Consenting, EIA and HRA Guidance for Marine Renewable Energy Developments in Scotland

PART THREE – EIA & HRA GUIDANCE

EMEC and Xodus AURORA Report

Scottish Government

Xodus AURORA

8 Garson Place / Stromness / Orkney / KW16 3EE / UK

T +44 (0)1856 851451 **E** info@xodusgroup.com

www.xodusgroup.com

EMEC

Old Academy / Stromness / Orkney / KW16 3AW / UK

T +44 (0)1856 852060 **E** info@emec.org.uk

www.emec.org.uk

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1 INTRODUCTION

1.1 Purpose of Part Three

Part Three of this Guide provides clear and comprehensive advice for a range of users on what the Environmental Impact Assessment (EIA) and Habitats Regulations Appraisal (HRA) processes involve. Summary of the EIA process and how it can incorporate HRA is provided in Section 1.2, Figure 1. It should be noted that although some stages of EIA and HRA are complementary and can be shared, they are two separate processes with different legislative requirements. For example, it is possible that HRA may be required for some projects that do not require EIA, and vice versa.

There is an abundance of text outlining and providing guidance on the legislative background to EIA, which this Guide does not seek to reproduce. An overview of the regulatory context for EIA is provided in Part Two of this Guide <insert hyperlink>. Part Three focuses specifically on the methods of the EIA and HRA processes, specifically in relation to marine renewables projects. Scottish Natural Heritage (SNH) has issued comprehensive guidance on EIA (SNH, 2009, (3rd Edition)) authored by D Tyldesley Associates) which has been taken into account in this Guide. See: http://www.snh.gov.uk/planning-and-development/environmental-assessment/eia/

This guidance provides a reference point for developers and regulators alike to ascertain exactly what is required to achieve a thorough and robust approach to EIA and HRA. In particular it is hoped that this will ensure consistent and high quality application of these required procedures from the early stages of the developing marine renewable energy industries.

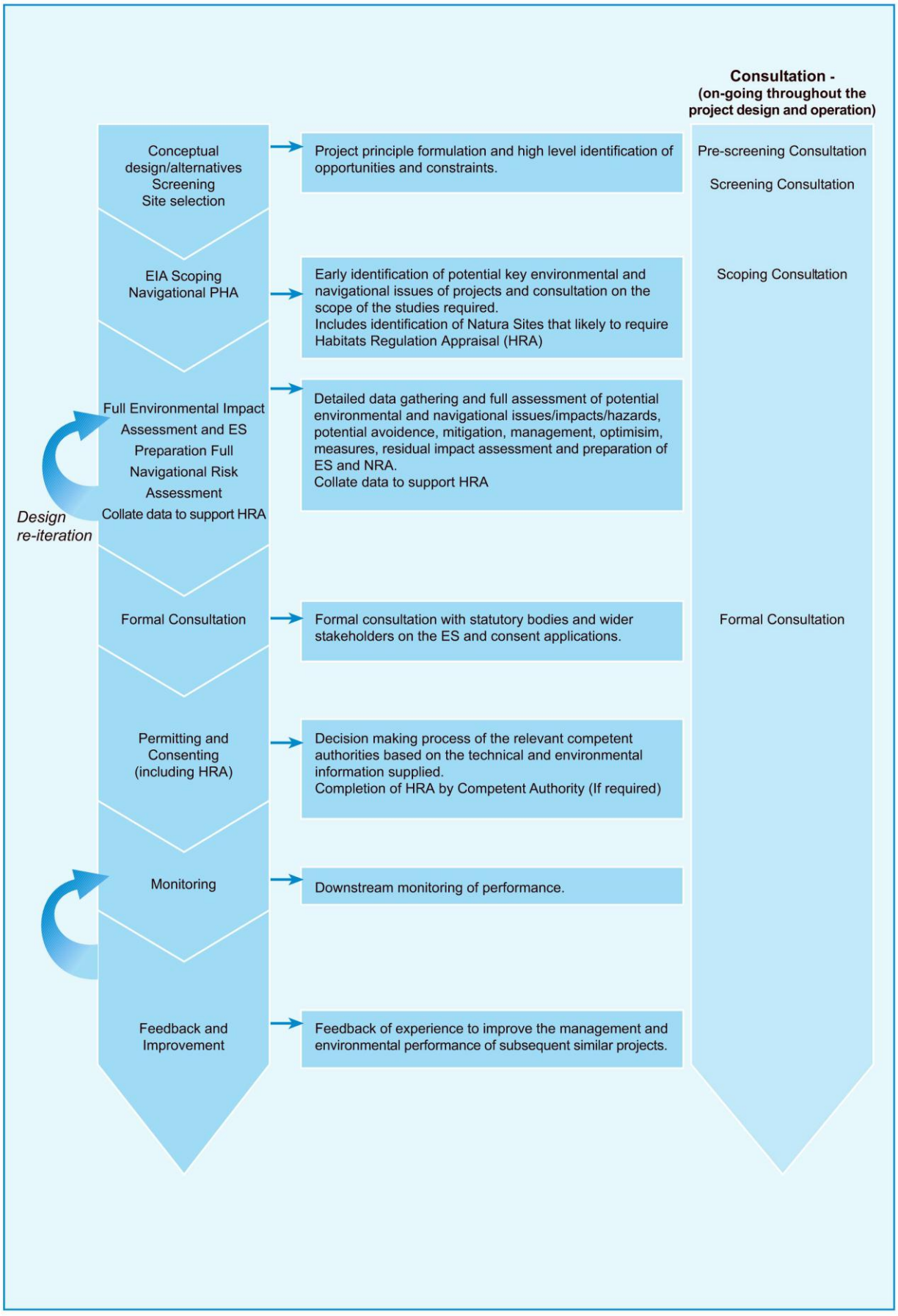
1.2 Structure

	Step in the Process
Stage 1 - Before submission of the Environmental Statement	Site selection and design Pre-application consultation Deciding whether an EIA is required What needs to be done if an EIA Is not required Scoping the EIA Gathering information on the project Gathering information on the environment Consultation throughout the core EIA Assessing the significance of impacts Mitigation measures Environmental Management Plan Environmental Monitoring Plan ES compilation and content ES review and quality control
Stage 2 - Submission of the Environmental Statement and consideration of the information	Submission of the ES
Stage 3 – Habitats Regulations Appraisal	Habitats Regulations Appraisal
Stage 4 – Project determination	Making the decision
Stage 5 - Implementation and compliance	Implementation of mitigation and compensation measures Monitoring Review, reassessment and remedial measures Project modifications

This part of the Guide is structured to follow the chronological progression of the EIA process from pre-application consultation and screening to the final decision by Marine Scotland Licensing Operations Team (MS-LOT) and the actions thereafter. The roles of both developers and MS-LOT are explained as necessary within these sections drawing attention to statutory requirements and elements of good EIA and HRA practice. More detail on the administrative structure, functions and responsibilities of MS-LOT is provided in Part One of the Guide <insert hyperlink>.

EIA can be broken down into a series of different stages, which are reflected in the structure of this Guide and summarised below. Whilst the four main stages will normally follow consecutively, the steps in each stage can be undertaken concurrently or in a different order. In practice the process rarely proceeds in a simple linear fashion; for example, environmental studies may identify a significant adverse impact which can only be overcome by altering design, so the process can be iterative.

Figure 1 Overview of EIA/HRA Processes



2 THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

	Step in the Process
Stage 1 - Before submission of the Environmental Statement	**Site selection and design** **Pre-application consultation** Deciding whether an EIA is required What needs to be done if an EIA Is not required Scoping the EIA Gathering information on the project Gathering information on the environment Consultation throughout the core EIA Assessing the significance of impacts Mitigation measures Environmental Management Plan Environmental Monitoring Plan ES compilation and content ES review and quality control
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The term 'Environmental Impact Assessment' describes a procedure that must be followed for certain types of project before they can be given development consent. The procedure is a means of drawing together, in a systematic way, an assessment of a project's likely significant environmental effects. This helps ensure that the importance of predicted effects and the scope for reducing negative effects are properly understood by the public and regulatory bodies (in this case, MS-LOT, *<insert hyperlink>*) before a decision on the outcome of the application is made.

Many marine renewable energy projects have a footprint in both the marine and terrestrial environments which may result in the identification of a large number of potential environmental impacts. It is important that the EIA process focuses on those issues that present the greatest environmental risk.

