Compliance with Aarhus requires that the structure, presentation and the non-technical summary of the EIS as well as the arrangements for public access all facilitate the dissemination of the information contained in the EIS. The core objective is to ensure that wider society is made as fully aware as possible of the likely environmental impacts of projects prior to the granting of consent.

Consultation is discussed in more detail in Section 2.6.

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2.5 COMPETENCY OF EXPERTS

The Directive\textsuperscript{16} requires that:

a) the developer shall ensure that the environmental impact assessment report is prepared by competent experts;

b) the competent authority shall ensure that it has, or has access as necessary to, sufficient expertise to examine the environmental impact assessment report;

The Directive does not offer a definition of what would be considered competent expertise. Guidance and/or regulation on this may emerge during the period of use of these guidelines. National courts may also decide on a definition over time. In the meantime it may be taken that the requirement for expertise on behalf of the developer and the CA is related to the significance, complexity and range of effects that an EIS needs to assess. This will be reflected by an appropriate combination of experience, expertise and knowledge. Such competence includes an understanding with the legal context of the decision-making process and may often require a range of experts to cover the full range of the complexity of a topic such as ecology – where the expertise of many disciplines intersect.

Experts involved in the preparation of environmental impact assessment reports should be qualified and competent. Sufficient expertise, in the relevant field of the project concerned, is required for the purpose of its examination by the competent authorities in order to ensure that the information provided by the developer is complete and of a high level of quality.

Inclusion of a list of experts who have contributed to an EIS, showing which topics they have covered and their qualifications, experience and any other relevant credentials at the beginning of an EIS facilitates an assessment of the competency in the team who have prepared an EIS.

2.6 FACILITATING BETTER CONSULTATION

Consultation is a key element of each stage of the EIA process. The requirement for consultation is included in the definition of EIA (see page 6) in the Directive and there are procedures for statutory consultation at various stages in the EIA process. These are detailed in the regulations\textsuperscript{17} and they include a provision for formal scoping consultation which is triggered when a developer makes a formal scoping request. This section concentrates on pre-application consultation that is carried out to inform the preparation of the EIS.

\textsuperscript{16} Directive 2014/52/EU

\textsuperscript{17} S.I. No. 349/1989 - European Communities (Environmental Impact Assessment) Regulations, 1989, as amended
Successful consultation when preparing an EIS is methodical, proactive, informative and focused. While it is generally best to commence consultation as early as possible, it is not obligatory during the preparation of an EIS and the extent to which it is carried out is decided by applicant and their team on a case by case basis.

Most consultation carried out for the preparation of the EIS takes place with the CA, other competent authorities and those parties that are most likely to be directly affected. Consultation by a developer with the wider public during preparation of an EIS tends to be used where the affected population may be very large and/or difficult to identify. To be of value, such consultation must have a sufficient time allocation and be expertly structured to ensure clarity and consistency. The non-technical summary of an EIS can be an effective tool in explaining the content of the EIS to the wider public and facilitating their involvement in the statutory consultation during the consent determination stage (ref section 4.5).

It is important to distinguish between EIA related consultation – which gathers information – and the exercise of canvassing for project support, which often accompanies applications for permission. Where a proposer carries out the latter type, they should keep it clearly separate from consultation for the EIS which should maintain an objective and factual approach.

The key stages at which consultation regarding the information to be contained in an EIS may be carried out are detailed in relevant sections later in this chapter.

2.6.1 STATUTORY CONSULTATION

During the statutory consent determination process, the CA is obliged to consult with other relevant prescribed bodies. Consultation with these authorities before formal submission for consent helps the applicant to pre-empt issues which may be raised at this stage and to address them beforehand.

As mentioned earlier in this section, statutory consultation provisions\(^9\) facilitate public engagement in the decision making process, particularly during the consent determination period.

TRANSBOUNDARY CONSULTATION

The Member States concerned shall enter into consultations regarding, inter alia, the potential transboundary effects of the project and the measures envisaged to reduce or eliminate such effects and shall agree on a reasonable time-frame for the duration of the consultation period.

Such consultations may be conducted through an appropriate joint body\(^{19}\). This will establish a consultation framework to consider and address these effects.

\(^{19}\) Article 1 (7) of Directive 2014/52/EU and Section 174 (1) (a) of the Planning and Development Act, 2000
3. PREPARING AN EIS

3.1 INTRODUCTION

This section provides guidance on how to carry out each of the stages of work that are required to prepare a compliant EIS.

The schematic below details the steps involved in the preparation of an EIS. The steps are largely sequential, but not necessarily consecutive and some elements may be carried out throughout. The first step, screening, is to determine if an EIS is required or not and that is discussed in the next section.
Environmental Impact Statement 
Contents in Sequence

1. Screening
   - Is an EIS required?
2. Scoping
   - What should it cover?
3. Consideration of Alternatives
4. Project Description
5. Baseline Description
6. Assessment of impacts
7. Mitigation & Monitoring

Environmental Factors
- Population and Human Health
- Biodiversity
- Land, Soils & Geology
- Water
- Air
- Climate
- Material Assets
- Cultural Heritage
- Landscape
- Interactions between the above factors

The information that must be included in an EIS is shown as seven steps in sequence in the diagram above. The environment is described under a number of specific headings that are shown on the right. The sequence and structure are very important to follow because it ensures an objective and systematic approach.

Figure 3.1 EIS Contents in Sequence
3.2 SCREENING

3.2.1 INTRODUCTION

The start of the EIA process involves making a decision about whether an EIS needs to be prepared or not. The decision-making process begins by examining the regulations and if this does not provide a clear answer then the nature and extent of the project, the site and the types of potential effects are examined. Only at the end of this process can a decision be made by a CA.

Figure 3.2 below provides a step-by-step guide of the main steps involved in screening.

The first step is to examine whether the proposed project is a type that is prescribed in the regulations\textsuperscript{20}. If a proposed project is not of a type that is included then there is no statutory requirement for it to be the subject of an EIS. However, this is an increasingly complex issue and should not be decided upon without a full consideration of the Directive’s ‘wide scope and broad purpose’\textsuperscript{21}. Projects at a first glance may not appear to come under Schedule but on closer examination when the processes are looked at, they may do so on account of factors such as the sensitivity or significance of the receiving environment etc. The EU document on Interpretation of definitions of project categories of annex I and II of the EIA Directive provides useful guidance on this.

The next screening step is to check if the project exceeds a specific threshold. Thresholds are set out in the regulations\textsuperscript{22}. The current list of thresholds from Schedule 5 of the Planning & Development Regulations is contained in the Advice Notes. The only types of projects to which thresholds do not apply are types that are considered to always be likely to have significant effects; a crude oil refinery for example.

Where a project is of a type that is listed in the regulations but does not meet or exceed the applicable threshold then the likelihood of the project having significant effects on the environment needs to be considered by reference to the criteria specified in lists 1, 2 and 3 in Table 3.1.

The project needs to be considered in its entirety for screening purposes. Dividing the project into separate parts so that each part is below an applicable threshold is to be avoided. This is considered to be project-splitting and is not compliant with the Directive\textsuperscript{23}.

Applications for project expansions should also be screened with regard to specified thresholds.

\textsuperscript{20} Projects including but not limited to those specified in The First Schedule of S.I. No. 349/1989 - European Communities (Environmental Impact Assessment) Regulations, 1989.

\textsuperscript{21} Interpretation of definitions of project categories of annex I and II of the EIA Directive


\textsuperscript{23} Ref Annex (2) Annex III 1 (a) and (b), 3 (g),
The CA is obliged to screen consent applications for consent for sub-threshold projects by reference to these criteria in table 3.1. Detailed guidance on this is given in Guidance for Consent Authorities regarding Sub-threshold Development\(^{24}\). While that guidance is intended for consent authorities, the same considerations are relevant to developers or any parties involved in the EIA process.

The screening procedure should ensure that an environmental impact assessment is only required for projects likely to have significant effects on the environment.

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\(^{24}\) Environmental Impact Assessment (EIA) Guidance for Consent Authorities regarding Sub-threshold Development, 2003 (note that the criteria are from previous directive – criteria from 2014/52 are given in the lists in this document (below))
3.2 Environmental Impact Statement Screening

- **START**
  - Is the development a type that requires an EIA?
  - **YES**
    - Is it of a type that requires a mandatory EIS?
      - **YES**
        - Is it above the Specified Threshold? See x.x.x
      - **NO**
    - **NO**
      - Is it a type of project that could lead to effects?
        - **YES**
          - **and / or**
            - Is it a sensitive location?
              - **NO**
                - Prepare any relevant consent documentation
              - **YES**
                - **and / or**
                  - Could the effects be significant?
                    - **NO**
                      - Prepare an Environmental Impact Statement
                    - **YES**
                      - See x.x.x
      - **NO**
    - **NO**
      - Prepare any relevant consent documentation
Projects are evaluated using the criteria set out below to determine whether in EIS is required.

### 1. CHARACTERISTICS OF PROJECTS

The characteristics of projects must be considered, with particular regard to:

a. the size and design of the whole project;
b. cumulation with other existing and/or approved projects;
c. the use of natural resources, in particular land, soil, water and biodiversity;
d. the production of waste;
e. pollution and nuisances;
f. the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge;
g. the risks to human health (for example due to water contamination or air pollution).

### 2. LOCATION OF PROJECTS

The environmental sensitivity of geographical areas likely to be affected by projects must be considered, with particular regard to:

a. the existing and approved land use;
b. the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;
c. the absorption capacity of the natural environment, paying particular attention to the following areas:
   (i) wetlands, riparian areas, river mouths;
   (ii) coastal zones and the marine environment;
   (iii) mountain and forest areas;
   (iv) nature reserves and parks;
   (v) areas classified or protected under national legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC;
   (vi) areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure;
   (vii) densely populated areas;
   (viii) landscapes and sites of historical, cultural or archaeological significance.

### 3. TYPE AND CHARACTERISTICS OF THE POTENTIAL IMPACT

The likely significant effects of projects on the environment must be considered in relation to criteria set out in points 1 and 2 of this Annex (above), with regard to the impact of the project on the factors specified in Figure 3.1, taking into account:

a. the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected);
b. the nature of the impact;
c. the transboundary nature of the impact;
d. the intensity and complexity of the impact;
e. the probability of the impact;
f. the expected onset, duration, frequency and reversibility of the impact;
g. the cumulation of the impact with the impact of other existing and/or approved projects;
h. the possibility of effectively reducing the impact.

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**Table 3.1 Criteria to determine whether Sub-Threshold Projects should be subject to an EIA**

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25 Population and Human Health, Biodiversity, Land & Soils, Water, Air, Climate, Material Assets, Cultural Heritage, Landscape and Interactions between these factors

3.2.2 CONSULTATION ON SCREENING

Where a developer wishes to consult with the CA about screening, then the Directive specifies the following as information to be provided by the developer:\(^\text{27}\):

1. “A description of the project, including in particular:
   a) a description of the physical characteristics of the whole project and, where relevant, of demolition works;
   b) a description of the location of the project, with particular regard to the environmental sensitivity of geographical areas likely to be affected.
2. A description of the aspects of the environment likely to be significantly affected by the project.
3. A description of any likely significant effects, to the extent of the information available on such effects, of the project on the environment resulting from:
   a) the expected residues and emissions and the production of waste, where relevant;
   b) the use of natural resources, in particular soil, land, water and biodiversity.

The criteria of Annex III (ref Table 3.1 above) shall be taken into account, where relevant, when compiling the information in accordance with points 1 to 3.”

The applicant can screen a project themselves or can consult with the CA to remove any uncertainty. If doing this, the authority may consult with other authorities with responsibility for environmental matters, may seek expert advice, may liaise with other consent authorities who have made decisions on similar projects or may refer to relevant guidance. In the case of projects on sites that are licenced by the EPA under the EPA Act\(^\text{28}\) and Waste Management Act\(^\text{29}\), the planning authority is obliged to consult with the EPA and the EPA must give its screening opinion.

When consulting at this stage, the applicant will often outline the reasons why they consider an EIS is not required rather than simply asking for an opinion without offering a preliminary opinion themselves. If they identify that significant effects are likely under some topics but that having regard to the prescribed screening criteria, these effects are insufficient to require an EIS, then they may suggest providing a separate report (or reports) on the affected topics.

