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IPI Members Briefing

Environmental Impact Assessment

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In a Nutshell.

EIA examines the **consequences** of proposed actions (projects) to determine if they are environmentally **acceptable**.

EIA Directive

- **Objective** - ensure **protection** of the environment and **quality** of life.
- Design, construction, and operation of any project is affected by the environment where it is developed.
- At the same time, the project will influence the environment, since during its life cycle it can cause an impact.
- This impact can lead to social, economic, and environmental impacts (**positive** and **negative**).

EIA Directive

- Public and private **Projects** that are **likely to have significant effects** on the environment be **assessed** before they are approved.
- Directive ensures the **participation** of environmental authorities and the public in environmental decision-making procedures.
- ECJ - EIA Directive has 'a **wide scope** and a **broad purpose**' and therefore needs to be interpreted as such.

Application of EIA – Not just Planning



EIA Responsibilities

Applicant

- Screen
- Scope
- Prepare EIAR
- Monitor

Competent Authority

- Screen
- Scope
- Consult
- Examine
- Reasoned Conclusion
- Decision
- Monitor

EIA – A Process

1. **Screening** - Decide if the project is EIA development (PDR Schedule 5 Part 1 & 2 and sub-threshold)
2. **Scope** extent of project & information to be provided.
3. Prepare EIAR
4. CA carries out **consultation** & takes into account information.
5. CA **examines** the EIAR and any other relevant information from consultation.
6. CA comes to **reasoned conclusion** on the significant effects.
7. CA integrates into decision to **Grant** consent the conclusion together with a description of measures to avoid, prevent or reduce or offset significant adverse effects and where necessary monitoring measures.
8. CA – decision to **Refuse**, state main reasons.

Requirement for EIA – PDRs Schedule 5, Part 1

EIA required if the stated threshold has been met or exceeded or where no thresholds are set e.g., oil refinery (no threshold), airport runway (2,100m), ports (1,350t vessels), pig and poultry rearing (see thresholds) etc.



Requirement for EIA – PDRs Schedule 5, Part 2

EIA required if stated threshold is met e.g., 500 houses, quarry 5 ha, wind 5 turbines or 5MW, urban development 2ha business district etc., demolition to facilitate development.



Sub Threshold EIA - Applicant

Part 2 (para 15) - Any project which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development, **but which would be likely to have significant effects on the environment**, having regard to the criteria set out in Schedule

SUB THRESHOLD SCREENING – MITIGATION

Screening Methodology

- Source – Pathway – Receptor
- Nature, Size and Location
- Criteria in Schedule 7 & 7A of PDRs

e.g., Development Plan identifies that wastewater treatment plant has limited capacity. Proposed to develop 300 dwellings & wastewater will discharge to it, likely significant impact on receiving water.

Sub Threshold EIA – Competent Authority

CA Screening

No Likely Significant Effects

1. Source – Pathway-Receptor
2. Consider Nature, Size & Location
3. Have regard to Schedule 7 criteria
4. Have regard to supplementary info
5. Record determination & state reasons

Likely Significant Effects

1. Determine EIA required
2. Record reasons
3. Notify Applicant
4. Revised Public Notices required

Likely Significant Effect

- More than a mere possibility
- More likely than not (greater than 50% probability of occurrence)
- Does the impact matter enough so that it should be reduced or prevented?' If so, the impact is likely significant.
- The most **common method** of determining whether the adverse environmental effects of a project are significant is to use **environmental standards, guidelines, or objectives**.

Examples - Standards, Guidelines & Objectives

Standards	Parameters
Air Quality Standards	e.g. SO ₂ , NO _X , PM ₁₀ etc.
Surface water quality standards (drinking, surface, salmonid)	BOD, SS, pH, etc.
BRE Standards – Daylight, Sunlight	e.g. 50% of area 21 st March
Code of practice for noise and vibration control on construction and open sites.	NSL A, B, C Guidance on permissible noise levels

Significant Effect

- If the level of an adverse environmental effect is **less than the standard**, guideline, or objective, it may be **insignificant**.
- If, on the other hand, it **exceeds the standard**, guideline, or objective, it may be **significant**.
- A significant effect does not necessarily equate to an effect so severe that consent for the project is refused planning permission e.g., **road developments** impacting archaeology, **Mitigation** preservation by record (excavation and recording).