2.1 Site Selection and Design Criteria

In embarking on the EIA process it is important that developers recognise that site selection and design development are integral parts of the EIA process. Since the overall purpose of the EIA process is to assess and reduce the impacts that a development is likely to have on the environment, it is sensible for developers to avoid particularly environmentally sensitive sites. For example, certain sites may be particularly environmentally sensitive if located in a Special Area of Conservation (SAC) designated for reasons such as important seabed habitats. Alternatively, if offshore, it may be that fish spawn at the proposed development site at certain times of the year. There may simply be operational issues associated with a particular site due to access and transport links and a site may be discounted for those reasons.

Any existing or developing Marine Spatial Plans relating to the proposed area of development should be fully considered by the developer during the site selection and initial design processes. Any relevant Strategic Environmental Assessments (SEAs), (such as the Scottish Marine Renewables SEA, prepared for the Scottish Executive in March 2007) may also provide input at this stage.

Project decision-making must be undertaken in a transparent manner, clearly demonstrating the incorporation of environmental criteria. From the earliest stages of a project (concept) assessment, it is good practice for the project team to introduce a process to facilitate and document decisions in a transparent and objective way. The process should be consciously designed to keep the decision-

making qualitative and uncomplicated. The strength of such a process is ensured through having the right people involved which feeds experience and multi-disciplined input into the decision making process. The responsibility of managing the records of option selection should lie with the project manager / project engineer rather than the environmental manager. It is important that the assessment of alternatives is well documented/recorded as it is a requirement of the EIA Regulations that the options/alternatives assessment process is explained in detail in the ES.

Key information

To avoid unnecessary environmental impacts and to reduce development constraints that could potentially be avoided in the early stages of the EIA process, developers should consider the following when selecting a potential development site and considering design of the development:

- Marine Spatial Planning.
- The proximity of the site to nature conservation interests.
- The proximity of any other developments and therefore potential cumulative and in combination impacts.
- Methods of operation.
- Regulatory context.
- Potential impacts on landscape and visual amenity.
- Availability of access and necessary infrastructure.
- Effects on recreation and tourism.
- Impacts on wildlife, e.g. birds and cetaceans.
- Impacts on navigation and fisheries interests.

2.2 Pre Screening Consultation

In considering a new project prospective developers are encouraged to participate in pre-screening consultation; essentially they are advised to discuss their proposals with MS-LOT as soon as possible. Pre-application consultation is not mandatory. However, if the applicant can demonstrate that there has been a significant attempt from the outset of the project to reduce its potential environmental impact then this is likely to benefit the project.

Key information

The benefits of pre-application consultation to the developer:

- Early access to environmental data, e.g., seabed data held by Marine Scotland.
- Consideration of the compatibility of the proposal with the existing environment.
- Identification of significant environmental issues where known will be highlighted at the start of the project.
- The process encourages developers to establish a network of contacts and develop relationships with key organisations.
- Through pre-application consultation developers will also be given an indication of acceptable methodologies and how the subsequently collected data should be presented.

However, developers may be sufficiently confident and well informed about the licensing process and associated requirements, that they do not feel the need for pre-screening consultation, preferring to present the information they have about their proposal in a screening document at the outset.

2.3 EIA Screening

	Step in the Process
Stage 1 - Before submission of the Environmental Statement	Site selection and design Pre-application consultation **Deciding whether an EIA is required** **What needs to be done if an EIA Is not required** Scoping the EIA Gathering information on the project Gathering information on the environment Consultation throughout the core EIA Assessing the significance of impacts Mitigation measures Environmental Management Plan Environmental Monitoring Plan ES compilation and content ES review and quality control
Stage 2 - Submission of the Environmental Statement and consideration of the information	Submission of the ES
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Screening, simply defined, is the process by which a project is assessed to determine if a statutory EIA and ES is required for a specific project or development. Screening is the first formal consultation stage in the EIA process.

Screening will determine if the project features within Annex I or Annex II of the European Council (EC) Directive on EIA (85/337/EEC as amended by 97/11/EC). Annex I of this directive provides a list of projects for which an EIA is mandatory and a statutory ES is required. Projects listed under Annex II of the EC Directive 97/11/EC may require an EIA if it is concluded that the project will exceed certain limits or thresholds. Marine renewable energy projects are likely to fall within Annex II. Annex (or Schedule) II[1] projects will require EIA where any part of the development is likely to be carried out in a sensitive area.

Screening requires the developer to present a document to the regulator (MS-LOT in this case) for comment. It is a statutory requirement that the regulator provides a screening response within a specified timeframe of the screening request unless otherwise agreed in writing.

In requesting a screening opinion the developer should provide the regulator with key information on the proposed project within a screening document. The screening document should include:

- Details of device design and operation.
- Mooring method or options.
- Size of the intended project.
- Area or areas under consideration for development and the wider development (offshore and onshore requirements).
- Any relevant maps, charts or site drawings.
- An idea of timescale and duration of the development.
- A summary of all discussions already held with local stakeholders and/or The Crown Estate.
- Any specific queries.

[1] The EC Directive on EIA is transposed into national legislation in the form of the EIA Regulations. Annex II projects as defined under the EC Directive are referred to as Schedule II developments under the EIA Regulations.

- Early identification of significant constraints that may potentially prevent developments
- A statement of any navigational issues envisaged.

Following a decision, MS-LOT will provide the developer with a screening opinion in writing. This will include:

- Whether or not a statutory ES or an Appropriate Assessment (AA) are likely to be required.
- Any specific site information that MS-LOT may hold such as seabed data may be made available.
- Information on any specific sensitivity at the planned site/s.
- An indication of the type and possibly the extent of environmental data collation/collection likely to be required.

If a statutory ES is required the developer then progresses to EIA scoping. If a statutory ES is not required, the developer will be advised if or what information/studies will be required to support consent applications.

If the developer does not agree with the screening opinion provided, i.e., the requirement for a statutory ES, the matter would generally be referred to the Scottish Government. Further details to be provided on request from MS-LOT.

2.4 EIA Scoping

	Step in the Process
Stage 1 - Before submission of the Environmental Statement	Site selection and design Pre-application consultation Deciding whether an EIA is required What needs to be done if an EIA Is not required
	Scoping the EIA
	Gathering information on the project Gathering information on the environment Consultation throughout the core EIA Assessing the significance of impacts Mitigation measures Environmental Management Plan Environmental Monitoring Plan ES compilation and content ES review and quality control
Stage 2 - Submission of the Environmental Statement and consideration of the information	Submission of the ES
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Scoping is an important early stage within the EIA process. It highlights the issues that will need attention and focuses the content of the ES at an early stage. Under the EIA Regulations a developer can request a formal scoping opinion from the regulator, in this case, MS-LOT.

The purpose of scoping is:

- To focus the EIA on environmental issues and their potential impacts, indicating which will need most attention.
- To identify which issues are unlikely to need detailed study.
- To identify which issues are likely to require detailed desk study and / or baseline survey requirements.

- To provide a means to discuss methods of impact assessment and reach agreement on the most appropriate.

In summary, scoping determines what information should be submitted to the regulator (MS-LOT) within the ES. It identifies what actions need to be taken to compile the required information and the level of detail that is likely to be needed.

In order to conduct a scoping exercise the developer may write to MS-LOT requesting a formal opinion on what data should be included in the ES. This is defined as a 'formal scoping opinion'. However, in order to request this, developers should first provide information on the proposed project to MS-LOT. The document within which this information is included is defined as a 'scoping report'.

In compiling a scoping report the developer may wish to produce a scoping matrix summarising the activities associated with the development and the sensitive receptors which they are likely to affect. This could be developed through, e.g., an Environmental Issues Identification (ENVID) as described below, in Part Three, Section 2.5.2. Such an approach helps to assess the overall project risk and highlight the higher risk issues on which the EIA should focus. A plan can then be devised for potential EIA studies, which will include details of the methods to be used and the resources required.

Navigational issues are one of the key impacts that need to be addressed for offshore marine renewables developments. Despite the requirement for this assessment to be primarily safety driven, impacts on other sea users also needs to be considered in the EIA and therefore it makes sense to address navigational aspects as an integral part of the EIA process. The Maritime and Coastguard Agency (MCA) require a navigational Preliminary Hazard Analysis (PHA) to be undertaken in order to scope the requirements of the full Navigational Risk Assessment (NRA). It is therefore recommended that the PHA is undertaken at the same time as the EIA scoping. The results of the PHA assessment can be included in the main text of the EIA scoping report and the stand alone report (as required by the MCA) included as an appendix to the EIA scoping report.

The information which should be submitted with a formal scoping request includes:

- Description of the project, providing further detail to that provided at screening.
- Summary of the installation and decommissioning methods.
- Project location, including a location map, for all offshore and onshore aspects of the project.
- List of the receptors likely to be affected by different stages or activities of the project.
- Identification of the potential environmental impacts with an estimation of their likelihood and potential degree of impact.
- Details / plan for conducting technical studies, methodologies and resources to be used.
- Address any comments received as feedback from the screening stage.