If screening the project themselves the applicant may seek to informally consult with the CA and other relevant authorities. These other authorities may include those with statutory responsibility for environmental matters such as pollution control, nature protection, cultural heritage, water, waste and air, such as the EPA and the Department of the Environment, Community and Local Government. Authorities are not obliged to engage in informal consultation so, as mentioned above, it is generally best to present a reasoned opinion (Reasoned opinion (written statement from a competent expert as to why an EIS is or is not required)) rather than just asking if an EIS is required or not. This should make it more feasible for an authority that may be lacking in resources to give useful input.

\(\text{27}\) Annex II.A  
3.3 SCOPING

3.3.1 OVERVIEW

‘Scoping’ is a process of deciding what information should be contained in an EIS and what methods should be used to gather and assess that information. It is defined in the EC guidance\(^{30}\) as:

> ‘determining the content and extent of the matters which should be covered in the environmental information to be submitted in the EIS’

Scoping is done on a case-by-case basis as the significant issues for different projects are unlikely to ever be identical though there are fairly standard issues that a developer should consider for each project to establish whether they apply in specific cases. The Advice Notes contain guidance both on environmental topics and for principal project types.

Scoping, like all stages in the preparation of an EIS should be carried out in accordance with the specific requirements of current regulations (\textit{ref to webpage}). Detailed guidance on scoping can be found in many publications including the Advice Notes and various other documents which can be accessed through the web page. Published guidance is typically focussed on individual development sectors (e.g. infrastructural projects) or on specialist topics (e.g. geology) and reference to both types is generally beneficial.

The potential for likely significant effects throughout different phases of the proposed project, as relevant - from site investigations, construction, commissioning and operation to eventual decommissioning – are considered as far as possible at scoping stage – whether they would individually require consent or not. Scoping also considers the range of alternatives to be considered in an EIS.

The provision of detail at the Scoping Stage is the best way to obtain useful and specific responses from consultees and prescribed bodies.

Scoping is best carried out by personnel having direct or relevant prior experience of the factors involved, particularly knowledge of the characteristics of the project type and of the sensitivities likely to be present in the receiving environment.

In addition to the knowledge and expertise available within the applicant’s team, consultation can draw on a wider pool of available knowledge and expertise. The regulations provide for developers to formally request the CA’s opinion on the scope of an EIS\(^{31}\). This can be availed of for any project requiring an EIS.

\(^{30}\) EC Guidance

\(^{31}\) Article 5, paragraph 2 of Directive 2014/52 and to: regulations
3.3 Environmental Impact Statement Checklist for Assessors

3.3.2 ROLES OF PARTICIPANTS IN SCOPING

The scope of the assessment commonly emerges from a dialogue between some or all of the following:

- The applicant, design team and environmental experts who may propose an initial draft of the scope on the basis of their knowledge of the project, the site and the likely relevant issues
- The Competent Authority (CA) who will have extensive knowledge of the context and local issues and concerns as well as detailed knowledge of statutory requirements
Other Authorities, Agencies and NGOs who typically have a detailed understanding of a particular aspect of the environment that may be affected

The Public, either individually or in groups, who are likely to have either thematically specific or area specific concerns.

More information on the roles of all participants is given in the Advice Notes.

3.3.3 CONSULTATION ABOUT SCOPING

There can be considerable benefits in engaging in early consultation about the scope of an EIS to help to identify the relevant issues. This can be done formally under the regulations or informally. Section 3.3 above, which covers the topic of scoping, gives more detail on this including reference to the applicable regulations.

3.3.4 KEY SCOPING CRITERIA

All parties should be aware of the on-going need to keep the EIS as tightly focussed as possible. This focusses the effort and resources of all parties on the key significant issues. Scoping is usually guided by the following criteria:

- Use ‘Likely’ and ‘Significant’ as the principal criteria for determining what should be addressed and do not include issues that do not meet both of these criteria32. Any issues that do not pass this test can be omitted (scoped out) from further assessment. A section should be included in the EIS that describes the scoping process explaining why such issues have been scoped out and why they are not being considered further. All of the prescribed environmental factors33 should be listed in the scoping section of the EIS. None should be omitted without justification.
- Precedence - where EIAs for similar projects on similar sites or for other project proposals for the same site are available, these can be useful references.
- Interactions – assessors need to be vigilant for pathways – direct and indirect – that can magnify effects through the interaction or accumulation of effects – for instance the potential for cumulative significant effects to arise from multiple non-significant effects.

3.3.5 CONSIDERATION OF OTHER ASSESSMENTS

Scoping considers the extent to which other assessments at the same or higher level or of specific topics may address some types of effects adequately and appropriately.

Strategic Environmental Assessment (SEA) is a higher tier form of environmental assessment but instead of examining projects, SEA examines plans and programmes. It examines a similar range of issues to EIA but at a higher decision making level. These include higher level alternatives and effects of the plan or programme on environmental topics including for example, water quality, biodiversity, climatic factors and the landscape. SEA also considers measures to avoid, reduce or mitigate likely effects. The extent to which higher level considerations have already been assessed and so do not need to be assessed again should inform and be referred to in the EIA scoping process. This tends to reduce the range of cumulative effects that need to be considered in an EIS.

Scoping considers other projects or activities that are not included in the same consent application but which are closely related to the subject consent application and may be a direct result of it. These could include secondary projects such a power line or a road junction upgrade which may result in significant effects. (See also sections 3.5.8 and 3.7.11.)

Such considerations should allow the CA and the public to form an overall understanding of the likely effects – direct, indirect and cumulative - that will arise as a consequence of a decision to permit a project. Where uncertainty arises then the EIS needs to describe the ‘worst case’ of the accumulation of effects that could arise from these other projects. It is prudent to identify the full...
range of these other likely sources of potential effect at the initial scoping stage. This will ensure that major and reasonably foreseeable issues that could prevent the granting of permission by other agencies can be identified and an informed decision can be made about the risks to the project’s fundamental viability.

Assessments carried out to support separate consent requirements may include assessments for compliance under other EU Directives including the Industrial Emissions, Habitats, SEVESO, Waste Framework, Water Framework and Floods Directives. The EIS ideally should avoid duplication of assessment covered by these but should incorporate their key findings as appropriate. A biodiversity assessment for an EIS, for example, should not repeat the detailed assessment of potential effects on European sites\(^\text{34}\) contained in a \textit{Natura Impact Statement}\(^\text{35}\), but it should refer to the findings of that separate assessment. The scoping process considers other such assessments that apply to a development and reduces coverage of these issues in the EIS accordingly. This should be noted in the EIS so that it is clear to the reader why specific issues which may be likely to cause significant environmental effects have been scoped out.

\subsection*{3.3.6 SELECTION OF HEADINGS UNDER WHICH TO ARRANGE ISSUES}

As the relevant scoped-in issues are identified, it may add clarity to create sub-headings under which to include them in the EIS.

Here are examples of how topic headings may be addressed:

<table>
<thead>
<tr>
<th>Environmental Factor (per Directive)</th>
<th>Headings under which factors are addressed in sample EIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Assets</td>
<td>Roads &amp; Traffic</td>
</tr>
<tr>
<td></td>
<td>Built Services</td>
</tr>
<tr>
<td>Water</td>
<td>Water Supply</td>
</tr>
<tr>
<td></td>
<td>Surface Water</td>
</tr>
<tr>
<td></td>
<td>Waste Water</td>
</tr>
<tr>
<td>The Landscape</td>
<td>Visual Impact</td>
</tr>
<tr>
<td></td>
<td>Outdoor Amenity</td>
</tr>
</tbody>
</table>

Inclusion of a table like this is helpful to make it clear how each of the prescribed environmental factors have been addressed and to demonstrate compliance with the statutory requirements. Section 4 provides more information on the arrangement of the appropriate material in an EIS.

\subsection*{3.3.7 ONGOING SCOPING}

Scoping continues throughout the preparation of the EIS. The team working on the EIS, particularly the team leader(s), should maintain a flexible view of the scope throughout their work on the EIS, particularly but not exclusively during the earlier stages. If information or analysis that emerges after the initial scoping stages indicate that additional issues should be considered, then these can be included.

\subsection*{3.3.8 DESIGN REVIEW}

The project design is informed and continually reviewed in light of environmental criteria emerging during the preparation of an EIS provides specific recommendations on the need for the developer, the design team and the environmental specialists in particular to maintain a regular dialogue through the design preparations and revisions to ensure that this objective is achieved. Open, effective and ongoing communication between all members of the developer’s team helps to achieve this. Scoping should be linked with and informed by design reviews at any stage during the preparation of the EIS.

\(^{34}\)\(^\text{Sites designated under the Habitats or Birds Directives}\)

\(^{35}\)\(^\text{An assessment prepared in accordance with requirements of the Habitats Directive}\)
3.4 CONSIDERATION OF ALTERNATIVES

3.4.1 OVERVIEW

The EIA Directive\(^{36}\) requires an EIS to contain:

“A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.”

The presentation and consideration of the various reasonable alternatives investigated by the applicant is an important requirement of the EIA process. These indicate the main reasons for choosing the project that is being submitted for consent describing how environmental considerations were taken into account.

The objective is for the developer to present a representative range of practicable alternatives to clearly show how environmental issues were considered at key relevant stages in the design process and how these were balanced against other issues to arrive at the final selected option. Clearly in some instances some of the alternatives described here are not applicable – eg there is no relevant ‘alternative location’ for the upgrading of an existing road or the renewal of an existing bridge.

In an effective EIA process, different types of alternatives may be considered at a number of key stages during the process. After the initial design development, the design may be reviewed in light of emerging environmental assessment findings during the preparation of the EIS and further detailed alternatives may be considered. This often includes consideration of different mitigation alternatives towards the end of the preparation of an EIS. These various levels of alternatives are discussed further in Figure 3.4 and sections 3.4.2 to 3.4.5 below.

Higher level alternatives may have been addressed during strategic environmental assessment of strategies or plans. Assessment at that level is likely to have taken account of environmental considerations associated, for example with the cumulative impact of an area zoned for industry on a sensitive landscape. Note also that plan-level/higher-level assessments may have set out project-level objectives or other mitigation that the project and its EIS should be cognisant of. So at EIA level these prior assessments of strategic alternatives will inform the EIS. Where applicable, findings will be relevant and should be referred to, to support any assertions on decisions of the developer to omit to consider an alternative. (See section 3.3.5 for more on this subject\(^{37}\).)

\(^{36}\) Annex IV, Article 2 of Directive 2014/52/EU

\(^{37}\) Alternatives for Habitats/Birds Directive assessments dealt with in other documents/guidance from commission and elsewhere
3.4 Consideration of alternatives in an Environmental Impact Statement

This illustrates the sequence of options that exist. Not all options (such as alternative sites) may be available for every project. The applicant is required to describe the reasonable alternatives examined during the design process with a description of the environmental considerations that were taken into account.

Figure 3.4 Consideration of Alternatives in an EIS
3.4.2 ALTERNATIVE LOCATIONS
Some locations have more inherent environmental problems than others. Such sites can usually be avoided in favour of sites which have fewer constraints and more capacity to sustainably assimilate the project. It can be useful to ensure that a range of options that may reasonably be expected to be considered are included in the evaluation.

3.4.3 ALTERNATIVE LAYOUTS
Alternative layouts can often be devised to consider how different elements of a proposal can be arranged on a site, typically with different environmental, as well as design, implications.

3.4.4 ALTERNATIVE DESIGNS
Most problems will be capable of being resolved by a number of design solutions by varying key aspects such as the shape of buildings or the location of facilities. Where designers are briefed at an early stage on environmental factors, these can usually be considered during the design development process, along with other design parameters.

3.4.5 ALTERNATIVE PROCESSES
Within each design solution there can be a number of different options as to how the processes or activities of the project can be carried out. These can include such aspects as management of process that affect the volumes and characteristics of emissions, residues, traffic and the use of natural resources.