Cumulative Significant Effect

Must consider **cumulation of impacts** – existing and/or approved.

Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018):

“Effects are not to be considered in isolation but cumulatively i.e., when they are added to other effects. A single effect on its own may not be significant in terms of impact on the environment but, when considered together with other effects, may have a significant impact on the environment.”

e.g., the excavation of numerous **basements** in an area may have a cumulative significant impact on groundwater levels which could undermine property.

Cumulative Significant Effect

Don't forget the wide scope and purpose of the Directive

Caution: narrow interpretation of the phrase "existing or approved projects"

Interpretation is arguably too restrictive in the context of an application which is part of a larger Masterplan.

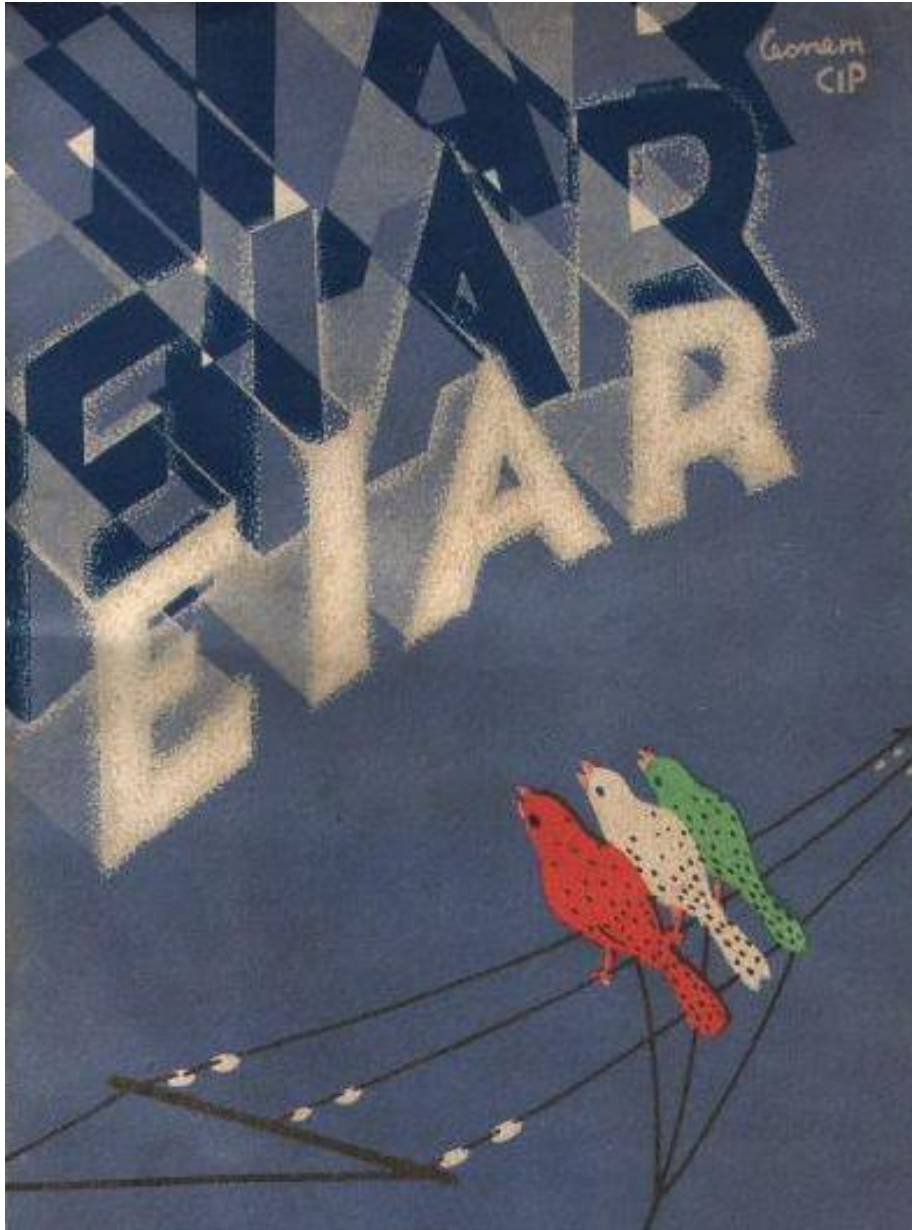
While not a specific requirement of the Directive, **best practice** to consider known future projects should be considered **in so far as is reasonably possible**.