Other useful details for inclusion in the scoping report include:

- Suggested alternatives to the development.
- Details of the baseline surveys and monitoring being proposed.
- Proposed stakeholder consultation strategy, including a proposed list of consultees.
- Suggested structure, content and length of the ES.
- Known data gaps.

MS-LOT has a statutory duty on the behalf of the Scottish Ministers to provide a scoping opinion within a specified timeframe, unless otherwise agreed in writing with the developer. The opinion provided will draw upon the knowledge of the Marine Renewables Facilitators Group (MRFG), Marine Scotland Science, and other advisors as necessary. Should a project be located in close proximity to a national boundary MS-LOT will consult with relevant transboundary authorities. MS-LOT will collate responses on the scoping document and return this to the developer in the form of a scoping opinion.

Developers may wish to undertake a wider informal scoping exercise to establish good communication channels with non statutory consultees at an early stage in the project. This will help identify potential impacts of the project and potential objections which if dealt with could reduce the potential for project delays. Opening such communication channels will also help the developer to draw upon specialised and local knowledge relevant to issues identified with the proposed project. During the development of the stakeholder consultation strategy developers should liaise with MS-LOT who will advise on the list of consultees appropriate for a specific project and location.

Key information

In conducting scoping there are three basic questions to be covered:

- What effects is the project likely to have on the environment?
- Which of these effects are likely to be significant and therefore in need of particular attention during the EIA?
- Which alternatives and mitigating strategies ought to be considered when outlining proposals for the project?

MS-LOT collates the information gathered from statutory consultees and information from the informal scoping exercise should be gathered by the developer. Ultimately the information gathered during the scoping phase will define the scope of the environmental information to be submitted in the ES. It is also good practice to update the scoping report in light of information received during scoping.

The scoping phase of the project will highlight if SNH consider there to be a requirement for an Appropriate Assessment (AA). An AA will be required if a project is likely to have a significant effect[2] on a Natura site i.e. Special Protected Area (SPA) or Special Area of Conservation (SAC) (Further details on the Habitats Regulations Appraisal (HRA) process, including AA, are provided in Part Three, Section 4 *<insert hyperlink>*). Scoping should also highlight the likely requirement for a European Protected Species (EPS) licence should the project present a risk to protected species and / or their breeding site or resting place.

Key information

The activity of scoping need not end with the delivery of a scoping opinion since new issues may emerge during the course of the EIA. It is therefore good practice to keep the EIA scope under review as studies progress, to ensure early identification of any additional potentially significant impacts. Addressing such issues before application submission will reduce delays following submission of the ES.

2.5 Core EIA

	Step in the Process
Stage 1 - Before submission of the Environmental Statement	Site selection and design Pre-application consultation Deciding whether an EIA is required What needs to be done if an EIA Is not required Scoping the EIA **Gathering information on the project** **Gathering information on the environment** **Consultation throughout the core EIA**

[2] A 'significant impact' under the EIA Regulations implies an impact of a certain magnitude and/or one that exceeds a certain threshold or meets certain criteria. However, when associated with the HRA process the term 'likely significant effect' refers to any potential connectivity or interaction with Natura site(s) which has the potential to affect the qualifying interest(s) of the site(s) in terms of its conservation objectives.

	Assessing the significance of impacts **Mitigation measures** **Environmental Management Plan** **Environmental Monitoring Plan**
	ES compilation and content ES review and quality control
Stage 2 - Submission of the Environmental Statement and consideration of the information	Submission of the ES
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2.5.1 The General EIA Process

This section refers specifically to the assessment of the identified potentially significant environmental impacts within the EIA process. Screening and scoping inform developers of the environmental impacts that their development is likely to have on the environment and the next stage is to assess the scale of these potential impacts. Potential environmental impacts must be assessed in regard to the whole project in its entirety and not in a segmented fashion, so, e.g., joint consideration should be given to both offshore and onshore aspects of a project.

The elements required to assess the impacts of a development on the environment include an understanding of both the project (Part Three, Section 2.5.3) and the baseline environmental conditions expected at a site (Part Three, Section 2.5.4). Consultation (Part Three, Section 2.5.5) is invaluable for both sourcing environmental data and identifying which impacts are likely to be significant (Part Three, Section 2.5.6). Having identified potential significant impacts the need for further study will become evident (Part Three, Section 2.5.7). The need for further study related to marine renewable energy developments is highly likely as the actual extent of some potential impacts is unknown and much of the baseline environmental data are not available. In assessing the environmental impact developers should fully consider both conservation issues and the cumulative and transboundary issues that may be associated with their development (Part Three, Section 2.5.9).

2.5.2 Environmental Issues Identification (ENVID)

It is vital that the project team accepts full ownership of all project data fed into the EIA process, its interpretation and ultimate presentation in formal documentation. Environmental Issues Identification (ENVID) during various stages of the project (e.g., scoping, full EIA etc) is a useful means of identifying environmental issues.

The key objective of an ENVID is to identify potential environmental issues resulting from a proposed development and agree practicable measures to ensure that throughout the life-span of the development it results in minimal harm to the environment. The process, broadly, weights the relevant factors, based on expert judgement and relying on multidisciplinary team strengths, particularly with regard to understanding:

- both demonstrated and perceived potential environmental sensitivities, using significance criteria (*See* Part Three, Section 2.5.6 Magnitude Significance of Potential Environmental Impacts); and
- acknowledge of the offshore marine renewable energy industry and potential sources of environmental hazard, to enable the identification of the current Best Available Techniques (BAT) required to establish the Best Practicable Environmental Options (BPEO).

There are several methods for presenting the results of an ENVID; the most commonly used being matrices or tables.

A crucial aspect of the ENVID process is to ensure that key issues are fully understood and owned by the project team.

2.5.3 Understanding the Project

Developers must have a full understanding of their project equipment, scale and associated activities to be able to identify and assess the scale of the potential impacts on the environment (Section 2.5.6). It is a requirement of the EIA Regulations that a project description is included within the ES.

The project description should cover all aspects and phases of the proposed development from installation and commissioning, through operation and maintenance as well as the ultimate decommissioning of the development. This description should not just cover tangible aspects, such as equipment onsite, but also details such as monitoring programmes and consideration of accidental events.

It is also a requirement of the EIA Regulations that the ES include a description of the alternatives considered for the project.

Industry specific Annexes to this generic guidance are used to provide guidance on the type of information that should be included within a project description.

2.5.4 Understanding the Environment and Baseline Environmental Data Gathering

In order to measure, and therefore assess, the impact of a development there must be a starting point, a baseline of environmental conditions against which the significance of predicted environmental impacts can be assessed. Developers must have an acute understanding of the environment surrounding their potential development which must be reported within the ES. Without this understanding and baseline information, it is not possible to provide accurate assessments nor will it be possible to suggest mitigation measures, which is the underlying aim of the EIA process.

There are several widely available datasets and publications that provide various biological, ecological and geological data relevant to the offshore and onshore aspects of marine renewable energy projects. Of particular relevance to such projects are any relevant Strategic Environmental Assessments (SEAs) (such as the Scottish Marine Renewables, prepared for the Scottish Executive in March 2007) and Marine Spatial Plans. The assessment of environmental datasets should be one of the first tasks (undertaken during screening and scoping) of the EIA in order to ascertain what data are available, prior to the identification of further studies. It should be noted that survey coverage of offshore, inshore and intertidal areas around Scotland is sporadic and infrequent. Therefore there will nearly always be a requirement for marine environmental surveys, e.g., for benthic habitats, birds and marine mammals, to provide site-specific data for impact assessment.

It is impossible to provide a prescriptive list of data that developers must gather in order to compile an accurate representation of the environmental conditions at a specific site, since this varies from site to site. However there will be some similarities in the baseline data required for different marine renewable energy developments. With this in mind, a number of industry-specific annexes have been appended to this Guide and these may provide a useful starting point for developers. Generally, following receipt of the scoping opinion and considering the feedback given during consultation, developers should have an indication of the potential issues and areas for which they will require baseline data and these are likely to include bathymetry, benthic ecology, birds and marine mammals amongst others.

Developers must consider what data are currently available and assess the currency and adequacy of such data for the purpose of their assessment. In order to source available data, developers should first approach MS-LOT and consultees (as part of the scoping phase) to request any information that would be relevant to the potential issues associated with the site.