3.4.6 ALTERNATIVE MITIGATION MEASURES
It may be possible to mitigate effects in a number of different ways. In these circumstances the EIS can describe the various options and provide an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

3.4.7 CONSULTATION ABOUT CONSIDERATION OF ALTERNATIVES
As also mentioned in section 2.5, it may be useful to use consultation to help establish the appropriate types of alternatives during consultation. See sections 2.5.1, 3.3.5, 3.4.1 and 3.7.13 for more coverage of alternatives.
3.5 DESCRIBING THE PROPOSED PROJECT

3.5.1 INTRODUCTION

The EIA Directive requires that the EIS includes\textsuperscript{38} “a description of the project comprising information on the site, design, size and other relevant features of the project”

The developer is required to provide a description of the proposed project, comprising information on the site, design, size and other relevant features of the project, within the EIS. The actual level of detail required will vary according to the given stage of the consent procedure, the specific characteristics of the project and the environmental features likely to be affected, as may have been identified during scoping. However it is appropriate for most EISs to include (to varying degrees of detail) a description of:

- the location of the project
- the physical characteristics of the whole project, including, where relevant, demolition works, the land-use requirements during construction and operation as well as parts that are integral to the project
- the main characteristics of the operational phase of the project (in particular, any production process), for example energy demand, energy used, nature and quantity of materials and natural resources (including water, land, soil, biodiversity, etc.,) used

and:

- an estimate, by type and quantity, of the expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operational phases.

EIA requires descriptions of projects that are distinct and different from those used for both the construction sector – as well as for other types of consent, such as land-use planning. The principal difference arises from the fact that the EIA needs to examine the dynamics of the construction, day to day operations as well as the use, disposal and transformation of materials in ways that traditional static descriptions of structures, layouts and land-uses do not. Similarly, it may be useful to describe avoidance measures that have been integrated into the project proposal.

The implementation of a systematic approach will help ensure that all relevant aspects of the project are accurately and fully described by the developer. The requirement is to provide a description in sufficient detail, which if taken together with

\textsuperscript{38} Article (5) 1.(a) of Directive 2014/52/EU
the description of the existing environment, will allow a CA to understand the significant effects likely to arise from the proposed project.

The description of the site, design and scale of the project considers all relevant phases of the life of the project, e.g. from construction through to existence and operation (and in some cases to its restoration or decommissioning). The level of detail provided should be appropriate to the scale of the project and to the sensitivities of the environment. It is generally desirable to focus on the specific aspects of the proposed project that will linked to the issues highlighted during scoping, such as the noise emissions from the project, water discharges or the characteristics of the project which could potentially affect biodiversity or the landscape though these may expand as understanding/design/construction methods of the project develops, particularly if scoping was undertaken at very preliminary stages of project design.

Also the focus of the EIS may change following initial baseline surveys, e.g. discovery of a zone of high archaeological potential adjacent to a site will trigger a need for increased detail on construction activities that will cause ground disturbance.

The following headings may serve as useful reminders of the aspects of a proposed project which can be addressed by descriptions or illustrations as appropriate. Not all of them will be relevant for all projects. More detailed coverage of the information which may be relevant under each heading is provided in the Advice Notes.

### 3.5.2 CHARACTERISTICS OF THE PROJECT

"...environmental impact assessments should take account of the impact of the whole project in question, including, where relevant, its subsurface and underground, during the construction, operational and, where relevant, demolition phases."

The means of describing the physical characteristics of a project are summarised here. These topics are frequently cross-referenced to drawings and illustrations:

- The site location
- the size of the proposed project
- the cumulation with other proposed projects
- the use of natural resources
- the production of waste
- emissions and nuisances
- a description of the Risk of Accidents – having regard to substances or technologies used.
3.5.3 THE EXISTENCE OF THE PROJECT

Complex projects which require EIA are described in a way, which takes account of their full “life-cycle”. They have the potential to generate different effects at different times and at different places both at and beyond the project site.

3.5.4 DESCRIPTION OF CONSTRUCTION

Effects during construction can be more significant than the operational life of a project. Larger projects can take a number of years to complete. During this period there may be numerous significant effects. The description includes, but is not be limited to:-
- the construction phase land use requirement
- Proposed Works and Methods
- Duration and timing
- Significant Effects
- Environmental Protection Measures
- Construction Management Plan (CMP).

3.5.5 DESCRIPTION OF COMMISSIONING

This section is included if the proposed development will not be substantially operational in the period immediately following construction. This description could include:-
- Phasing
- Testing and commissioning
- Occupation/use
- Establishment of mitigation measures (monitoring, planting etc.).

3.5.6 THE OPERATION OF THE PROJECT

This is one of the most important sections of an EIS. While accurate descriptions are vital to ensure credibility, not all of these topics will be relevant to many projects, particularly smaller scale ones.
- Description of the Principal Processes or Activities
- The Scope of the Project
- The Operations described in general terms
- Processes
- Occasional Activities
- Occupants
- Description of Materials Used
- Description of Natural Resources Used (including energy and materials)
- Description of Effects, Residues and Emissions
- Description of Waste Management
- Description of Secondary Processes/Activities
- Description of post consent landuse.

3.5.7 CHANGES TO THE PROJECT

Very few projects remain unaltered throughout their existence. Success may bring growth; technology or market forces may cause processes or activities to alter. All projects change and - like living entities - will some day cease to function.

The lifecycles of some types of projects are finite and predictable. Such projects often consider their closure and decommissioning in detail from the outset, while for most projects a general indication of the nature of possible future changes may suffice.
While the examination of the potential consequences of change (such as growth) does not imply permission for such growth, its identification and consideration can be an important factor in the determination of the application. Descriptions of changes may cover:

- Growth;
- Decommissioning;
- Other Changes.

### 3.5.8 DESCRIPTION OF OTHER RELATED PROJECTS

The description includes the other projects (sometimes off-site) which occur as a direct result of the main project, such as a power line, a substation, road junction upgrade which may result in significant effects. Omission of such projects may be referred to as project-splitting where parts are ‘integral’ (i.e. elements that are required for the project to operate) and the EIS in such cases may be deemed not to be in compliance with statutory requirements. This issue is also discussed under Scoping (section 3.3).

The description of other projects can loosely be grouped under two headings: Off-site and Secondary Projects. Effects of these can often be as significant as those of the main project but must not be overlooked. It should also be borne in mind that these ancillary works may generate the need for other types of assessments of the entire project (such as an appropriate assessment) that the primary aspect of the project on its own may not necessitate. The following are indicative of aspects which may need to be included in the project description:

**Off-Site Projects**

These include projects specifically required for the project which take place at a distance from the site, often on lands owned by others (such as public roads) and which are sometimes carried on by others. For example:

- Transportation;
- The provision of new access facilities (e.g. links to motorways) or the upgrading of existing facilities (e.g. road widths and junctions) carried out by other parties can give rise to significant environmental effects;
- Energy transmission, e.g. power lines;
- The provision of new power-lines or pipelines with associated sub stations or pumping stations can give rise (for instance) to effects on landscape or ecological or archaeological heritage at a considerable distance from the project;
- Wastewater infrastructure.

**Secondary Projects**

These include projects that arise solely as a consequence of the existence of the principal project and are usually not carried out by the developer of the principal project. By definition these can be very difficult to describe with precision – though they can be usefully examined as a series of ‘what if’ scenarios that can lead to the inclusion of simple safeguards in the project – or its conditions.

Examples include:

- Commercial Developments at new major road junctions;
- Industrial and warehousing developments near new inter-modal transportation nodes;
- Recreational land-uses near new access in undeveloped areas;
- Retail development near new residential areas;
- Land-use change including agricultural intensification, hunting, tourism, restructuring of landholdings, afforestation etc as a result of new access.
3.5.9 LEVEL OF DETAIL IN PROJECT DESCRIPTION

All descriptions of proposed projects are approximations compared to the finished project. Drawings, illustrations and models are conventions used by consent processes to enable the CA to adequately assess the likely effects of the proposed development. The detail of these approximations can vary for different types of projects and different types of consent processes.

The precision of predictions about the likely effects is often determined by the level of project description that can be made available to the CA.

It is very important to understand that the nature of the construction process limits the amount of detail that is available at consent stage to documentation that is described as ‘General Arrangement Illustrations’.

Further detail only becomes available once ‘Contract Documentation’ is available – and while this may involve considerable expense and time it still does not provide complete information because so many of the final details only arise after a ‘Procurement Process’ is completed – which can involve further resources, time and legal commitment.

Consent for land use (‘planning permission’) generally depends on ‘General Arrangement’ Drawings – though more detail may be required where precise information is required to ensure that provision has been made to avoid effects to specific site features – such as a spring, a monument, a protected structure or species and to assess the range of potential environmental effects that may arise. The feasibility of providing such detail needs to be identified and agreed at scoping stage.

Consent for processes – such as emission licenses – often requires very detailed information about the specific equipment and operating procedures. For this reason these consent procedures should, ideally take place at a later stage than the land-use consent.

Descriptions of some aspects or details of the project only become available once the procurement process is completed and the contractor/supplier is identified. In these circumstances the project description for the consent process and the EIS will need to specify the outermost (‘not to exceed’) environmental parameters of the characteristics of the proposed project – maximum dimensions, tolerance for variation, maximum emissions, range of technologies and processes to be employed etc.

In these circumstances the CA will need to provide conditional permissions that require confirmation that the final design conforms fully with the permitted parameters.
3.6 DESCRIBING THE RECEIVING ENVIRONMENT

3.6.1 OVERVIEW

The EIA Directive requires:

“A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.”

and

“A description of the factors specified in Article 3(1) likely to be significantly affected by the project: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.”

After the description of the proposed project, the description of the receiving environment, is the second of the two factual foundations of the EIS. This involves the collection and analysis of information on the condition, sensitivity and significance of relevant environmental factors which are likely to be significantly affected by the project.

The term the existing environment, refers to the environmental characteristics which exist at the time of carrying out baseline assessment work in the preparation of an EIS. These environmental characteristics are not static and may be changing over time even without the introduction of the proposed project. So in order to establish the characteristics of the receiving environment, against which the effects of the proposed project should be compared, it is important to identify changes that would occur without the project. This is often described as the do-nothing scenario, i.e. the evolution of the baseline without implementation of the project.

The term the baseline, is used to refer to the environmental conditions that exist at a particular time or in a particular scenario. The Directive uses baseline to mean the existing baseline. A receiving baseline is sometimes referred to and it is important to be clear about which baseline is meant whenever this term is used.
The description of the relevant aspects of the receiving environment need to be sufficiently accurate to provide a reliable reference against which effects can be assessed and against which environmental monitoring of the effects of the project can be measured. This applies for all phases, from construction through to operation and decommissioning. It is important that the methodology used in establishing the baseline is documented to permit replicable future monitoring so that the later results can be compared. Standard recognised methods should be applied where available and appropriate.

Baseline data gathering should ensure that sufficient data is gathered to enable assessment of all of the types of effects that the EIS needs to consider, as identified at scoping stage. These may include direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects.

Changes in the receiving environment during a period after commencement of a project may be relevant, for example in the case of a phased proposal. It may be necessary to take account of such changes in order to ensure a reliable and robust assessment of impacts.

**Examples**

a) Water discharge

Water quality in a river to which a water discharge is proposed is going to improve due to an already permitted upgrade to a water treatment plant upstream of the project, which will be operational before the time of the proposed new discharge. So the available assimilative capacity at time of commencement of the proposed discharge will be greater than the existing capacity. In this case the EIS may describe the existing water quality but should assess the impact of the proposed discharge against the receiving baseline water quality.

b) Expansion of Industrial Site

Where an intensification of another operation on a site has already been permitted but is not yet operational at time of the assessment, then emissions from the proposed expansion may be assessed against the increased baseline level which would happen with the proposed expansion.

**Scenarios**

If it is not certain in either example if the change will be in effect before commencement of the proposed project then the impact of the proposed project may be assessed against two scenarios, i.e. with and without the water treatment plant upgrade in example (a) and with and without the intensifications of other operations in example (b).

It is important to include the worst case-scenario in terms of environmental impact in an EIS. This is the scenario that would be likely to give rise to the most significant environmental impacts.

As explained above; changes to the baseline that would occur if the proposed project were not to proceed may be referred to as the do-nothing scenario.

The following sections provide general guidance on the methodology and range of baseline information which an adequate description may include. The Advice Notes contain more detail on potentially relevant types of baseline data for each individual environmental factor.
3.6.2 GENERAL METHODOLOGY

Sourcing Baseline Information

Descriptions should, in the first instance, rely upon published reference to ensure objectivity. Such data is increasingly available from state agencies and these sources provide readily available referable sources which are likely to reduce time and resources required to prepare an EIS as well as making it easier for consent authorities and others to review the sources and verify the veracity of the information used.