Where design of wider area of a Masterplan is progressed, it should be addressed in the cumulative assessment – confirmed by SC in '**Apple Case**'.

Significance of Effect

Significance may be based on one or more of the following;

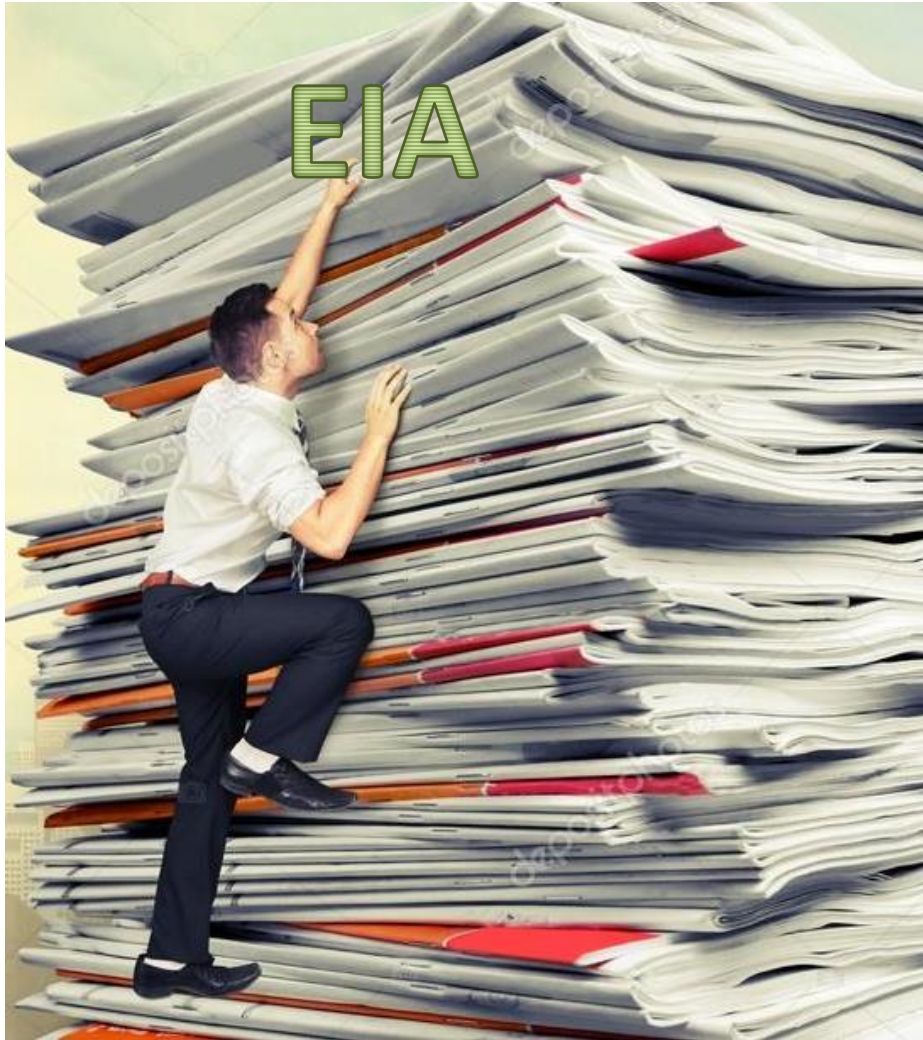
1. Comparison with laws, regulations or accepted standards.
2. Consultation with statutory bodies.
3. Acceptability to the local community or the general public