Developers should be aware of the timescales that may be associated with collecting relevant data and with variability in the environment. The environment within a development area is not static; conditions may change from season to season and from year to year. The length of time over which it may be necessary to collect baseline data will depend on, among other factors, the sensitivity of the site and the behaviour of different species e.g. seabed, birds, marine mammals etc. Baseline data should be collected in a way that adequately reflects the variability in the environment.

The need for baseline data should be factored into the project timescale and initial budgeting and it is important that field work is carefully planned and agreed with all relevant consultees. Survey specifications should be submitted to MS-LOT who will liaise with Marine Scotland Science, the MRFG, and other consultees as appropriate to ensure that data and analyses are adequate to meet the regulatory requirements. Other organisations outwith the MRFG e.g. Historic Scotland, may also need to be consulted. Formal bodies are not only an invaluable source of baseline data but they will also be able to comment on the suitability of collected data and proposed surveys which will reduce the risk that they have to be repeated.

If EIA scoping identifies the potential requirement for an Appropriate Assessment (AA) (*see* Part Three, Section 4, *<insert hyperlink>*), the survey scope of work should include consideration of the data required to support the AA. This will mitigate against the need for further data collection at a later date and minimise consenting/licensing risks.

Key information

Common pitfalls associated with gathering environmental baseline data are:

- Reliance on out-of-date data.
- Omission of important data that are available.
- Narrow focus on the development site, omitting the wider area.
- Inadequate expertise and time to conduct surveys.
- Omission/lack of understanding of designations.
- Survey methodologies don't take into account the questions that need to be answered and how these may influence the methodology.
- Use of inappropriate survey techniques and concentration on the easier aspects of survey whilst omitting more difficult ones.
- Inadequate acknowledgement of data limitations.
- Insufficient time allocated in project schedules to ensure the collection of robust data.
- Insufficient funds allocated for surveys.
- No consideration of presentation and analysis requirements

The EIA for any development should address cumulative impacts from other developments in the area (*see* Part Three, Section 2.5.9). Hence co-ordination of baseline data collection activities with other developers is strongly encouraged. This will help work towards a standardised approach to data collection, thereby facilitating comparison between sites and contributing to co-ordinated post-construction monitoring plans. Collaboration between developers will also assist the production of broad scale regional overviews for specific species and contribute to SEA.

2.5.5 Consultation

It is important to ensure that projects give due consideration to stakeholder concerns and opinions and integrate them into the project decision-making process. Stakeholder consultation is essential to ensure that the consenting/licensing process runs as smoothly as possible and all concerns are noted and addressed in an open and transparent manner.

One of the aims of the streamlining of the consenting/licensing process for marine renewables projects is to ensure that consultation at all levels is with the right party and progressed at the right time. Although MS-LOT should be the primary point of contact for all queries related to the licensing of a proposed development, detailed consultation between developers and/or their contractors and the relevant parties is still very strongly encouraged. MS-LOT will channel all queries through the appropriate member of the MRFG, thereby ensuring that detailed consultation progresses through the most productive channels.

Under the EIA Regulations the ES undergoes a formal public consultation process. However, it is recommended that developers begin informal consultations at the pre-application stage and recognise the importance of continuing consultation between developers, MS-LOT, their advisors and other stakeholders, including local interest groups and the public. This will ensure that appropriate consideration is given to all stakeholder (including the public) concerns and that opinions are integrated into the project decision making process. All commitments made by the developer during the EIA should be conducted in as open and transparent a way as possible. The openness of the process and the addressing of concerns as early as possible will help instil confidence amongst stakeholders and the general public.

Consultees may also be an excellent source of information when gathering baseline data, providing informed advice on identified potential impacts of the development.

Key information

In order to establish and maintain good relationships with consultees it may be useful for developers to develop and document a stakeholder consultation strategy which should ideally be discussed and agreed with MS-LOT. The consultation process can take whatever form is deemed to be the most appropriate and could include all or any of the following:

- Workshops
- Individual and public meetings
- Public events
- Web pages

Records of all consultations should be maintained and be summarised in the ES.

2.5.6 Magnitude Significance of Potential Environmental Impacts

The EIA Regulations require that the EIA consider the significance of the effects of the development on the environment. The decision process related to defining whether or not a project is likely to impact significantly on the environment is the core principle of the EIA process. The regulations themselves do not provide specific definition relating to what significance actually is, however the methods used for identifying and assessing effects should be transparent and verifiable.

Despite there being no definitive methodology for the evaluation of significance for the EIA process, certain common principles exist which can be taken into account and these include:

- Environmental significance is a value judgement;
- The degree of environmental significance is related to the specific impact;
- The significance of the impact is related to sensitivity of the receptor and its capacity to accommodate change;
- The amount any type of change, often referred to as the impact magnitude which includes timing, scale, size, and duration of impact;
- Potential effects of the proposed project may be wide ranging in nature, e.g., they could be direct, indirect; short, medium or long term, permanent or temporary and have positive or negative effects;
- The likelihood of a specific effect occurring should also be considered and,
- Identification of any significant residual impacts following mitigation

As the determination of the significance of an impact is subjective, primarily based on professional judgement, this highlights the requirement for an extensive scoping and consultation process throughout the development of the project.

Once the scope of the EIA studies has been established, it is particularly important to standardise the description and assessment of all the potential effects due to the development. Despite this being a

subjective process, a defined methodology should be used to make the assessment as objective as possible. As the environmental factors under consideration can vary considera
being assessed, there is likely to be some variation in this process. This will
marine renewable energy developments since there may be various onshore and offshore effects that may impact on the biological, physical and human environments.

Key information

The evaluation of impact significance should follow the four stage process outlined below:

1. Identification of the sensitivity of the receptor.
2. Identification of the magnitude of change upon the receptor as a result of the project.
3. Assessment of the likelihood of impact.
4. Identification of the impact significance.

The sensitivity of a receptor to the proposed project considers the specific nature of the receptor (or group of receptors) and its (their) capability to accommodate change. Assessment of the magnitude of change upon the receptor takes into account the timing, scale, duration and recovery from an impact. The sensitivity of receptor and magnitude of impact should be combined to define the consequence of the impact. In order to finally assess the significance of impact (or risk), the consequence should then be combined with a frequency/probability of the impact occurring.

A matrix approach is commonly employed for assessing the significance of impacts. Specific criteria are developed to define the sensitivity of receptor and the magnitude and likelihood of impact. A matrix approach can combine this information to provide an assessment on the significance of the impact.

Whatever the methodology employed to assess impact significance, it should be clearly described in the ES document.

2.5.7 EIA Study Requirements

The need for specific study requirements in order to assess the impact of the development on the environment will be initially identified during scoping, however there may also be other study requirements that become apparent as the EIA progresses, e.g., due to changes in project design.

The collection of baseline environmental data (*see* Part Three, Section 2.5.4) will be the initial key phase of the EIA. Data collected will provide input to specific impact assessment studies, e.g., modelling may be required to assess temporal changes in water flows around tidal devices, collision risk studies may be required to assess potential impacts on cetaceans.

The environmental issues for which further supporting studies will be required will vary with project and location. Those projects with a footprint in both the marine and terrestrial environments may potentially have a longer list of supporting studies than a solely marine project. The project ENVID and EIA scoping processes should be used to assess the overall risk associated with the project and should highlight the higher risk issues on which the EIA should focus.

The industry specific annexes which support this generic Guide provide guidance on the main potential topics that may require study during the EIA.

As previously indicated, navigational issues are one of the key impacts that need to be addressed for any marine renewables development and therefore it is essential that they are addressed as an integral part of the EIA process. The scope of the full Navigational Risk Assessment (NRA) as required by the Maritime and Coastguard Agency(MCA) (*see* Annex, *<insert hyperlink>*) will have been defined during the completion of the Preliminary Hazard Analysis (PHA), which, it is recommended, is completed during EIA scoping. The full NRA should be completed at the same time as the full EIA. Again, it is considered

good practice for a summary of the findings of the NRA to be included in the main EIA and there also needs to be an independent NRA report.

In addition, it is important to reiterate that consultees must agree that the proposed study methods are appropriate. This will help prevent requests for additional data following submission of the ES. Repetition of a study will cause unnecessary cost in terms of time, effort and money, which developers will obviously wish to avoid.

Key information

The wave and tidal energy industries are in their infancy and there are currently numerous different technologies that could be deployed. As a result there are large uncertainties with regard to the significance of specific impacts, e.g., effects of developments on diving birds and marine mammals.

As the industries become more experience from operational monitoring, these uncertainties should reduce, and impacts initially considered as potentially significant, may prove not to be so, and therefore be scoped out of EIAs for future projects.

This emphasises the importance of implementing robust environmental monitoring programmes for early projects (*see* Part Three, Section 2.7).