Note that the absence of a designation or known feature (e.g. ecological or archaeological) does not mean that no such feature exists within the site. A detailed evaluation of the existing environment, by an independent specialist, is likely to be necessary for all topics that are likely to be significantly affected.

The need for site specific and up-to-date data is reviewed on a case-by-case basis in the context of available data and to determine whether new surveys or research is required. This is particularly likely for certain factors such as biodiversity where seasonal variations, for example, may be a significant consideration.

Information on standard/central sources is provided in provided in the Advice Notes and on the Web Page.

Describing Baseline Information

To facilitate evaluation of the EIS, references to recognised descriptive standards and classifications are included, where appropriate, as well as supporting records/information and descriptions of methodologies employed.

The description of any aspect of the environment provides sufficient data to facilitate the identification and evaluation of the likely significant effects on that topic. Systematic, accurate and comprehensive descriptions include descriptions of the context, character, significance, sensitivity and certainty of the information on each topic of the existing environment.

<table>
<thead>
<tr>
<th>BASELINE DESCRIPTIONS REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context</strong></td>
</tr>
<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Character</strong></td>
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<tr>
<td><strong>Significance</strong></td>
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<td><strong>Sensitivity</strong></td>
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</tbody>
</table>
### Certainty

How can a Competent Authority or Developer be certain that the EIS contains sufficient data? The following criteria can provide useful Guidelines:-

- Is the information necessary for identification of the main effects available?
- Is the information necessary for assessment of the main effects available?
- Is the information focused on effects which are likely and significant?

<table>
<thead>
<tr>
<th>Table 3.2 Fundamental Standards of Descriptions of Baseline Data required for use in an EIS</th>
</tr>
</thead>
</table>

### Sufficiency

Baseline information is ultimately used to inform decisions about whether to grant or withhold consent to develop. “Sufficiency” may therefore be regarded as enough information upon which to base a decision based a clear understanding of the implications for the environment.

Where it is the case that incomplete information is provided, it should be made clear that information is not intentionally withheld and that readers are made aware of the incompleteness. The resultant decision will usually be qualified or conditional.

### 3.6.3 GROUPING OF BASELINE INFORMATION

The environment is an extremely complex combination of natural and human factors, many of which are constantly changing. To ensure that comprehensive, reliable and accurate baseline environmental descriptions are provided in a manner which is consistent from one EIS to another. These topics break the environment down into its constituent elements so that it can be systematically described. The topics to be addressed in a specific EIS and the appropriate level of detail for each are should be informed by the scoping process and there is no need to compile information on topics that have already been scoped out. Inclusion of irrelevant information will tend to reduce clarity of the assessment as well as adding to costs and time required to prepare the EIS and unnecessarily increasing demands on all parties involved in the overall EIA process.

The information should be categorised under some or all of the environmental factors given in the Directive:

- Population and Human Health
- Biodiversity
- Land & Soils
- Water
- Air
- Climate
- Material Assets
- Cultural Heritage
- The Landscape

### Scope of Topics

The environmental factors are a necessary simplification of the environment. Each factor is explored by examining a series of topics relevant to that factor. Some of the topics are summarised below.

Note that some of these topics could be placed under more than one factor, for example hydrogeology could be placed under ‘Land & Soils’ or under ‘Water’ or ‘Biodiversity’ or amenity could be placed under ‘The Population and Human Health’ or ‘The Landscape’. The requirement for the EIS to consider ‘Interactions’ provides the formal resolution to this issue by ensuring that effects are cross-referenced between topics. As discussed at Section 3.3.6 it is good practice...
to include a list at the beginning of an EIS to show the topics headings used in an EIS and their relationship to the prescribed environmental factors.

**Population and Human Health**
- Economic Activity
- Land-use
- Employment
- Settlement Patterns
- Social Patterns
- Human Health (considered with reference to other headings such as air quality and the landscape)

**Biodiversity**

Over the last decade, environmental issues, such as resource efficiency and sustainability, biodiversity protection, climate change, and risks of accidents and disasters, have become more important in policy making. They should therefore also constitute important elements in assessment and decision-making processes.\(^{\text{xi}}\)

- Habitats
- Breeding/Feeding/Roosting Areas
- Routes
- Mammals/Birds/Fish/Insects/Reptiles
- Population Stability/Management
- Critical Resources
- Terrestrial/Aquatic/Marine
- Seasonality
- Existing Management
- Designations

With a view to ensuring a high level of protection of the marine environment, especially species and habitats, environmental impact assessment and screening procedures for projects in the marine environment should take into account the characteristics of those projects with particular regard to the technologies used (for example seismic surveys using active sonars).
Land & Soils
- Land (for example land take)\(^{40}\)
- Soil (for example organic matter, erosion, compaction, sealing)\(^{41}\)
- Agricultural capability
- Geology
- Hydrogeology (can alternatively be placed under heading of Water)

Water
- Ground/Surface/Estuarine/Marine
- Physical
- Chemical
- Biotic
- Beneficial Uses

Air
- Air Quality
  - Pollutants
  - Suspended Particles
- Odour
- Noise & Vibration
  - Daytime Noise
  - Night time Noise
  - Vibration sources
  - Sensitive receptors
- Radiation

Climate

“Climate change will continue to cause damage to the environment and compromise economic development. In this regard, it is appropriate to assess the impact of projects on climate (for example greenhouse gas emissions) and their vulnerability to climate change.”

- CFCs
- Acid Rain
- Thermal Pollution
- Climate change trends (macro and micro)

Material Assets
- Built services
- Roads and traffic

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\(^{40}\) Removal of productive land from potential agricultural or other beneficial uses

\(^{41}\) Annex IV (4) of Directive 2014/52/EU
Cultural Heritage
- Archaeology
  - Known archaeological monuments including wrecks
  - Areas of archaeological potential
- Architectural heritage
  - Designated architectural heritage
  - Other significant architectural heritage
- Folklore and history
  - Designations or sensitivities

The Landscape
- Landscape Character
- Landscape Context
- Views & Prospects
- Historical Landscapes
3.7 IMPACT ASSESSMENT

3.7.1 INTRODUCTION

The main purpose of an EIS is to present an assessment of the likely significant effects of a project on the environment. This informs the CA’s decision on whether or not to consent a project and if granting consent, what conditions to attach.

The EIS focuses on:

- Effects that are both likely and significant;
- Impact descriptions that are accurate and credible

The EIS should provide:

“A description of the likely significant effects of the project on the environment resulting from, inter alia:

a) the construction and existence of the project, including, where relevant, demolition works;

b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;

c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;

d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);

e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;

f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;

g) the technologies and the substances used.

The description of the likely significant effects on the environmental factors "should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project."

Impacts should be described by reference to the individual environmental factors (population and human health, biodiversity, etc) taking into account the criteria listed at item 3 in Table 3.1.

Furthermore the assessment of effects needs to leave a clear documentary trail of the analysis used to arrive at conclusions. Such documentation would include a description of data and methods used, the reasons for their selection from a range of reasonable alternatives together with descriptions of the reliability and certainty

42 DIRECTIVE 2014/52/EU, Annex iv, Article 5 the technologies and substances used
of the results and the limitations and difficulties encountered. All of the preceding should, wherever possible, be carried out using referable standards and methods that demonstrably conform to peer-reviewed standards used by established specialist organisations.

3.7.2 THE LIKELIHOOD OF IMPACTS

To ensure that EIA adds value to the consent process it is clearly necessary to focus on effects that are probable or likely to occur. The EIS also attempts to identify a reasonably foreseeable worst case scenario when determining ‘likely significant effects’.

With competent scoping, it should be possible to greatly narrow down the areas of concern and to derive a list narrowed down to ‘effects’ that may reasonably be seen as ‘likely’. Likely or probable effects can be described as those which are planned to take place (e.g. the projected emissions, the proposed earthmoving etc.) and those which can be reasonably foreseen to be inevitable consequences of the normal construction and operation of the project.

To address unforeseen or unplanned effects the Directive further requires that the EIS takes account of the vulnerability of the project to risk of major accidents and /or disasters relevant to the project concerned and the EIS therefore explicitly addresses this issue. The extent to which the effects of major accidents and / or disasters are examined in the EIS should be guided by an assessment of the likelihood of their occurrence (risk), supported by documented experience elsewhere or by a systematic risk assessment, usually a CoMAH (Control of Major Accident Hazards Involving Dangerous Substances) assessment. It is expected that such assessments will only be required where the “worst case” effects pose significant threats to the environment and/ or human health and will be required by the under other regulations (e.g. CoMAH).

The potential for a project to cause risks to human health, cultural heritage or the environment due to external accidents or disasters is considered where such risks are significant, e.g. effects of floods on vulnerable sites with sensitive plant which could pose external risks in event of inundation. (See web page for more on this.)

3.7.3 RESIDUAL IMPACTS

The final or intended effects are those that occur after the proposed mitigation measures have been put into place, as planned. Examples of these mitigation measures include regeneration of ecological habitats, commissioning of environmental management systems and establishment of tree screening.

3.7.4 THE SIGNIFICANCE OF IMPACTS

The significance attributed to effects is one of the most contested topics when the findings of an EIS come under close scrutiny, for example during an appeals process for a controversial project. Significance of effects is usually understood to mean the importance of the outcome of the effects (the consequences of the change). Significance is determined by a combination of (objective) scientific and subjective (social) concerns.

Determination of significance relies on the professional judgement of competent experts who may place different emphases on the factors involved. As this can lead to differences of opinion, the EIS sets out the basis of these judgements so that the varying degrees of significance attributed to different factors can be understood.

3.7.5 SUBJECTIVITY (SEE ALSO 2.4.5 MAINTAINING OBJECTIVITY)

Some uncertainty is unavoidable in EIA – especially about matters that involve an element of judgement – such as assigning a level of significance to an effect. Such judgements should be explicit and substantiated rather than presented as objective fact. This is best done using to agreed referable approaches, e.g. landscape impact assessment Guidelines which provide guidance on what constitutes a severe visual impact.
3.7.6 THE DESCRIPTION OF IMPACTS

Environmental Impact Statement
Description of Impacts

There are seven generalised degrees of impact that are commonly used in EIA. Imperceptible, Not Significant, Slight, Moderate, Significant, Very Significant and Profound. Generalised definitions of each of these are provided below. Where more specific definitions exist within a specialised topic eg ecology, these should be used in preference to these generalised definitions. (ref Advice Notes)

Figure 3.5 Descriptions of Impacts

The description of effects is usually subjected to closer scrutiny than any other part of the EIS. Clarity of method, language and meaning are vital to accurately explain the full range of effects. Adherence to a systematic method of description can be of considerable assistance in this matter. The following notes offer guidance on the issues that need to be considered when describing impacts.
3.7.7 DEFINITIONS OF IMPACTS

The description of effects needs to be precise and concise. Each effect usually needs to be qualified to provide a comprehensive description of the predicted effect on receptors – for example ‘The likely effect of the monthly quarry blasts will be a very loud noise that will be audible at distances of up to two kilometres. The cumulative effect of the quarry blasts in addition to the established motorway noise will give rise to a momentary increase in noise levels that will have a slight adverse impact at the local primary school.’