- Prepared on behalf of Applicant
- Competent Experts (Quals & Experience)
- Presents the information gathered relating to a Project's likely significant effects on the environment
- Accompanies Application

Multidisciplinary Study





- Competent Authority (Planning Authority, ABP, EPA etc.)
- Examination of EIAR **AND** Information from consultations
- Own Assessment
- Reasoned Conclusions on Significant Effects

Continuous Project Scoping

EIA is not bound by the land under the control of the Applicant or the red line. A project may have a **wider reach**.

Practitioners must monitor the evolution of the project to direct the EIAR team on changes to the scope

E.g.,

Review Scope of Project defined by Applicant

Design development proceeds – **Active Listening**, don't assume team thinking of impact decisions have for EIAR.

Project engineer applies to IW for CoF

Response indicates upgrade to off-site infrastructure required

EIAR must take account of this change in scope

Assessment of **WHOLE** project is necessary

Formal EIA Scoping

Objective: identify the information to be contained in EIAR

Opportunity to Scope out issues

Very few changes introduced in 2014;

- CA must take account of information provided
- CA must consult with Prescribed Bodies/Local/Regional competencies (4 weeks)
- Opinion does not prejudice the CA
- EIAR must be based on the opinion

Methodology

- Transparent methodology which explains approach to the assessment, then demonstrably apply that methodology in the assessment.
- The methodology should explain how the assessor deems whether or not a significant effect will occur and as a matter of good practice it should take into account all appropriate guidance in reaching those judgements.
- Current and most appropriate scientific methodology.

Baseline Assessment – Survey Examples

Bats:

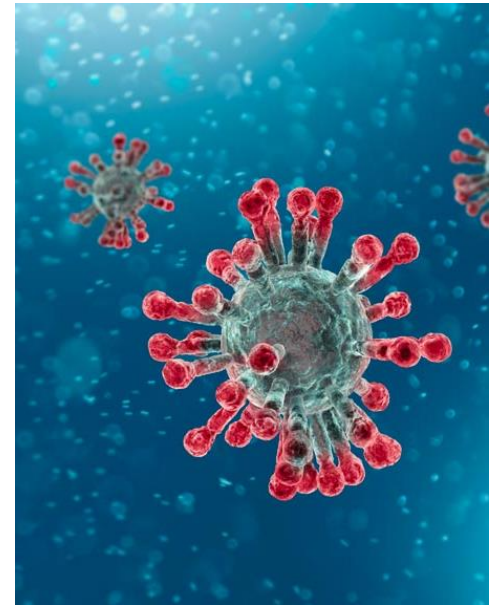
- ✓ May to September
- ✓ Details of temperature and weather conditions during surveys should be included in final report.

Wintering Bird Surveys: Mid October - Mid March

Traffic Count: Seasonality issues (schools, holidays) & now Public Health

- ✓ TII Permanent Count Sites
- ✓ Alternative Methodology – Generic Expansion Factor Method.

Sharing results from other similar Projects'. For example, if one year is spent collecting Baseline data for a windfarm, a similar windfarm Project in a similar location would be able to use much of the data already collected for the first Project.



Cradle to Grave Assessment & Evaluation

- Identify Projects Likely Significant Effects for **all stages**
- Assess and evaluate a project's impacts in all its phases
- Typical Project Phases:
 1. Demolition
 2. Construction
 3. Operation
 4. Decommissioning

Windfarm Decommissioning

A wind turbine comes to the end of its lifecycle after about **25 years**.

Analysis concentrates on installation and operation phase of wind turbines - limited information on decommissioning.