2.5.8 Mitigation Measures

Mitigation refers to the reduction or removal of the risk of environmental effects/impacts of a project. The instigation of mitigation measures is one of the major benefits of undertaking an EIA. Mitigation measures are most successful when they are considered from the outset of the project rather than as a late stage solution to an identified problem. This can allow the design of the facility to include solutions to potential environmental problems, rather than looking for a solution late on, which fits with the design. Mitigation measures should therefore be considered from the outset of the project and discussions on the appropriate mitigation measures are likely to continue after submission of the ES as consent and licence conditions are decided. An appropriate specialist who has assessed the impacts usually develops mitigation measures in close liaison with the project team.

Key information

Mitigation can take various forms, including in descending order from best practice:

- Avoidance - the project is designed or the site selected to avoid any environmental impacts. This may not always be possible for all potential impacts.
- Reduction - where impacts cannot be avoided, developers should then look to reduce impacts via the introduction of mitigation measures.
- Compensation - where impacts are unavoidable or cannot be reduced, compensation must be considered which involves the improvement of a related environmental issue, such as construction of alternative / artificial otter holts in an alternative location.
- Remediation - where the environmental impact both short and medium term is unavoidable, e.g. where materials may have spread to adjacent seabed and on completion of the works the area must be cleaned and restored.

Additionally best practice measures should also be investigated and include:

- Enhancement - the improvement of the site beyond the existing baseline.

Mitigation measures for a site will be highly specific for each development. It is recommended that the developer provides detailed information about each of the mitigation measures including: what is proposed; where and when it will be proposed; duration of the measure; how effective the measures will be; and responsibilities for monitoring the measure. Any uncertainty in the effectiveness of the measures should be noted in the ES. It is good practice to provide a section summarising all proposed mitigation measures for each of the potentially significant impacts. This can be of significant benefit for the process of identifying and agreeing consent/licence conditions. This also demonstrates that the findings of the ES have been considered in an integrated manner.

When considering mitigation, consideration should be given to 'design' mitigation and site specific mitigation.

2.5.9 Cumulative and Transboundary Issues

Cumulative impacts

The European Commission (EC) has produced guidance on how cumulative impacts can be assessed (EC, 1999).

The EIA Regulations state that cumulative impacts should be addressed within an EIA. Cumulative impacts can be described as impacts that result, or are likely to result, from incremental changes caused by other past, present or reasonably foreseeable actions together with the project. Cumulative impacts can occur on a local, regional or global basis and can be additive, combined or synergistic impacts. Cumulative impacts are not necessarily controlled by the developer and, as such, it is difficult to assess these impacts and attribute a level of significance to them. It should also be noted that the assessment of cumulative impacts in relation to Natura interests is an integral aspect of a Habitats Regulations Appraisal (*See* Part Three, Section 4 <insert hyperlink>).

Transboundary impacts

The transboundary impacts are of particular relevance to projects located in close proximity to national boundaries. In terms of marine renewable energy projects in Scotland it will relate to projects close the boundaries between Scotland, England, Northern Ireland and Isle of Man.

The Convention on Environmental Impact Assessment in a Transboundary Context (Espo, 1991) - the 'Espo EIA Convention' to which the UK is a signatory, states the requirement for all parties to the Convention to take individually or jointly all appropriate measures to prevent, reduce and control, significant adverse transboundary environmental impacts.

For a proposed activity that is likely to cause a significant adverse transboundary impact, the UK must notify any party which it considers may be affected as early as possible within the EIA process and no later than when carrying out the public consultation exercise following submission of ES. Regulators (MS-LOT) will expect to see consideration of potential transboundary impacts throughout the EIA from the scoping phase onwards, and reported in the ES.

Developers should note that in gathering baseline environmental data it may be necessary to consider collecting data from other sovereign waters/areas as migratory species such as fish and birds, which potentially could be affected, may migrate from one transboundary area to the other.

2.6 Environmental Management Plan

Environmental management of a project is essentially covered by the EIA process until the point of completion of the ES. However the management of environmental issues is a process that will continue following the production of the ES and this is achieved through the creation of an environmental management plan (EMP). The EMP defines the commitments made in order to ensure that environmental impacts are avoided and minimised where possible and it and describes how these commitments will be implemented. It should be drafted within the ES but, following project consent, should be developed further and fully integrated with the overall project plan.

The EMP section of the ES would form the basis of the Construction Environmental Management Plan (CEMP) which along with detailed method statements, may be required by planning condition. This approach provides a useful link between the principles of development which need to be outlined at the early stages of the project and the method statements which are usually produced following award of contract (just before development commences).

2.7 Environmental Monitoring Programme

The EIA process identifies potential impacts on the environment. It is important once projects are operational that potential impacts are assessed and therefore a robust environmental monitoring programme is an integral aspect of any project. There are often interrelated drivers for such monitoring:

- Validation of predictions made during the EIA process;
- Consent/licence requirements; and
- Broader strategic issues that need to be further understood/researched.

This is particularly important for demonstration arrays, where information yielded through operational monitoring will be very important to inform future proposals using similar technology. MS-LOT and MRFG should be involved in the development of specific monitoring programmes and protocols and as a minimum be given the opportunity to review and comment upon the environmental monitoring programme before it is formally approved and implemented.

Wherever possible the details of the proposed environmental monitoring programme should be included in the ES: however, as with the EMP, following project consent it will be developed further and fully integrated with the overall project plan.

3 THE ENVIRONMENTAL STATEMENT

	Step in the Process
Stage 1 - Before submission of the Environmental Statement	Site selection and design Pre-application consultation Deciding whether an EIA is required What needs to be done if an EIA Is not required Scoping the EIA Gathering information on the project Gathering information on the environment Consultation throughout the core EIA Assessing the significance of impacts Mitigation measures Environmental Management Plan Environmental Monitoring Plan **ES compilation and content** **ES review and quality control**
Stage 2 - Submission of the Environmental Statement and consideration of the information	Submission of the ES
Stage 3 – Habitats Regulations Appraisal	Habitats Regulations Appraisal
Stage 4 – Project determination	Making the decision
Stage 5 - Implementation and compliance	Implementation of mitigation and compensation measures Monitoring Review, reassessment and remedial measures Project modifications

3.1 ES Compilation and Content

The ES is the written output of the EIA process and should be presented as a complete and independent document, which the developer is responsible for producing. The ES sets out all the information gathered during the EIA process in a clear and logical manner for consideration and comment by MS-LOT, the MRFG, other relevant stakeholders and the general public, and will be used by MS-LOT when making their decision on whether or not to grant approval for the development.

Key information

The key elements that an ES should achieve are:

- Provide sufficient details to allow readers to make an independent decision on the impacts associated with the proposed development;
- Provide an unbiased report of the EIA process;
- Avoid technical jargon unless absolutely necessary as findings should be presented in non technical language.

The length of the ES depends largely on the range and importance of the various issues addressed within the EIA which will vary between projects. Wherever possible unnecessarily long ES documents should be avoided.

Developers do, however, have a statutory duty to include certain information within the ES. Under regulation 2 (1) Schedule 4 parts II of the EIA Regulations the following information must be included within the ES, and these are described further below:

- A non technical summary (NTS).
- A description of the development.
- A description of the mitigation measures.

- The data required to identify and assess the main effects which the development is likely to have on the environment.
- An outline of the main alternatives considered.

Developers are advised to include a number of other sections within the ES and, although not mandatory, MS-LOT may request them. An indicative contents list for an ES including the mandatory requirements includes:

Non Technical Summary (NTS):
The importance of this section must be highlighted to developers not only as it is a regulatory requirement but because it is read as an overview to the whole document. It should be clear, concise and written in a non technical language to be accessible to the lay reader. The NTS should be a fair reflection of the main ES and should cover all aspects of the EIA process, not just a summary of the potential impacts; and should inform people of the environmental effects of the project and proposed mitigating measures and monitoring requirements. The use of graphics to illustrate issues rather than the use of lengthy text is recommended.

Table of Contents

Abbreviations, Acronyms and Glossary:
A list of the abbreviations and acronyms used should be provided together with a glossary to define any technical terms used within the ES.

Introduction:
This section should be used to introduce the project (briefly), the legislative policy and content within which the EIA is undertaken and the purpose and scope of the ES. Data gaps and uncertainties identified during the EIA should be included within this section, as should a list of the contributors to the EIA and their relevant experience.

Alternatives:
This section should include a full assessment of the alternatives that were considered for the proposed project. This could include alternatives sites, technologies and preliminary designs. If no alternatives were considered then this should be stated.