**Quality of Effects**

| Positive Effects | A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or removing nuisances or improving amenities). |
| Neutral Effects | A change which does not affect the quality of the environment |
| Negative/adverse Effects | A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance). |

**Describing the Significance of Effects**

| Imperceptible | An effects capable of measurement but without noticeable consequences. |
| Not significant | An effects which causes noticeable changes in the character of the environment but without noticeable consequences |
| Slight Effects | An effects which causes noticeable changes in the character of the environment without affecting its sensitivities. |
| Moderate Effects | An effects that alters the character of the environment in a manner that is consistent with existing and emerging trends. |
| Significant Effects | An effects which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment. |
| Very Significant | An effects which, by its character, magnitude, duration or intensity significantly alters the majority of a sensitive aspect of the environment. |
| Profound Effects | An effects which obliterates sensitive characteristics |

**Describing the Magnitude of Effects**

| Extent | Describe the size of the area, the number of sites, and the proportion of a population affected by an effect. |
| Duration | Describe the period of time over which the effect will occur. (See further detail below) |
| Frequency | Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually) |
| Context | Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?) |
### Describing the Probability of Effects

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likely Effects</td>
<td>The effects that can reasonably be expected to occur as a result of the planned project if all mitigation measures are properly implemented.</td>
</tr>
<tr>
<td>Indeterminable Effects</td>
<td>When the full consequences of a change in the environment cannot be described.</td>
</tr>
<tr>
<td>'Worst case' Effects</td>
<td>The effects arising from a project in the case where mitigation measures substantially fail</td>
</tr>
</tbody>
</table>

### Describing the Duration of Effects

<table>
<thead>
<tr>
<th>Type</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Momentary Effects</td>
<td>Effects lasting from seconds to minutes</td>
</tr>
<tr>
<td>Brief Effects</td>
<td>Effects lasting less than a day</td>
</tr>
<tr>
<td>Temporary Effects</td>
<td>Effects lasting less than a year</td>
</tr>
<tr>
<td>Short-term Effects</td>
<td>Effects lasting one to seven years</td>
</tr>
<tr>
<td>Medium-term Effects</td>
<td>Effects lasting seven to fifteen years</td>
</tr>
<tr>
<td>Long-term Effects</td>
<td>Effects lasting fifteen to sixty years</td>
</tr>
<tr>
<td>Permanent Effects</td>
<td>Effects lasting over sixty years</td>
</tr>
</tbody>
</table>

### Describing the Types of Effects

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative Effects</td>
<td>The addition of many small effects to create one larger, more significant, effects.</td>
</tr>
<tr>
<td>'Do Nothing Effects'</td>
<td>The environment as it would be in the future should no project of any kind be carried out.</td>
</tr>
<tr>
<td>Indeterminable Effects</td>
<td>When the full consequences of a change in the environment cannot be described.</td>
</tr>
<tr>
<td>Irreversible Effects</td>
<td>When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.</td>
</tr>
<tr>
<td>Residual Effects</td>
<td>The degree of environmental change that will occur after the proposed mitigation measures have taken effect.</td>
</tr>
<tr>
<td>Synergistic Effects</td>
<td>Where the resultant effects is of greater significance than the sum of its constituents.</td>
</tr>
<tr>
<td>Indirect Effects</td>
<td>Effects that arise off-site or are caused by other parties that are not under the control of the developer (such as a quarry)</td>
</tr>
<tr>
<td>Secondary Effects</td>
<td>Effects that arise as a consequence of a project (a new waste water treatment plant will reduce the yield of mussels in a nearby estuary)</td>
</tr>
</tbody>
</table>
3.7.8 LANGUAGE AND TERMS

Impacts need to be described clearly and directly.

- The phrase “...effects will occur” or “is likely to occur” is always preferable to may, could, or might occur unless there is a particularly high degree of unavoidable uncertainty about the effects.
- Avoid euphemisms (e.g. the description of the clear-felling of a mature woods as “a woodland management programme”)
- Use terms that have a widely accepted meaning consistently throughout the EIS (ref glossary of terms in the Advice Notes). This is particularly important when compiling contributions from different experts into one EIS document.

3.7.9 IMPACT ASSESSMENT CRITERIA

The description identifies the criteria by which likely significant effects are considered. The EIS should aim to answer the types of questions included in the right column below in relation to each of the criteria.

3.7.10 CONSULTATION ABOUT IMPACT PREDICTION AND MITIGATION MEASURES

When impacts have been predicted and during the stage where mitigation measures are being considered, it can be useful to consult with the competent authorities or other bodies with responsibility for the relevant environmental characteristics. This can help to determine the practicality and acceptability of any mitigation measures that are being considered.
<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>DETAILED QUESTIONS - TO DETERMINE WHETHER THE EIS HAS:</th>
</tr>
</thead>
</table>
| a. Magnitude and spatial extent of the effects | ▼ clarified the size and scale of the effects?  
▼ indicated the spatial extent of the effects (will some, much or all of the areas be affected)?  
▼ highlighted profound (i.e. complete) changes of character?  
▼ identified the receptors which will be affected, indicating their sensitivity and significance? |
| b. Nature of the Effects | ▼ clarified which part of the environment will be affected and how significantly?  
▼ identified the aspect of the environment affected?  
▼ described whether the effects is positive, neutral or negative?  
▼ highlighted significant effects (positive and negative)? |
| c. Transboundary nature of the effects | ▼ clarified the size and scale of the transboundary effects?  
▼ quantified the amount or intensity by which the character/quality of any aspect of the transboundary environment will change?  
▼ indicated the spatial extent of the transboundary effects (will some, much or all of the jurisdiction be affected)?  
▼ described the degree of transboundary change; (i.e. imperceptible, slight, noticeable or significant)?  
▼ highlighted profound (i.e. complete) transboundary changes of character? |
| d. Intensity and complexity of the effects | ▼ quantified the amount or intensity by which the character/quality of any environmental factor will change?  
▼ described the degree of change; (i.e. imperceptible, slight, noticeable or significant)?  
▼ described indirect and secondary effects?  
▼ Described complex effects with input by sufficiently competent experts as required? |
| e. Probability of the effects | ▼ established the level of certainty of the assessment’s findings?  
▼ highlighted consequence that cannot be determined? |
| f. Expected onset, duration, frequency and reversibility of the effects | ▼ stated whether the effects will be continuous, intermittent or occasional?  
▼ indicated whether the effects will be temporary, short, medium or long-term?  
▼ highlighted irreversible effects? |
| g. Cumulation of the effects with the effects of other existing and/or approved projects | ▼ described cumulative effects?  
▼ considered cumulative effects due to cumulation of effects with those of other projects that are existing or are approved but not yet built or operational? |
| h. Possibility of effectively reducing the effects | ▼ stated whether compensation is available, possible or acceptable?  
▼ Indicated whether the effects can be mitigated? |

Table 3.3 Information required to describe Effects
3.7.11 INDIRECT, SECONDARY AND/OR CUMULATIVE IMPACTS

Effects which are caused by the interaction of effects, or by associated or off-site projects, are classed as indirect effects. Cumulative and synergistic effects are often indirect, arising from the cumulation of different effects that are individually minor. Such effects are not caused or controlled by the project developer and therefore can be difficult for the CA to control or condition.

In many instances the applicant needs to demonstrate that these indirect effects will not give rise to uncontrolled adverse effects – this is usually done by demonstrating the ready availability of suppliers (such as quarries) or services (such as waste disposal) that has itself been the subject of environmental assessment and permission by a CA.

Prediction of such effects can be difficult until the full extent of direct effects has been established, together with their mitigation measures. These in turn can establish secondary effects which are checked against the sensitivities of the existing environment described earlier.

Note also in particular the potential for mitigation measures to unintentionally cause indirect effects that may significantly adversely affect the environment e.g. the visual effects of an acoustic screen wall or the sludge waste disposal necessitated by water treatment. The importance of considering indirect, secondary and cumulative effects is an integral part of the EIA process.

- **Indirect Effects** are those that arise off site or are caused by other parties that are not under the control of the developer (such as a quarry)
- **Secondary effects** are those that arise as a consequence of a project (a new waste water treatment plant will reduce the yield of mussels in a nearby estuary)
- **Cumulative effects** arise when a number of projects gradual increase the pressure on the environment (each new premises on an industrial estate will gradually increase pressure on the nearby drainage and road network)
### SUMMARY OF EFFECTS OF PROPOSED AIRCRAFT NAVIGATION BEACON

<table>
<thead>
<tr>
<th>Description</th>
<th>Effects</th>
<th>Character</th>
<th>Magnitude</th>
<th>Duration</th>
<th>Consequence</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population and Human Health 1</td>
<td>Psychological effects of loss of perceived wilderness character</td>
<td>Significant</td>
<td>Localised</td>
<td>Permanent</td>
<td>The development will be the only man-made structure encountered along a 7km stretch of the Kerry Way.</td>
<td>High</td>
</tr>
<tr>
<td>Population and Human Health 2</td>
<td>Loss of Access is an incremental effect on the tourism resources of the area</td>
<td>Slight</td>
<td>Localised</td>
<td>Permanent</td>
<td>The access of this commonage will seem diminished and the Kerry Way will be slightly diverted</td>
<td>High</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>Change of vegetation</td>
<td>Slight</td>
<td>Localised</td>
<td>Long term</td>
<td>The vegetation within the enclosure will no longer be grazed</td>
<td>High</td>
</tr>
<tr>
<td>Land &amp; Soil</td>
<td>Possible Increased Erosion at fence</td>
<td>Slight</td>
<td>Localised</td>
<td>Long term</td>
<td>Walkers may trample vegetation passing close to the fence</td>
<td>Low</td>
</tr>
<tr>
<td>Water</td>
<td>Water may concentrate in erosion channels left by diverted walkers</td>
<td>Slight</td>
<td>Localised</td>
<td>Seasonal</td>
<td>May incrementally contribute to increased runoff</td>
<td>Low</td>
</tr>
<tr>
<td>Air</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Climate</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Material Assets</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cultural Heritage</td>
<td>Track may divert closer to mound</td>
<td>Moderate</td>
<td>Long term</td>
<td>The diverted path may alter erosion patterns in the vicinity of the mound</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Landscape 1</td>
<td>Landscape Appearance Change</td>
<td>Significant</td>
<td>Permanently</td>
<td>The mast will be visible over a wide area of an area of designated scenic amenity</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Landscape 2</td>
<td>Landscape Character Change</td>
<td>Moderate</td>
<td>Localised</td>
<td>Permanently</td>
<td>The development will be the only man-made structure encountered along a 7km stretch of the Kerry Way.</td>
<td>High</td>
</tr>
</tbody>
</table>

Figure 3.6 Effects Assessment Summary. See Sample Table 3.7 below for an example of Interactions between these impacts.
3.7.12 INTERACTIONS BETWEEN IMPACTS ON DIFFERENT FACTORS

It is general practice to include a matrix showing where effects on one factor may interact with effects on another. Identification of interactions in this way ensures that they are noticed so that they can be addressed under specialist topics as relevant where the interactions are considered, by reference to the above criteria, as likely to give rise to significant effects. Any matrices need to be well cross-referenced to the supporting analysis/assessment so that they are clearly substantiated. This heading is also covered in the Advice Notes.

<table>
<thead>
<tr>
<th>Description</th>
<th>Population and Human Health</th>
<th>Biodiversity</th>
<th>Land &amp; Soil</th>
<th>Water</th>
<th>Air</th>
<th>Climate</th>
<th>Material Assets</th>
<th>Cultural Heritage</th>
<th>Landscape 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population and Human Health</td>
<td>1. Changes in patterns of circulation may affect vegetation and associated fauna.</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Biodiversity</td>
<td>2. No grazing within enclosure will change vegetation.</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Land &amp; Soil</td>
<td>3. Changes in patterns of circulation may increase erosion at fence</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>4. Overland flow may concentrate along new erosion trails</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Air</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Climate</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Material Assets</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Cultural Heritage</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td>Landscape 1</td>
<td>8. Concentration of walkers along fence may reduce sense of solitude.</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Changes in un-grazed vegetation within enclosure may affect appearance</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. Erosion along new paths will alter the appearance</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.7 Sample Table to show 10 Interactions between Factors from the Project in Figure 3.6
3.7.13 ASSESSMENT METHODS

Where relevant the EIS should describe the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved. These details should enable all parties to arrive at similar conclusions as to the significance of effects, having regard to the criteria above. This can be included as a separate section – often as part of the pre-ambles – or on a topic-by-topic basis within each specialist section of the EIS.
3.8 MITIGATION & MONITORING

3.8.1 MITIGATION

Overview
EIA is carried out to identify likely significant adverse effects early in the pre-consent stage and to integrate measures into the fundamental design to mitigate such effects. Before developing detailed mitigation measures it may be worthwhile reviewing the likely significant effects to compare the benefits of the project with the environmental costs to check that the project can be justified taking account of the mitigation requirements.

Furthermore, the descriptions of undertakings to mitigate are specific parts of the project that must be complied with – in the same way as features that are described in drawings or specifications.

It is in the applicant’s interest to ensure that all undertakings to mitigate are fully understood and accepted and the resources will be available to ensure compliance with such commitments.

Increasingly sophisticated monitoring and post-consent evaluation are likely to detect non-compliance – which will lead to increased enforcement proceedings in relation to failure to fully or effectively implement mitigation measures.