Typical Detail Provided:

*“When the wind project ceases operation, all major components and **most** above-ground structures will be removed from the site. In the case of the foundation works, the upper sections will be removed, and the voids backfilled with appropriate materials. Underground cables and concrete foundations will be left in place as removal would be likely to cause more damage than leaving them in situ. The surface will then be restored.” (Extract from EIAR)*

Windfarm Decommissioning –What's Missing?

Blades - fibreglass plastic materials, currently regarded as unrecyclable.

Options?

- Landfill – leaching - groundwater impact?
- Combustion (Incineration/Cement Kiln) – Carbon Dioxide, Carbon Monoxide emissions?
- Recycling - cutting, shredding, and grinding the material to separate the fibers from resins. This process is energy intensive and produces small fiber particles with poor mechanical properties that can only be used as filler reinforcement material in the cement or asphalt industries
- Reuse – CIT 'Re-Wind' – use in pedestrian bridge, greenway

2014 Directive - Major Accidents/Disasters?

Major Accident: occurrence such as a major emission, fire or big explosion resulting from an uncontrolled development in the course of the construction, operation, dismantling or demolition of a project, and leading to serious danger to human health or the environment, immediate or delayed.

Disaster: natural events such as floods, rising sea levels, external to the project, that results in severe destruction or damage on the people or the environment.

Major Accidents - Windfarm Example

Major Accidents	Risk Identification	Risk Level/Action
Pollution	<ul style="list-style-type: none"> • Construction requires large concrete pours. • Spillages migrating to watercourses/groundwater. 	<p>Likely Significant Assessment of potential impacts from pollution events considered in Land & Soils Chapter and Water Chapter.</p>
Accident	<ul style="list-style-type: none"> • Offshore – significantly different working environments to onshore • Working from boats, diving • Weather conditions offshore can be harsh and will change constantly, and this increases the risks to workers when they are assembling or maintaining wind farms or being transferred to and from turbine platforms by vessels in shifting seas. 	<p>Likely significant Assessment of impact in Population & Human Health Chapter</p>

Natural Disasters – Windfarm Example

Natural Disaster	Risk Identification	Risk Level/Action
Natural Disaster - Landslide	<ul style="list-style-type: none"> Increased peat slide risk and development itself may be affected by a peat slide. 	<p>Likely Significant Peat Slide Risk Assessment</p>
Severe Weather - Storm	<ul style="list-style-type: none"> Wind turbines are designed to withstand extreme weather conditions with brake mechanisms Only operate under specific wind speeds and will shut-down during high wind speed events. 	<p>Low Risk - not likely significant</p>
Severe Weather - Ice	<ul style="list-style-type: none"> Ice accumulation on turbine blades, turbine technology has evolved to avoid the possibility of ice throw through the shut-down of the turbines in the appropriate conditions and the detection of ice on the blade 	<p>Risk of ice throw is considered to be Low Risk, and no likely significant effects are anticipated.</p> <p>Ice throw is therefore scoped out of further assessment.</p>

2014 Directive – Climate Change

Clear references to ‘climate change’ and ‘greenhouse gases’.

Questions to consider

- Will the project emit carbon dioxide (CO₂), nitrous oxide (N₂O) or methane (CH₄) or any other GHGs?
- Does the project entail any land use, land-use change or forestry activities (e.g., deforestation) that may lead to increased emissions, loss of carbon sequestration?
- Does it entail other activities (e.g., afforestation) that may act as emission sinks?
- Will the proposed project significantly influence demand for energy?
- Is it possible to use renewable energy sources?
- Travel, increase or decrease?

2014 Directive – Climate Change Mitigation

Direct GHG Emissions

- Consider different technologies, materials, etc. to avoid or reduce emissions.
- Protect natural carbon sinks that could be endangered by the project, such as peat soils, woodlands, wetland areas, forests.
- Plan possible carbon off-set measures, available through existing off-set schemes or incorporated into the project (e.g., planting trees).