Description of the proposed development:
The project should be described in sufficient detail and include: site design and size or scale of the development in order to allow potential environmental impacts to be identified. This section should include consideration of installation and commissioning; operation and maintenance; and decommissioning aspects of both onshore and offshore facilities.

Environmental Description:
The environmental description, when considered with the project description, should provide the information needed to assess the potential impacts that the proposed development is likely to have on the environment. This section should describe the baseline environmental conditions at the development site. Further details on specific topics might be better left for inclusion within the EIA chapters discussing the assessment of key issues. The environmental description should include the physical, biological and human aspects of the environment, to provide a background of environmental conditions prior to development.

EIA methodology, scoping and consultation:
The explanation of EIA methodology should include each stage of the EIA process that the development went through from screening, scoping and consultation, both formal and informal, to the assessment of potential impacts. The method by which the magnitude of effect is assessed should be defined, i.e. under which circumstances an impact is considered to be significant.

Assessment of key issues:
Detailed discussion of the potentially significant impacts which were highlighted during the EIA should be addressed in this section. The specific issues discussed will be project-specific.

Depending on the scale of the project it may be easier for the developer to address key issues as separate sections within the ES. This is generally the preferred structure for regulators and their consultees, as it makes ES review a lot more efficient. If considering issues separately it is useful to ensure that the following is provided within each section:

- An introduction to the topic, including reference to relevant policies and guidance considered during the assessment of impacts.
- The methodology by which baseline data was gathered.
- A baseline description based on the data gathered.
- An assessment of potential effects.
- Proposed management and mitigation.
- Potential cumulative and transboundary effects.
- Summary and conclusions.

Environmental management / mitigation plan:
The ES is not the end point of the EIA process, as mitigation measures suggested will undoubtedly contain future actions and potential impacts may need to be monitored. It is good practice to summarise commitments made and any remaining actions. The process by which these actions will be integrated into the project should be detailed within an environmental management plan.

References

Appendices - typical appendices may include:
- Scoping responses.
- Navigational Risk Assessment.
- Supporting studies.

Throughout the suggested sections of the ES listed above, it is useful to note the benefit of maps, diagrams, charts, photomontages and tables etc for displaying information in a clear, concise and understandable format. Consideration should also be given to the provision of appendices/supporting studies in CD format, rather than hard copy.

3.2 ES Review (Quality Control)

In order to ensure that the ES satisfies the legal requirements and is consistent with good practice, these guidelines recommend that the ES should be subjected to review. This is essentially a quality control check prior to ES submission to MS-LOT.

It is essential to ensure that the review of the ES by the developer and other relevant parties (e.g. project partners, etc.) is structured to ensure the production of an acceptable document that has full project team ownership.

Key information

The review should confirm that the ES:

- Adequately reflects the environmental aspects of the development.
- Meets local, national and regulatory requirements.
- Is suitable and sufficient to withstand external scrutiny.
- Is sufficiently complete to submit to the regulators.

The internal review process also ensures that the document produced by the EIA project team is compatible with the developer's operations, i.e., that the mitigation and monitoring measures proposed are practicable and feasible within the plan of work. The internal review process also serves to increase project ownership by the developer and will help to ensure that outlined environment management and monitoring plans are followed.

3.3 Submission of the Environmental Statement

	Step in the Process
Stage 1 - Before submission of the Environmental Statement	Site selection and design Pre-application consultation Deciding whether an EIA is required What needs to be done if an EIA Is not required Scoping the EIA Gathering information on the project Gathering information on the environment Consultation throughout the core EIA Assessing the significance of impacts Mitigation measures Environmental Management Plan Environmental Monitoring Plan ES compilation and content ES review and quality control
Stage 2 - Submission of the Environmental Statement and consideration of the information	**Submission of the ES**
Stage 3 – Habitats Regulations Appraisal	Habitats Regulations Appraisal
Stage 4 – Project determination	Making the decision
Stage 5 - Implementation and compliance	Implementation of mitigation and compensation measures Monitoring Review, reassessment and remedial measures Project modifications

In submitting the ES, and in the time frame immediately after this, the developer and MS-LOT have specific duties which they must fulfil under the EIA Regulations.

The developer must submit sufficient copies of the ES as directed by MS-LOT.

MS-LOT is responsible for making the decision on whether a proposed project should be granted consent or not, but in doing this they must ensure that certain statutory requirements are fulfilled:

- The ES and application must be advertised. The developer is responsible for placing notices in the local press which should include details of where the ES can be inspected for four weeks from the date of the advertisement. MS-LOT will advise on the publications within which the advertisement should be placed, and typically the ES will be available for reference at local council office, post offices and public libraries. The notice should further detail where copies of the ES can be obtained and the cost of the ES. The notice should also state that representation should be made in writing to MS-LOT at its given address.

- MS-LOT will be responsible for passing the ES on to the statutory consultees, or notifying them of its location on-line, and subsequently taking account of any representation received.

- The ES will be made available for consultation for a period of four weeks.

Although not a legal obligation, the developer should be prepared to issue copies of the ES or non-technical summary to interested parties. The EIA Regulations stipulate that the ES must be made available for a reasonable charge. On-line access should achieve this objective, but there should be provision for downloading and printing the ES or the non-technical summary.

4 HABITATS REGULATIONS APPRAISAL

	Step in the Process
Stage 1 - Before submission of the Environmental Statement	Site selection and design Pre-application consultation Deciding whether an EIA is required What needs to be done if an EIA Is not required Scoping the EIA Gathering information on the project Gathering information on the environment Consultation throughout the core EIA Assessing the significance of impacts Mitigation measures Environmental Management Plan Environmental Monitoring Plan ES compilation and content ES review and quality control
Stage 2 - Submission of the Environmental Statement and consideration of the information	Submission of the ES
Stage 3 – Habitats Regulations Appraisal	**Habitats Regulations Appraisal**
Stage 4 – Project determination	Making the decision
Stage 5 - Implementation and compliance	Implementation of mitigation and compensation measures Monitoring Review, reassessment and remedial measures Project modifications

4.1 Introduction

In order to tackle the continuing deterioration of natural habitats and the threats posed to the wellbeing of certain plant and animal species, the European Community adopted Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna. This directive, known as the Habitats Directive, is implemented, including marine areas, by the Scotland (including marine areas) Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 and the Conservation (Natural Habitats and &c.) Regulations 1994 as amended.

The legislation requires the protection of internationally important habitats and species (within Natura sites) from the effects of proposed developments and, to this end, requires that a Habitats Regulations Appraisal (HRA) is undertaken, which may include an Appropriate Assessment (AA). HRA is a process, separate to EIA, required by law, of which the Competent Authority and developers must be aware, including their associated responsibilities in the process. In the case of marine renewable energy projects in Scotland the Competent Authority is MS-LOT. An overview of the process is provided in Figure 2.

4.2 What is Habitats Regulations Appraisal?

The Habitats Regulations Appraisal (HRA) process relates specifically to the consideration of effects on Natura[3] sites designated for their importance for European protected habitats and species. The process considers the potential effects of the development on internationally important habitats and/or species for which the sites are or will be designated. The assessment includes consideration of direct and indirect effects on these interests and must also consider cumulative effects from other proposed plans or projects.