The best mitigation measures fully incorporated into the permitted design and operation of the project. Other mitigation measures – that respond to the results of monitoring to detect exceedance are expressed as ‘if’/’then’ measures that clearly set out a sequence of actions and responsibilities that arise. e.g. ‘If the BOD levels in the holding pond exceed the (stated parameter) then the discharge valve shall be closed until the levels return to permitted levels’

There are four established strategies for effects mitigation - avoidance, prevention, reduction and offsetting. The efficiency of each is related to the stage in the design process at which environmental considerations are taken into account (i.e. effects avoidance is most applicable at the earliest stages, prevention may be provided up to a much later stage, while remedy or offsetting may be the only option available for largely designed projects or for projects that cannot avoid significant effects due to their need to locate on a particular site).

Mitigation by Avoidance
Avoidance is generally the fastest, cheapest and most effective form of effects mitigation. Environmental effects and consideration of alternatives must be taken into account at the earliest stage in the site / route selection and project
design processes, e.g. realignment of transport corridor to avoid residential property, avoid habitat destruction or to reduce agriculture severance etc. In many situations, mitigation by avoidance may be viewed as part of the ‘consideration of alternatives’.

Avoidance also encompasses making provisions for avoiding readily foreseeable changes for which provision must be made – such as bad weather, industrial action, delays etc.

**Mitigation by Prevention**
Where a potential exists for unplanned significant effect to occur – often accidentally – then measures are put in place to prevent the effects from giving rise to adverse effects. The installation of a fire-water retention basin is an example of mitigation against such risk by prevention.

**Mitigation by Reduction**
This is a very common strategy for dealing with effects which cannot be avoided. It tends to concentrate on the emissions and effects and seeks to limit the exposure of the receptor. It is generally regarded as the “end of pipe” approach because it tends not to affect the source of the problems. As such this is regarded as a less sustainable, though still effective, approach.

**Reducing the Effect**
This strategy seeks to intercept emissions, effects and wastes before they enter the environment. It monitors and controls them so that acceptable standards are not exceeded. Examples include wastewater treatment, filtration of air emissions and noise attenuation measures.

**Reducing Exposure to the Effects**
This strategy is used for effects which occur over an extensive and undefined area. Such effects may include noise, visual effects or exposure to hazard. The mitigation is achieved by installing barriers between the location(s) of likely receptors and source of the effects (e.g. sound barriers, tree screens or security fences).

**Examples of Reduction**
- Installing double-glazing, deeper wells or higher walls
- Excavation of archaeological deposits and features where permitted by statutory authority

**Mitigation by Offsetting**
This is a strategy used for dealing with effects which cannot be prevented from entering the environment and causing adverse effects.

**The Principle of Offsetting**
Offsetting serves to improve adverse conditions by carrying out further works which seek to restore the environment to an approximation of its previous condition or to compensate for or counteract the effects.

**Examples of Offsetting**
- Reinstating buildings, walls or features
- Increased planting of specific trees/shrubs to offset unavoidable loss of vegetation
- Introduction of tunnels to enable wildlife to access other comparable habitats.

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Note that offsetting under the habitats and birds directives is seen as compensation not mitigation and has very different implications for decision-making.
3.8 Strategies for Identification of Mitigation to be Used

3.8.2 MONITORING

The continued measurement of effects on the environment – monitoring – ensures that the project in practice conforms to the predictions made during the EIA.

Monitoring provides assurance that proposed systems are operating as intended and also allows adjustments of operations to be made to ensure compliance with emission limit values, conditions of operation, performance criteria/indicators and detection of unexpected mitigation failures.

It is important to avoid excessive reliance on monitoring as a stand-alone measure because this has the potential to lead to operational changes occurring that fall outside the scope of the project that was subject to public scrutiny during the consent process. Monitoring post-consent should similarly not be used to allow the deferral of the gathering of information that is necessary for the assessment/consent.

In this context, it is important to ensure that monitoring is described within the context of the operations of the project processes. Monitoring descriptions should refer to remedial actions to be taken; as well to responsible parties i.e., the developer and/or the planning authority (if monitoring thresholds are exceeded). In this way, all monitoring proposals and actions should be expressed as ‘if-then’ scenarios.
3.8.3 CLARITY RE MITIGATION AND MONITORING MEASURES
A summary table, or listing, of mitigation and monitoring measures clarifies the undertakings made in an EIS and facilitates compliance and enforcement.

3.9 RESIDUAL IMPACTS & CONCLUSIONS

3.9.1 RESIDUAL IMPACTS
It will not always be possible or practical to mitigate all effects. The effects that remain after all assessment and mitigation are referred to as ‘Residual Effects’. These are the remaining environmental ‘costs’ of a project, which are a key consideration in deciding whether the project should be permitted or not.

For this reason it is important that residual effects are clearly described in accordance with the system of effects description as set out previously.

3.9.2 CONCLUSIONS
At this stage it can be useful to provide an overview of the ways that the EIA process has helped to avoid reduce or mitigate significant effects of the proposed project and to include an overview of how the impact assessment and mitigation process has influenced the evolution of the design.

While an EIS is being scrutinised during the consent determination process, it is not uncommon to encounter a request for an EIS to provide an overall summary of the effects on the environment – or indeed on one aspect – for example ‘what is the overall effect of the proposed development on the landscape of the area?’ The tendency to try to answer simplistic questions needs to be resisted because they fail to recognise that it is the nature of effects to affect individual, discrete, receptors at specific and separate times.

For this same reason the EIS – or sections of the EIS - should avoid including a ‘Conclusion’ section. Instead the EIS can include a summary of effects, mitigation and monitoring measures – such as a table summarising impacts – or a section on ‘Residual Impacts’ as described in section 3.9.1.

The Residual Impacts are the final or intended effects which occur after the proposed mitigation measures have taken effect as planned in a manner that is compliant with relevant monitoring. Examples of these mitigation measures include regeneration of ecological habitats, commissioning of environmental management systems and establishment of tree screening.

3.9.3 DOCUMENT REVIEW
All parties can benefit from pre-application review of draft EIS documents. It can help identify any real or perceived deficiencies before finalising the application.

The principal advantages of a document review can include:
- the avoidance of requests for additional information during the formal consent application process
- the testing of the acceptability of residual effects and mitigation proposals
- helping to identify interactions or conflicts that were not evident at the earlier scoping stage.

Resources may not always be available to facilitate this kind of review and engagement, but this is at the discretion of the relevant authorities.
4. PRESENTING THE INFORMATION IN THE EIS

While the regulations include many requirements about the factors that need to be addressed in an EIS, including the topics that need to be considered, there are few requirements regarding the presentation of the EIS. In practice, the EIS structure tends to follow the same sequence as the requirements set out in the regulations.

4.1 CONTENT, STRUCTURE AND FORMAT

Everything required by the legislation ensures that the information needed for decision makers is available, adequate and accurate. Furthermore, the structure ensures that facts and prediction are kept separate – to keep facts to forefront and to reduce the potential for bias or selective information.

4.1.1 CONTENT

To assist assessment and increase clarity and the systematic organisation of information in the EIS; it is good practice to provide sections describing:

- key alternatives considered
- proposed project
- receiving environment
- likely significant effects
- mitigation and monitoring measures
- residual effects and a
- non-technical summary.

The existing environment and the effects of the project are explained by reference to its possible effects on a series of environmental factors:

- Population and Human Health
- Biodiversity
- Land & Soils
- Water
- Air
- Climate
- Material Assets
- Cultural Heritage
- Landscape
- Interactions

Different specialist topics may be relevant under some of these factors (Ref section 3.7.12).

Effects address direct, indirect, secondary, cumulative, transboundary, short, medium and long-term, permanent, temporary, positive and negative effects.

Where it has been decided during scoping that a topic is not relevant, then the EIS should contain an explanation for its omission, i.e. why it is considered that it may be “scoped out”.

4.1.2 STRUCTURE

While project proponents are obliged to include certain information in an EIS and competent authorities have powers to require this information to be included, the organisation of the information within an EIS is a matter for the proponent. Whatever format is used, it should be
rational and systematic, clearly showing how it relates to the mandatory requirements. Accessibility and clarity should be key considerations in the structure. A non-technical summary must always be provided. This can be part of the main EIS document or can be separately bound.

EISs tend to follow what is referred to as a **Grouped Format Structure**

An EIS is prepared in a format which, usually after an introduction and descriptions of the screening and scoping stages and an overall project description, then examines each scoped in topic as a separate section. The coverage of each topic includes descriptions of the relevant characteristics of the proposed project, the existing environment, predicted impacts, mitigation measures and residual impacts.

The advantages of using this format are:

- it is convenient for reading all about a single topic. This is particularly convenient for CAs which may get different departments or personnel to review different topics, e.g. a local authority’s roads and services department may review the material assets section and their heritage department may review the biodiversity, archaeology, cultural heritage and architectural heritage sections;
- where adverse impacts are predicted, descriptions of mitigation measures and residual impacts follow – making it easy to follow the whole assessment of the topic.

The disadvantages of using this format are:

- it is more difficult to obtain a comprehensive understanding of the full range of impacts and mitigation measures
- it results in a high degree of repetition when the author of each section prepares their assessment as though it is a stand-alone report, without due consideration of the need to adapt the format to an appropriate style for inclusion in an EIS. Each section may commence with a description of the whole project with maps and other illustrations when a single general project description at the outset would be adequate, followed by supplementary descriptions of the key characteristics of the project that are relevant to each topic
- different authors often have different styles and different levels of adherence to the requirements of the regulations and of these Guidelines, often leading to an inconsistent assessment across the range of topics
- it requires a high level of co-ordination and editing to ensure consistent coverage of the different topics, with adequate cross referencing to ensure adequate assessment of interactions between different topics

EISs in this format must be carefully edited in order to avoid producing a disjointed EIS which is merely a collection of disparate reports by various consultants. As a result, good editing and cross-referencing are very important.

**A Direct Format Structure** is sometimes used

An EIS is prepared that directly follows the sequence of the Regulations, i.e. separate descriptions are provided of:

- the Proposed Project
- the Existing Environment
- the Predicted Impacts of the Proposed Project; and
- the Measures to Mitigate Adverse Impacts.

Under each of these headings there is coverage of each topic that has been included

Some advantages of this approach are that:

- it facilitates a comprehensive understanding of the project, the receiving environment, impacts and mitigation measures;
- all of the impacts and mitigation measures are grouped together;
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it encourages a consistent and co-ordinated approach across the various topics. Disadvantages include that:

- the descriptions of impacts without mitigation measures can appear overly theoretical when read in isolation from the descriptions of any mitigation measures and residual impacts;
- to follow a single topic, e.g. archaeology, a reader must look for the coverage of that topic in different sections of the EIS.

4.2 PRESENTATION

Illustrations including maps, plans and other drawings, diagrams, photographs, sketches are used where helpful to help explain aspects of the assessment. The relevant information in any illustrations should be legible, bearing in mind the scale at which they are included in the EIS, e.g. drawings that are intended to be printed in large size (e.g. A1 / A0) will usually not be sufficiently clear in report format. The date and source of mapping and other externally sourced data used in illustrations should be included where relevant.

Illustrations should only be included where they help to explain information that is relevant to the EIS. So, for example, large sets of floor plans, elevations and process diagrams are rarely helpful in an EIS and their inclusion may make it harder to find other information that is relevant. Lack of clarity can undermine credibility or lead to requests for additional information.

For ease of use, most EISs are printed at an A4 format sometimes with some material is presented at A3 to aid legibility. This is considered acceptable. Excessive use of colour illustrations is best avoided as this would tend to raise printing costs and make it difficult to make copies for a reasonable cost. EISs presented in digital format can be made available online, generally increasing ease of access and reducing cost.

4.3 APPENDICES

Appendices can be useful for including supporting information that is not core to the EIS but does nonetheless contain information required for gaining a clear understanding of the significant issues. The appendices can be particularly useful for minimising the size of the main EIS.

Where detailed information needs to be included to support any part of the EIS, for example a detailed traffic impact assessment report that may contain numerous junction diagrams and engineering calculations or the results of an air dispersion modelling exercise, then this information may be included in an appendix to the EIS and the findings accurately summarised in plain language in the main body of the EIS. This approach helps to keep the main EIS document clear and succinct.

The appendix needs only to include information that is necessary to understand the information and assessment provided in the main EIS document, for readers who want to delve deeper into a specific topic for example. It is best to limit the appendices content to information that is useful in this sense. The inclusion of excessive amounts of technical data or copies of legislation that may be available elsewhere (e.g. online) is not useful.