Energy Emissions

- Use recycled/reclaimed and low-carbon construction materials.
- Build energy efficiency into the design of a project (e.g., south facing windows for solar energy, passive ventilation and low-energy light bulbs).
- Make use of renewable energy sources.

Transport Emissions

- Choose a site that is linked to a public transport system or put in place transport arrangements.
- Provide low-emission infrastructure for transport (e.g. electric charging bays, cycling facilities).

Monitoring

- Requirement ONLY for significant & adverse environmental effects.
- Consents must incorporate to ensure implementation.
- Monitoring Procedures
 - ✓ Proportionate to nature, location & size of project
 - ✓ Use of existing monitoring to avoid duplication



O’Grianna – Project Splitting & Cumulative Effects

Custom & Practice

- Phase 1 - erection of the wind turbines and all related development / construction
- Necessary for that wind farm to be connected to the national grid, and custom & practice was this was usually Phase 2 of the project.
- Planning permission not requested for connection, as the wind farm developer is dependent on the ESB to make this happen in the future, so the EIAR did not include the environmental impact of this necessary connection.
- Connection generally requires either overhead or underground power cables with a substation or transformer.

Change to Custom & Practice

- Judicial review brought by a number of residents against the decision. The connection to the national grid is fundamental to the entire project.
- Grounds: The Board had not assessed the **cumulative environmental impacts** of the grid works before granting permission. This was because, as the Board and its inspector accepted, it was not possible to know (and therefore assess) the line of the grid connection, or whether it was above or underground, as these details had not yet been fully developed by the ESB networks, a third party who was not the developer.
- The turbine development and the grid connection was “one project, neither being independent of the other... the wind turbine development on its own serves no function if it cannot be connected to the national grid.”

Decision

- The reason for the quashing the decision was that the planning application and the subsequent EIA undertaken by ABP related only to the construction of the wind turbines, and did not include the necessary second phase, namely the works necessary to connect the wind farm to the national grid.
- An impermissible “**project-splitting**” had occurred thereby invalidating the decision-making process



Apple Data Centre, Athenry

Apple Data Centre, Athenry, Co. Galway

- Defining the **Scope** of the Project – Future Expansion
- 2016 ABP Granted Permission to Apple for 1No. Data Hall & Grid Connection
- **JR**-failed to carry out an EIA of the proposed data centre development in accordance with the EIA Directive
- Apple's Masterplan envisaged 7No. Data Halls in the future.
- Capacity of substation (200kV) would serve much larger Data Centre
- Alleged ABP failed to assess the energy demands of the overall masterplan (240MW not 30MW) and the EIA was defective on grounds that ABP had failed to describe or assess the development as a whole

Apple Data Centre, Athenry, Co. Galway

ABP submitted the Data Hall would operate on its own

- ✓ No functional dependency
- ✓ Further Data halls would require separate consents with EIA
- ✓ HC held an EIA of Masterplan not required

The Court was satisfied that there was no '**project splitting**' to avoid the full rigours of EIA, nor was there a failure to carry out a cumulative impact assessment of the data centre hall with the proposed substation and grid connection development.

Apple Data Centre, Athenry, Co. Galway

Supreme Court - 2019

1. The Board was **not obliged** to carry out EIA of the entire masterplan before deciding on the applications for the data centre hall and substation.
2. The Board was only **obliged** to carry out an EIA of the proposed developments for which planning permission was sought.
3. The Board was additionally **obliged** to take account as far as practically possible of the environmental effects of potential later phases of development identified in the masterplan.
4. The Supreme Court was satisfied that the Board had met its legal obligations in full, accordingly the **appeal was dismissed**.

Conclusions

- Practitioners & Decision Makers should approach EIA as a key instrument for protecting the environment and quality of life.
- Not expected to be a specialist in all disciplines – build generalist knowledge.
- Increase in JRs crystallises process issues but may be undermining the overarching objective – preoccupation with legal challenge.
- Avoid treating EIA as 'tick box', paper churning exercise.
- Approach as a value enhancing exercise.

Míle Buíochas!