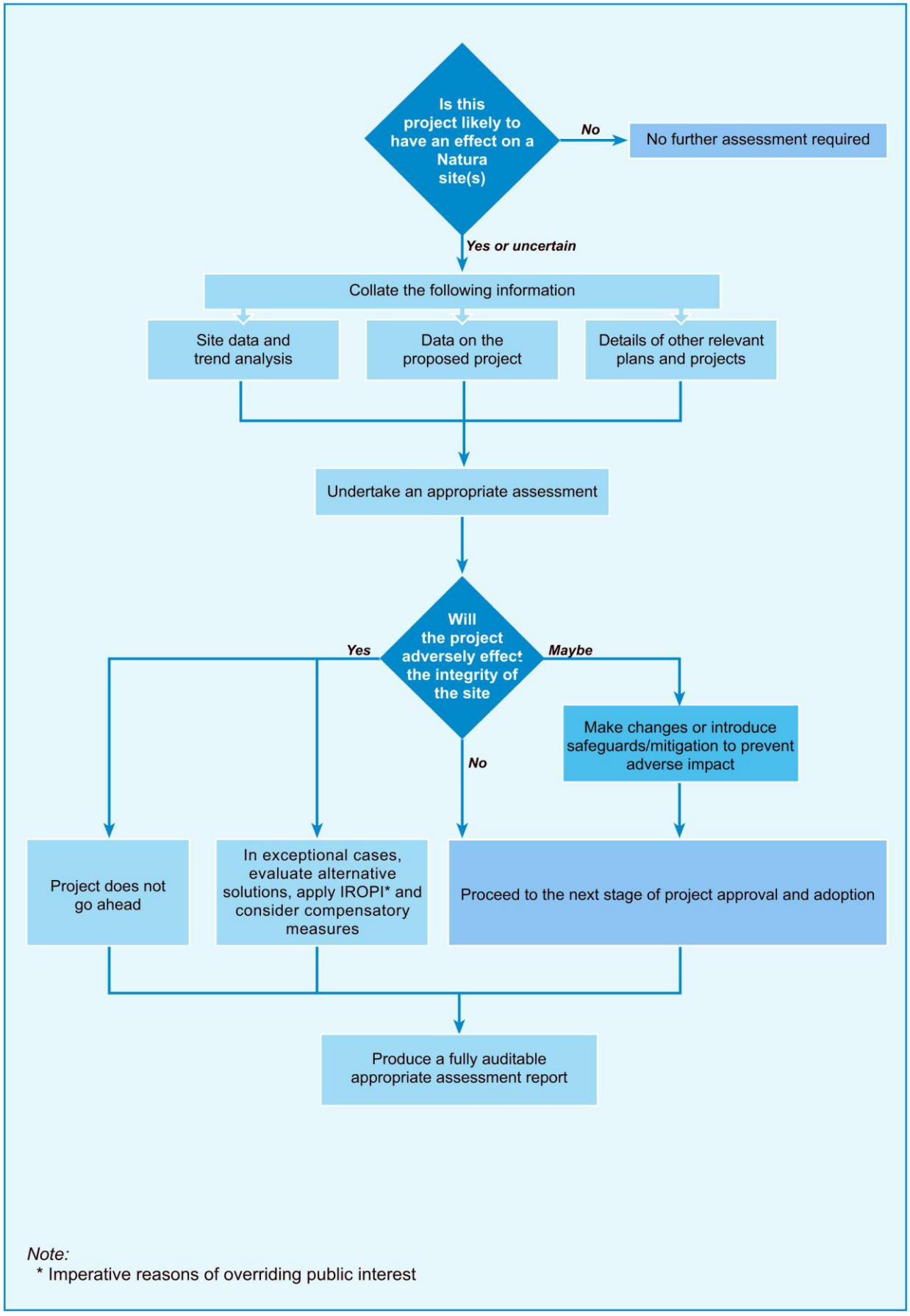
The AA must ascertain that the proposed project will not adversely affect the integrity of the site. In all other circumstances, including cases where there is doubt about the absence of adverse effects, the

[3] The term Natura sites refers to Special Areas of Conservation (SACs) and Special Protected Areas (SPAs) as designated under the Habitats Directive (92/43/EEC) and Wild Birds Birds Directive (2009/147/EC) respectively. Proposed SPAs (pSPAs) and proposed (pSACs) are under consideration for designation and these sites require the same consideration as designated sites.

proposal may not proceed unless there are no alternative solutions and imperative reasons of over-riding public interest apply.

The HRA process as applied to marine renewables energy developments is summarised in Figure 2.

Figure 2 Overview of Habitats Regulations Appraisal Process as Applied to Marine Renewable Energy Projects



Although the Habitats Regulations do not specify exactly how HRA should be undertaken, they do specify key responsibility of both the Competent Authority and developer. The role of the Competent Authority is to undertake the decision making process and document the Appropriate Assessment (if required), while it is the responsibility of the developer to supply the information required to undertake this assessment.

The scope and content of an AA (if required) will depend on the location, size and significance of the proposed project. The assessment must be specifically tailored to consider each individual site and project. It should be noted that a development does not have to be located within the boundaries of the designated site to require an AA, as effects may occur even if the development is located some distance from a designated site. There is no maximum distance beyond which the proposed development will be considered not to have an impact on a site. For example, bottlenose dolphins from the Moray Firth SAC have been recorded as far south as the Firth of Forth, therefore an activity impacting upon bottlenose dolphins anywhere between these two locations could, potentially, affect the interest of the SAC and thereby require AA.

Key information

HRA is not the same as an EIA and it is not always the case that a project will require both. However in many cases marine renewable energy projects subject to a HRA will need an ES to be prepared under the EIA Regulations. Much of the information/data required to inform the HRA will also be required for the EIA. Note that HRA is only concerned with effects on the qualifying interests[4] of Natura sites, whereas EIA considers a much wider scope of environmental impacts.

There is a statutory requirement for the Competent Authority to determine beyond reasonable scientific doubt that an activity or development will not affect the integrity of a Natura site. Consequently, there is a need for the developer to provide sufficiently compelling evidence to enable the Competent Authority to make such a judgement. This can be much more challenging than EIA.

4.3 What does a Habitats Regulations Appraisal Involve?

The first step in deciding if a proposal will affect a Natura site is to determine if the proposal is directly connected with or necessary for site management or conservation. If the proposed development is not necessary for the conservation management of the designated site then it must be established if the proposal is likely to have a significant effect on a Natura site.

In general it can be assumed that a marine renewable energy development will not be directly connected with or necessary for site management or conservation and will therefore need to be assessed in terms of its potential to affect a site's conservation objectives. It is therefore expected that the majority of marine renewable energy proposals will proceed to the next stage of the process and have to be assessed in terms of the potential to have a significant effect on a site(s).

It should be noted that a 'significant impact' under the EIA Regulations implies an impact of a certain magnitude and/or one that exceeds a certain threshold or meets certain criteria. However, when associated with the Habitats Regulations Appraisal process, 'likely significant effect' refers to any potential connectivity or interaction with Natura site(s) with the potential to affect the qualifying interest(s) of the site(s) in terms of its conservation objectives.

[4] The specific habitats and/or species for which Natura sites are designated.

The assessment of potential impacts on Natura sites will begin during EIA scoping. The information contained in the scoping report will allow the Competent Authority to establish a good understanding of:

- the designated sites that will potentially be affected and the qualifying features for which they have been designated, e.g., threatened species of birds, seabed habitats, marine mammals, Atlantic salmon, etc.
- the underlying trends which should be outlined in baseline data supplied by the developer.
- a good understanding of the proposed development and the preferred methods by which this plan will be achieved.
- other plans and projects which could affect the integrity of the site.

Once the above have been considered, the Competent Authority, and their advisors, will be in a position to determine if the proposed development has the potential to affect any Natura sites. This will be communicated to the developer through the scoping opinion and/or ongoing informal consultation during the EIA process.

If it is considered there is no potential for likely significant effect on Natura site(s) this will be documented by the Competent Authority and no further assessment will be required under the requirement of the regulations.

If the assessment concludes there is the potential for effect, then an Appropriate Assessment is required. This stage of the HRA process requires consideration as to whether the proposed project could adversely effect the integrity of the Natura site(s) in terms of its conservation objectives.

Key information

Avoid using language that confuses the meaning of the terms used in the legislation and the separate steps in the HRA process. Never use the terms significant and adverse together when considering the effects of Natura sites. **Likely significant effect** is the step where potential effects from the proposed project are initially considered. **Adverse** is the term used to describe any impacts on site integrity in view of the conservation objectives of the site(s). This is the Appropriate Assessment step in the HRA process which follows only after likely significant effect has been determined.

To complete the AA, the Competent Authority (taking appropriate expert advice) will consider the site's conservation objectives against the potential impacts that the proposed development is likely to cause. If it is ascertained that the proposal will or may adversely affect the habitats and species of the designated site and consequently the conservation objective(s) of the site, then action will need to be taken to avoid this.

Avoidance of impacts arising from the project is best. Avoidance would typically be achieved through not proposing damaging activities/developments at all, or moving proposed developments from locations that could affect a Natura site(s) to locations where they would not. As marine renewable energy project locations are dependent on the resource (i.e. waves, tide), it is unlikely that it will be feasible to completely relocate a project to avoid adverse effects. However, it may be possible to relocate individual elements of a project where these are damaging.

If adverse effects cannot be avoided, then, where possible, mitigation measures need to be developed to reduce the impact to a point where there is no longer a risk of adverse effect.

If following development of mitigation measure it is assessed that the impacts will no longer adversely affect the Natura site then permission is likely to be granted to proceed with the development. If mitigation measures are unable to remove the risk of adverse effect of the development then permission will only be granted under certain tightly defined circumstances (*see* below).

Key information

Where it has not been ascertained that a proposal will not adversely affect a Natura site, the conditions under which it will be permitted are listed as follows:

- There are no alternative solutions **AND**
- There are imperative reasons of over-riding public interest for which the development should go ahead.
- Such reasons are limited to those outlined in regulation 49 of the Habitats Regulations.
- The Competent Authority must consult with the Scottish Ministers.
- And necessary compensatory measures must be taken to secure the coherence of the Natura site network.