4.4 SIZE

The size of an EIS may vary as a result of the range and complexity of the significant issues. Practice has tended to err on the side of being indiscriminately generous in the amount of coverage given to most issues. However this is not good practice and results in overly long and unfocussed EISs which can be difficult to follow and do not serve their purposes well.
It is in the interest of all parties for an EIS to be kept as concise as possible. Excessive length can be a considerable barrier to effective public participation. Practitioners should aim to prepare EISs that are between 50 and 150 pages long, only exceeding that length in the case of large scale projects with many significant effects\textsuperscript{47}.

Where more material than this is considered necessary it is best to keep supplementary or detailed information out of the main volume of the EIS and present it as an Appendix, separate to the main EIS document.

The EIS, together with its appendices ought to constitute a self-contained document i.e. reliance on references to documentation that is not readily available (e.g. online) is to be avoided. Topics which are not directly relevant to the EIS are excluded to maintain focus on environmental matters. (e.g. information on project need or justification may be more appropriately included in a planning application report instead).

\section{4.5 NON-TECHNICAL SUMMARY}

\textbf{Introduction}

The regulations include this requirement because one of the fundamental objectives of the EIA process is to ensure that the public are made aware of the environmental implications of any decisions about whether to allow new projects to take place.

It is often useful to present the non-technical summary as a separate and self-contained document, which can be widely distributed, to the public who are likely to be affected by the project. It is helpful if it contains the name and address of the CA to whom any comment should be sent, indicating a latest date for such observations.

A non-technical summary of an EIS is different to and should not be confused with public relations or promotional material (see also \textsection{2.6}).

While it is a summary it must cover the issues that arose in sufficient detail so that the issues their implications, can be clearly understood.

\textbf{Structure and Contents}

The non-technical summary is generally laid out in a similar, but condensed, format to the main EIS, i.e. describing the project, existing environment, principal effects and mitigation measures. It may also summarise the ways in which the EIA process helped to reduce environmental conflicts\textsuperscript{48}. It often includes a site location and site layout plan (showing context) together with any easily interpreted graphical representation of the proposed project, such as a perspective drawing.

\textbf{Language and Terms}

The non-technical summary should be short and easily followed, but it should not omit or understate any effects which may be controversial. All key likely significant effects should be included.

Technical terms, abbreviation, references or jargon should not be used.

\textsuperscript{47} Institute of Environmental Management and Assessment reference (ref section c.10.4 of SNH Guidelines)

\textsuperscript{48} \textsection{3.9.2}
PRESENTATION MEDIA

The copies of an EIS accompanying a consent application need to be made available in whatever format is required by the CA and in accordance with requirements of the regulations. For public information or for distribution to other stakeholders or interested parties, digital distribution can be particularly useful. It is increasingly practical and useful for EISs to be made available online.

It is increasingly useful and acceptable to submit copies on digital media such as CDs, DVDs or online.
5. NEXT STEPS IN EIA PROCESS

5.1 INTRODUCTION

After completion of the EIS, further stages in the EIA process (ref section 2.3) are considered under the following headings: scrutiny & consent and enforcement & monitoring. These are not part of the preparation of the EIS—but are worthwhile considering to improve the applicant’s focus on how to present material in a way that facilitates the EIA by Consent Authorities.

5.2 SCRUTINY & CONSENT

Submission to Competent Authority

Once the EIS has been completed and prior to submission as part of the consent application, the developer must follow regulatory requirements regarding public notification that an EIS is being submitted and must submit a specific number of copies of the EIS. The number of copies and format are best discussed with the CA prior to submission.

Competent Authority Assessment

The CA will assess the EIS to ensure that it is compliant with the requirements of the Regulations. This is usually done by checking that it contains all of the main requirements, as set out in section 2.4.5. Where any of these items are not included, the CA will expect to see an explanation as to why the particular item or items were omitted. The CA will also check that the EIS was prepared by competent experts (Ref section 2.5).

The CA consults with environmental authorities and the public to seek their observations or submissions on the review and must consider their observations as part of the determination process.

The CA assesses the EIS in detail to determine whether it has sufficient information on the environmental effects of the project to enable it to make an adequately informed determination. In addition to the legislation and these Guidelines there are many other sources of reference which the Authority may find useful during the review. Links to many of these are included in web page.

If, during the review, the CA determines that the information presented in the EIS is not sufficient for it to make a determination, by reference to prescribed criteria and having regard to these Guidelines, then the developer may be asked to provide further information.

Competent Authority Decision

The CA then makes its decision whether to grant or refuse the application having been informed by the EIS. If granting, it may attach conditions to the consent. The conditions will typically seek to ensure adherence to mitigation and monitoring measures presented in the EIS. These may be augmented and modified by the CA.

Article 8a of the Directive specifies various requirements in relation to the making of the decision. These mainly relate to reasoned conclusion, conditions, mitigation measures and monitoring. While some of these requirements are not yet included in domestic regulations, CAs may have regard to them in carrying out their functions.

51 Annex 4 of the EIA Directive
5.3 ENFORCEMENT & MONITORING

Member States should ensure that mitigation and compensation measures are implemented, and that appropriate procedures are determined regarding the monitoring of significant adverse effects on the environment resulting from the construction and operation of a project, inter alia, to identify unforeseen significant adverse effects, in order to be able to undertake appropriate remedial action. Such monitoring should not duplicate or add to monitoring required pursuant to Union legislation other than this Directive and to national legislation.

If consent has been granted and the project proceeds then the developer is obliged to adhere to the specific mitigation measures and monitoring commitments contained in the EIS, as modified by any conditions attached to the consent, if relevant.

Applicants are strongly advised to give careful consideration to the wording of undertakings to mitigate – to ensure that they clearly result in actions that can be readily identified by monitoring and acted upon by enforcement procedures.

Monitoring requirements may include reporting to the CA, the planning authority or other authorities. Where triggers have been attached to monitoring results then mitigation measures are activated as required by the EIS or consent conditions. This could be during construction, commissioning, operations, decommissioning or reinstatement.
5.1 Environmental Impact Statement Monitoring and Evaluation

DEVELOPMENT

CONSENT CONDITIONS

DEVELOPMENT

OPERATION

MODIFICATION

EVALUATION

MONITORING

CONSTRUCTION COMPLIES WITH CONSENT?

EFFECTS COMPLIES WITH CONSENT?

ALTERATIONS COMPLIES WITH CONSENT?

ENFORCEMENT

BUILD ONLY IN COMPLIANCE WITH CONSENT

TAKE ACTION TO ENSURE COMPLIANCE WITH CONSENT

MAKE NEW APPLICATION

Figure 5.1 Monitoring and Evaluation
APPENDIX I – GLOSSARY OF TERMS

This glossary provides standard definitions of terms that may be useful in preparation of EISs.

Alternatives
A description of alternatives - as defined by the Regulations - alternative locations, alternative designs and alternative processes.

Amelioration
Measures to diminish a negative effects.

Aquifer
A body of permeable rock that is capable of storing significant quantities of water.

Aquiclude
A rock with very low permeability, impermeable to groundwater flow, which may act as a boundary to an aquifer.

Archaeology
The study of past societies of any period through the material remains left by those societies and the evidence of their environment. The material things (objects, monuments, sites, features, deposits) which archaeology uses to study past societies are referred to as ‘archaeological heritage’.

Baseline Survey
A description of the existing environment against which future changes can be measured.

BAT – Best Available Techniques
Best Available Techniques shall mean the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the effects on the environment as a whole:

- ‘techniques’ shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;
- ‘available’ techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator;
- ‘best’ shall mean most effective in achieving a high general level of protection of the environment as a whole.

BAT may be determined in each EU member state with reference to the BREF documents.

BATC - “BAT conclusions”
BATCS is a document containing the parts of a BAT reference document laying down the conclusions on best available techniques. According to Article 14(3) of the IED, BAT conclusions shall be the reference for setting the permit conditions to installations covered by the Directive.
BATNEEC - Best Available Technology Not Entailing Excessive Costs
Use of BATNEEC means that a greater degree of control over emissions to land, air and water may be exercised, utilising the best currently available technologies. In the identification of BATNEEC emphasis is placed in pollution prevention techniques including cleaner technologies and waste minimisation. This was required by the EPA as part of Integrated Pollution Control Licence under the EPA ACT 1992. BATNEEC is superseded by BAT.

**Biotic**
Processes which relate to living organisms.

**BPEO - Best Practicable Environmental Option**
Takes accounts of the total pollution from a process (including the risk of transfer of pollutants from one medium to another) and the technical possibilities for dealing with it.

**BREF (See Article 16 of IPPC Directive 96/61/EC)**
These are reference documents developed under the aegis of the European Commission with input from industry, (MS) Regulators and NGO's, at the European IPPC Bureau in Seville. These documents are intended to advance the development of BAT throughout the EU (see [http://www.eippcb.jrc.es](http://www.eippcb.jrc.es)).

**Competent Authority**
Any authority charged with examining an Environmental Impact Statement with a view to issuing a consent to develop.

**Commissioning**
The rendering fully operational of a project or process.

**Decommissioning**
The final closing down, and putting into a state of safety of a development, project or process when it has come to the end of its useful life.

**“Do nothing” Scenario**
The situation or environment which would exist if no intervention, development or project were carried out.

**Ecology**
The study of the relationships between living organisms and between organisms and their environment (especially animal and plant communities), their energy flows and their interactions with their surroundings.

**Effluent**
Any liquid discharged from a source into the environment.

**Environmental Impact Assessment – EIA (see sections Legislation, 1.1)**
The process of examining the environmental effects of projects - from consideration of environmental aspects at design stage through to preparation of an Environmental Impact Statement, evaluation of the EIS by a competent authority and the subsequent decision as to whether the project should be permitted to proceed, also encompassing public response to that decision.

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52 It is worth noting here that this is not necessarily an option under the Local Government (Planning and Development) Act 1999, where the owner or occupier of a protected structure has a duty to protect it from endangerment and it can be an offence to allow a structure to deteriorate.
Environmental Impact Statement – EIS
A statement of the effects, if any, which the proposed project, if carried out, would have on the environment.

Environmental Factor/ Topic
EIA legislation has defined a number of headings that are used to organise descriptions about the environment. For consistency the terms are used as headings for all discussions of the characteristics of the environment in EIA.

Emission
a) an emission into the atmosphere of a pollutant within the meaning of the Air Pollution Act 1987.
b) a discharge of polluting matter, sewage effluent or trade effluent within the meaning of the Local Government (Water Pollution) Act 1977 to waters or sewers within the meaning of that Act.
c) disposal of waste, or
d) noise.

EPA
The Environmental Protection Agency

Geology
The science of the earth, including the composition, structure and origin of its rocks.

Ground Water
The water which flows underground through naturally porous parts of the soil or rock.

Habitat
The area in which an organism or group of organisms live.

Hydrology
The science concerned with the occurrence and circulation of water in all its phases and modes, and the relationship of these to man.

Impact
The degree of change in an environment resulting from a project.

Impact Anticipation
Using knowledge of both the project and the receiving environment to predict the likely effects and consequences.

Impact Avoidance
The modification of project decisions (about site location or design for example) having regard to predictions about potentially adverse environmental effects.

Industrial Emissions – IE
Emissions from a process, development or activity specified in EU (Industrial Emissions) Regulations which may be subject to licencing by the EPA. More information is available on EPA website.

http://www.epa.ie/licensing/industrialemissionslicensing/#.VQIV3tKsUph
Infrastructure
The basic structure, framework or system which supports the operation of a project for example, installations such as roads and sewers which are necessary to support development projects.

Integrated Pollution Control - IPC
This was a National licensing/enforcement regime for specified activities. It aimed at preventing or resolving pollution problems rather than transferring them from one medium to another. All major emissions to land, air and water were considered simultaneously and not in isolation in order to minimise pollution of the environment as a whole. IPC was superseded by IPPC54.

Integrated Pollution Prevention and Control – IPPC (see Directive 96/61/EC)
This was an EU-wide licensing/enforcement regime for specified activities. It aimed to prevent, reduce, and as far as possible eliminate pollution by giving priority to intervention at source and ensuring prudent management of natural resources, in compliance with the ‘polluter pays’ principle and the principle of pollution prevention. Emphasis was placed on energy efficiency and residuals management. It has been superseded by IE55.

Land-use
The activities which take place within a given area of space.

Life Cycle
Refers to the stages in the life of a process or project including construction, operation, existence, extraction, manufacture, storage, transport, handling, use, disposal and decommissioning.

“Likely Effects / Impacts”
The effects that are specifically proposed or planned to take place - based on an understanding of the interaction of the proposed project and the receiving environment. (See also Potential Effects and Residual Effects)

Methodology
The specific approach or techniques used to analyse impacts or describe environments.

Mitigation
Measures designed to avoid, reduce, remedy or compensate for impacts.

Mitigation:
- by Avoidance
  When no change is caused.
- by Prevention
  When specific design measures prevent effects from being realised.
- by Reduction
  When an impact is lessened.
- by Offsetting
  When an adverse effect is balanced with a positive effect.

Mitigation Measures
The means by which decisions about a proposed project are modified to avoid, reduce or remedy the adverse environmental effects that are identified.

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Monitoring
The repetitive and continued observation, measurement and evaluation of environmental data to follow changes over a period of time, to assess the efficiency of control measures.

NGO
An acronym used to describe Non-Governmental Organisations.

Paleobiology
The scientific study of the environments of past geological times, their land forms, climates, flora and fauna.

Palaeontology
The branch of science that deals with extinct and fossil animals and plants.

Particulates
Fine solids or liquid droplets suspended in the air.

Pedology
The scientific study of the formation, characteristics, distribution and use of soils.

Pollution
Any release to the environment which has a subsequent adverse effect on the environment or man.

Potential Effect/ Impact
The effect/ impact that would occur without mitigation.

Precautionary Principle
The theory that the absence of complete information should not preclude precautionary action to mitigate the risk of significant harm to

Processes
The activities which take place within a development.

Project Promoter
A term sometimes used to describe persons or organisations proposing to carry out a project.

Radio Nuclide
An atom that has an unstable nucleus which spontaneously disintegrates and emits radiation (alpha, beta particles or gamma radiation or both).

Reasonably Foreseen
A working assumption about the future that assumes that a project will be developed as planned and used within a receiving environment that will change in accordance with currently evident trends. It will include a consideration of the likelihood and consequences of abnormal occurrences - such as accidents.

Receptor
Any element in the environment which is subject to impacts.
Residual Effect/ Impact
The effect/ impact after mitigation.

Risk Assessment
An analytical study of the probabilities and magnitude of harm to human health or the environment associated with a physical or chemical agent, activity or occurrence.

Scoping
The process of identifying the significant issues which should be addressed by a particular Environmental Impact Assessment as well as the means or methods of carrying out the assessment.

Screening
The process of assessing the requirement for a project to be subject to Environmental Impact Assessment based on project type and scale and on the significance or environmental sensitivity of the receiving environment.

Scrubber
Device for flue gas cleaning

Services
The conduits, pipes and lines that carry water, phones, electricity, sewage etc.

Sensitivity
The potential of a receptor to be significantly changed.

Significance (of factor)
The role or value of an environmental factor.

Significance (of impact)
The importance of the outcome of the impact (the consequences of the change), sensitivity of a receiving environment to change or the consequence of change for the receiving environment.

Statutory EIS
A term sometimes used to describe an EIS prepared in accordance with the regulations.

Statutory Consultees
Organisations and authorities stipulated by Legislation to be notified by a competent authority if an application is made which might give that organisation a cause for concern.

Surface Water
Natural water bodies such as streams, lakes and rivers.

Sustainable Development
Defined by the Brundtland Commission 1987
“Development that meets the needs of the present without comprising the ability of the future generation to meet their own needs“.

Threshold
The magnitude of a project which, if exceeded, will trigger the requirement for an Environmental Impact Assessment to be carried out.
Vector
An organism (animal or fungus, for example), which transmits or acts as a carrier of parasites or disease.

Waste Licence
A waste licence is a single integrated licence dealing with emissions to all environmental media and the environmental management of the facility.
APPENDIX II - LEGISLATIVE BACKGROUND

BACKGROUND
The 1992 Environmental Protection Agency Act provides for the preparation by the Agency of Guidelines on the information to be contained in environmental Impact statements. The Act further provides that those preparing and evaluating environmental impact statements shall have regard to such Guidelines.

The Agency published Guidelines in 2002. Since then National and EU regulatory frameworks have changed, including adoption of Directive 2014/52/EU amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment. There have also been developments in areas such as IPC licencing, Waste Management, Water Basin Management, Flood Risk Assessment and Natura 2000 Assessments which have implications for EIA. A considerable body of case law has emerged, nationally and from the European Court of Justice (ECJ). Many useful guidance documents have also been prepared by EU, national and sectoral bodies on various aspects of environmental impact assessment. In this context, the Agency decided to review and update the Guidelines.

LEGISLATIVE CONTEXT
EIA requirements, including requirements for information to be contained in EISs, derive from the European Commission’s EIA Directive. This is Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment. It has been amended three times; by Directives 97/11/EC, 2003/35/EC, 2009/31/EC and 2014/52/EU. The primary objective of the Directive is to ensure that projects which are likely to have significant effects on the environment are subject to an assessment of their likely impacts.

The Directive applies to a wide range of public and private projects which are defined in its Annexes I and II. It makes EIA mandatory for all Annex I projects on the basis that these types of projects are considered to always have significant environmental effects.

In the case of Annex II projects, Member States have to decide on the basis of thresholds, other criteria (such as site sensitivity) or a case by case examination, whether or not a project should be subject to EIA. In making this decision, criteria laid down in Annex III must be taken into account. Annex III specifies the information that the developer is obliged to provide in an EIS.

In addition to transposing the mandatory requirements for Annex 1 projects into domestic legislation, Ireland chose to set thresholds for each of the project classes in Annex II. In setting these thresholds, account was taken of the relevant circumstances in Ireland, including the general nature, size and location of projects and the sensitivity of the receiving environment. The thresholds were then set at levels which aim to differentiate between those projects which, by virtue of their nature, size or location, would be likely to have a significant effect on the environment and those which would not.

The implementing legislation also addresses the possible need for EIA for projects which are below the specified thresholds (referred to as sub-threshold projects). In effect, this requires EIA where the CA considers a project as having the potential to have significant effects on the environment. This addresses key requirements in relation to the “nature, size and location” criteria referred to in Article 2 of the Directive.

In the light of the approach adopted by Ireland in relation to Annex II projects, particularly the relatively low level at which thresholds were set, there should be only a limited need for EIA below the specified thresholds.

The Irish EIA system implements the EU Directive through the integration of its requirements into the land-use planning consent system and several other consent systems covering, for example, foreshore development, roads/motorway construction, light rail systems and the laying of oil and gas pipelines, Industrial Emissions Licencing and Waste Licencing. Requirements on developments,
activities or projects which may arise from the provisions of legislation such as the European Communities (Natural Habitats) Regulations 1997, the National Monuments Acts 1930 to 1994 and the Wildlife Acts 1976 to 2000 are also significant.

**DIRECTIVE 2014/52/EU**

A number of changes are provided for by Directive 2014/52, the most recent amendment to the Directive. Key changes in the Irish context are:

1. **Screening**
   - Modification of Annex III to include demolition works as part of a project description
   - Inclusion of a formal screening procedure for Annex II projects
   - Justification of negative screening decisions
   - Procedures for taking account of unsolicited comments at screening stage

2. **EIA Quality**
   - Mandatory assessment of alternatives studied by the developer
   - Quality control of EIA preparation and review
   - Mandatory post-EIA monitoring of significant effects
   - Incorporation of mitigation and monitoring measures in consents and ensuring that developers deliver these measures

3. **Other Procedures**
   - Co-ordination and integration of procedures under the EIA Directive and other EU Directives such as the Habitats Directive and the Industrial Emissions Directive
   - Specific time-frames for public consultation

Amendments also introduce the need to address, where relevant:
- use of natural resources during construction & operation
- impacts of a project on climate change and impacts of climate change on a project
- land take, soil erosion, compaction and sealing
- biodiversity
- protection of the marine environment
- risks to human health, cultural heritage or the environment (due for example to accidents or disasters)

Directive 2014/52/EU replaces the term environmental impact statement (or EIS) with the term environmental impact assessment report. These Guidelines continue to use the former as this is the established term and the term used in the current regulations. (see also section 2.2.)

Member states have until April 2017 to transpose these provisions.
APPENDIX III – EIA RELATED GUIDELINES / GUIDANCE

A list of references will be included - per the links that will be provided on a dedicated EPA webpage.
ENDNOTES

5. link to case law on JR
AN GHNÍOMHAIREACHT UMA CHAOMHNÚ COMHSHAOIL

Tá an Ghniomhaireacht um Chaomhnú Comhsaoil (GCC) freagrach as an gcomhsaoil a chaomhnú agus a fheabhsú mar shócháiní luachmhó do mhuintir na hÉireann. Táimid tionscanta do dhaoin agus dom comhsaoil a chosaint ó éifeachtáid díobhálachá a nádúracht agus agus trauailthe.

Is féidir obair na Gníomhaireachta a roinnt ina trá phríomhfeidhmí:

- Rialú: Déanamid córas éifeachtach rialaithe agus chomhiontacht comhsaoil a chur i bfeidhm chun tortháid náthaí a chumhacht agus chun díorú ortu síad nach gcleonann leis na córais sin.
- Eolas: Soláthraidhíom shonraí, faisnéis agus measnú cumbhaoil atá ar ardchaighdeán, spricodhírthe agus tráthnúl chun bonn eolais a chur faoin gcintiointeachta ar gach leibhéal.
- Tacalocht: Bvímid ag saothrú i gcormhach le grúpaí eile chun tacú le comhsaoil atá gán, táirgíúl agus cosanta go maith, agus le hionpar a chuirfidh le comhsaoil inbhuanaithe.
- Ár bhFreagrachtaiti

Ceadúnú

- Dánaímid na gníomhaoilte seo a leasadh a rialú íosa nach ndéanann siad dochar do shláinte an phobail nó don gcomhsaoil.
- Saoráidí drámaíola (m.sh. láthairéin lionta talún, loiscoirí, stáisiún aistrithe drámaíola);
- Gníomhaoilte tionscailicha ar scála móir (m.sh. déantaíochta cógasíochta, déantaíochta stróighne, stáisiún chumhsaoil);
- An díantalmhasíochta (m.sh. muca, éanlaith);
- Usáidís shrianta agus scailleadh rialaithe Orgánach Géinmhodhnaithte (GÖM);
- Foinís radaíochta ianúcháin (m.sh. trealamh x-gha agus radaeiteoire, foinís tionscailacha);
- Áiseanna móra stórála peitril;
- Scardadh drámaíse;
- Gníomhaoiltei dímpaill ar farrage.

Forfhheidhmí Náisiúnta i leith Cúrsaí Comhsaoil

- Clár náisiúnta iníuichta agus cígréachtach a dhéanamh gach bliain ar shaoráidí a bhfuil ceannadó nón gníomhaireacht acu.
- Maoirseacht a dhéanamh ar fhreagraigh staonta comhsaoil na n-údaráis átitúil.
- Caighdeán an uisce óil, arna sholáthar ag soláthraithe uisce n-údarás áitiúil.
- An dlí a chur orthu siúd a bhfriseadh dlí a chumhacht agus a dhéanann deachtar ón gcomhsaoil.

Bainistíocht Uisce

- Monatóiríocht agus tuairisciú a dhéanamh ar chéile na cumbhaoil aithe, lochanna, uscíidhríochta agus cósta na hÉireann, agus screamhúsí; leibhéal uisce agus streithanta uisce le hainmhas.
- Monatóiríocht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce.
- Monatóiríocht agus tuairisciú a dhéanamh ar Cháilíocht an Uisce Snámha.

Bainistíocht an Gháiseachta

- Monatóiríocht a dhéanamh ar chéileocht an aer agus Treoir an AE a hAer an Dóraí (CAFÉ) agus chur aithne feidhm.
- Tuairiscíocht neamhspleách le chabhrú le cinniointeachta ar rialais náisiúnta agus na n-údaráis átitúil (m.sh. tuairiscíocht tréimhseil ar staid Chomhsaoil na hÉireann agus Tuarsáilgha ar Tháscairí).
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