4.4 What Does HRA Mean to the Developer?

Developers must be aware of the HRA process, since they will be expected to provide to the Competent Authority any information/data required to undertake an AA, if one is required.

The qualifying interests and the conservation objectives of Natura sites, which a proposed development could potentially impact, are likely to be flagged during the pre-application, site selection and scoping phases of EIA. At the EIA scoping phase, the Competent Authority will consult with the relevant members of the MRFG to determine what information will be required from the developer, including any suggested methods of data collection and the level of detail that will be required. It is likely that much of the baseline data gathered for EIA will be applicable for HRA, although more information or a higher level of detail is likely to be required to support an AA. There is a requirement to ascertain beyond reasonable scientific doubt that the project will not adversely affect site integrity.

As with EIA, developers should be aware of timescales for obtaining the requested data.

If the AA cannot determine that a proposed project will not adversely affect the integrity of a Natura site, the proposal can only proceed under certain circumstances.

Key information

Due to of the legal weight carried by the Habitats Directive (and associated regulations), it is recommended that potential HRA requirements are considered early in the planning of a project and influence its development and design. The aim should be to have a project that does not have an adverse effect on site integrity.

Early consideration of HRA issues will also help reduce project delays and provide realistic project timescales.

At any stage of the HRA process the Competent Authority can request more data from the developer in order to make informed decisions on potential impacts.

Appendix A to this Guide provides a template for the provision of information to the Competent Authority. Such a template should be completed for each Natura site requiring an HRA.

4.5 Who Undertakes the Habitats Regulations Appraisal?

It is the responsibility of the Competent Authority to undertake the HRA.

In order to assess the potential effect of a proposed development on a Natura site the Competent Authority must have an understanding of the location, scope and activity of the project and this information should be supplied by the developer.

SNH will be invaluable in assisting the Competent Authority to ascertain whether the proposed project may have a negative impact on the identified protected sites. Such decisions will require specialised knowledge and SNH (and other members of the MRFG) will be able to guide the Competent Authority as to the aspects, data and methods which should be used to inform the HRA.

4.6 When is a Habitats Regulations Appraisal Undertaken?

Consideration of Natura issues will commence at the EIA scoping stage, if not earlier, and the potential requirement for an AA will be flagged by SNH. However, the production of the AA statement, which concludes that a project will not adversely affect the integrity of a Natura site or otherwise, is completed as part of the project determination process and is therefore not undertaken until after the submission of the ES.

If at the scoping stage determination of likely significant effect indicates that an AA will be required, the developer needs to keep this very clearly in mind throughout the project design and EIA. Although the developer does not need to initiate any specific process they should consider what surveys and studies they may need to conduct in the interim to provide the evidence necessary to inform the AA.

Decisions on consents/licences will only be made by the Competent Authority when it has completed the AA which seeks to confirm that there will be no adverse effects on the integrity of any European site in terms of its conservation objectives.

5 PROJECT DETERMINATION

	Step in the Process
Stage 1 - Before submission of the Environmental Statement	Site selection and design Pre-application consultation Deciding whether an EIA is required What needs to be done if an EIA Is not required Scoping the EIA Gathering information on the project Gathering information on the environment Consultation throughout the core EIA Assessing the significance of impacts Mitigation measures Environmental Management Plan Environmental Monitoring Plan ES compilation and content ES review and quality control
Stage 2 - Submission of the Environmental Statement and consideration of the information	Submission of the ES
Stage 3 – Habitats Regulations Appraisal	Habitats Regulations Appraisal
Stage 4 – Project determination	**Making the decision**
Stage 5 - Implementation and compliance	Implementation of mitigation and compensation measures Monitoring Review, reassessment and remedial measures Project modifications

Once MS-LOT has received the required environmental information, e.g., the ES and information to support the Appropriate Assessment (if required), they will administer the consultation process for all licences required for a specific development proposal. Feedback from consultees will be collected at the end of the consultation period and MS-LOT will liaise with the developer if any further information or clarification is required. Developers should be aware that the time they take to provide such additional information or clarification to MS-LOT will have a direct effect on the length of time taken to process the applications and grant consent.

Following completion of the consultation, receipt of all representations, MS-LOT will advise on the outcome of the application and will issue the relevant consents/licences in respect of successful applications.

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6 EIA POST PROJECT DETERMINATION

	Step in the Process
Stage 1 - Before submission of the Environmental Statement	Site selection and design Pre-application consultation Deciding whether and EIA is required What needs to be done if an EIA Is not required Scoping the EIA Gathering information on the project Gathering information on the environment Consultation throughout the core EIA Assessing the significance of impacts Mitigation measures Environmental Management Plan Environmental Monitoring Plan ES compilation and content ES review and quality control
Stage 2 - Submission of the Environmental Statement and consideration of the information	Submission of the ES
Stage 3 – Habitats Regulations Appraisal	Habitats Regulations Appraisal
Stage 4 – Project determination	Making the decision
Stage 5 - Implementation and compliance	**Implementation of mitigation and compensation measures** **Monitoring** **Review, reassessment and remedial measures** **Project modifications**

6.1 Implementation and Compliance

Following a positive determination, the developer will be required to implement various measures depending on the consent/licence conditions set by MS-LOT.

6.1.1 Implementation of Mitigation and Compensation Measures

The developer has a statutory duty to comply with the terms of the consent issued and MS-LOT has statutory powers to enforce compliance.

To ensure compliance, the developer should incorporate necessary measures to comply with consent/licence conditions into the project specific environmental management plan and environmental monitoring.

6.1.2 Monitoring

Monitoring is a non-statutory procedure but may be required by conditions on a project consent/licence. As the implementation of mitigating measures may still not guarantee their success in reducing environmental effects, it is vital that the effectiveness of mitigation is monitored to ensure that it meets the standards and achieves the objectives anticipated in the decision. Monitoring can provide information likely to be required for future mitigation of similar developments. It may also be necessary where there is no mitigation implemented.

To ensure compliance the developer should incorporate consent/licence conditions into the project specific environmental monitoring programme (as previously described).

6.1.3 Review, Reassessment and Remedial Measures

Review, reassessment and remedial measures are non-statutory procedures, but may be required by conditions on a project licence.

Provision must be made at the decision-making stage to ensure that changes or remedial (i.e., corrective) action can be implemented affectively and quickly if monitoring reveals problems. Procedures for monitoring and the review of mitigation after the project has commenced, and for as long as may be necessary, are therefore essential if monitoring is to have any real effect.

Reviews may need to include consultation, which may be overseen by MS-LOT. Often this can be accommodated by an annual report (or similar) being submitted to MS-LOT and other relevant stakeholders. These reports should be considered at a review meeting where relevant parties decide on the effectiveness of the mitigation. The need for review consultation and reporting may be a condition of consent/licence.

7 REFERENCES

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Scottish Executive (2006). Assessing Development Plans in Terms of the Need for Appropriate Assessment; Interim Guidance. Edinburgh: Scottish Executive.

SNH (2005). A handbook on environmental impact assessment; Guidance for Competent Authorities Consultees and others involved in the Environmental Impact Assessment Process in Scotland, 2nd Ed. Edinburgh: David Tyldsey and Associates.

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APPENDIX A INFORMATION REQUIRED FROM THE DEVELOPER TO SUPPORT HRA/AA

The following information should be provided by the developer, preferably as an Appendix to the ES, for all SACs and SPAs requiring an Habitats Regulations Appraisal. This information will be used by the Competent Authority.

	Project and site description	
1	Brief description of the project	
2	Brief description of the designated Natura site including qualifying interests	
3	Conservation objectives for the Natura site	
	Screening	
4	Is the proposal directly connected with, or necessary to, conservation management of the Natura site?	
5	Consider whether there are any likely direct, indirect or secondary impacts of the project on the Natura site, at all phases of the development.	
6	Is the plan/project likely to have a significant effect on the designated Natura site, either alone or in combination with other plans or projects?	
	Appraisal of Impacts on Site Integrity	
7	Identify the relevant conservation objectives to consider for the designated Natura site?	
8	Consider the key phases of development and the risks associated with each. In view of the relevant conservation objectives.	
9	Appraise which individual elements of the overall project would give rise to the greatest risk of effects in view of the conservation objectives.	
10	Can it be ascertained that the proposal/plan will not adversely affect the integrity of the designated Natura site?	
11	Consider whether mitigation measures can be adopted to avoid impacts on site integrity	
9	**Appraisal of Impacts on Site Integrity**	
	Conclusion of Appraisal	
12	**Can it be ascertained that the proposal will not adversely affect the integrity of the SAC?**	