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Institution of Civil Engineers
Publishing

Environmental Impact Assessment Handbook

A practical guide for planners, developers and communities

Third edition

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ice Publishing

Carroll, B, Fothergill, J, Murphy, J and Turpin, T
ISBN 978-0-7277-6141-5
http://dx.doi.org/10.1680/eiah3e.61415.001

Chapter 1
EIA in context

This chapter gives an overview of the environmental impact assessment (EIA) process, explaining why and when to carry out an EIA. The role of EIA within the planning and development processes is introduced, together with professional standards and the role of key parties/stakeholders. EIA's main benefits are set out, and the future of the process is considered in relation to the need to deliver developments that act to enhance the environment, rather than simply minimising their negative effects.

1.1. What is EIA?

EIA is a process to help ensure environment and social consequences are integrated into and given due attention in the consenting or financing of development. This handbook is focused on the EIA procedure that informs local authority planners, statutory consultees, other interested parties and the general public about certain proposed developments that are deemed likely to significantly affect the environment. The EIA is generally undertaken by specialist consultants on behalf of a developer, acting to improve the concurrent design process and generate improved environmental and community outcomes. It was first introduced in the USA, by the National Environmental Protection Act 1969 (US Government, 1969), and has developed to be applied by governments and international institutions throughout the world, including in the UK, for example for England through the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) – the EIA Regulations (HMG, 2017).

''The aim of Environmental Impact Assessment is to protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision-making process''

– MHCLG (2019a)

EIA is part of the wider process of deciding whether certain types of development projects should be approved. Other dimensions – political, stakeholder perspectives and cultures, overriding need, competing proposals – also must be considered. However, by including environmental (and social) factors alongside economic and other considerations, a more sustainable outcome can be achieved.

While termed 'environmental impact assessment', factors such as human health are regularly assessed within EIA, and stakeholder engagement activity is core to the process. As such, while EIA has clear social elements within how it is practised, in the UK it remains framed within an environmental context. Within the risk management frameworks of international financial institutions (e.g. the World Bank), EIA is often explicitly expanded to 'environmental and social impact assessment' (ESIA), addressing issues such as labour rights, involuntary resettlement and impacts on indigenous peoples.

EIA is an ongoing process: the collection and assessment of environmental information, the preparation of an environmental statement (ES), consultation with a wide range of parties and the consideration of the environmental information. This information is then taken into account in the determination of the application for development approval (undertaken by the authorising body). Early and continued stakeholder engagement is encouraged between the promoter, the authorising body, other consultees and the public. The process identifies the potential significant effects on the environment, and develops appropriate options for their mitigation.

Key fact
Environmental issues are not necessarily a constraint on development: environmental enhancements or opportunities can improve development and can facilitate sustainable development

effects on the environment, either on its own or cumulatively with other developments.

2.2.3.3 Thresholds and criteria – Schedule 2

On the assumption that development outside of sensitive areas carries a lower risk of significant impact, planning authorities are not required to screen all developments that fall within the broad category definitions set out in Schedule 2. The EIA Regulations take a risk-based approach by setting out thresholds/criteria (Table 2.2) related to each sub-category of the 13 development types, listed in the second column of the schedule's table.

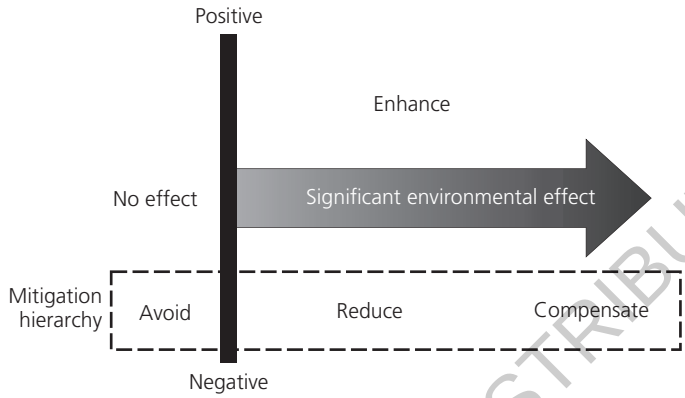
Where a development proposal is below or outside of the specified threshold or criterion, the project is effectively exempt from the need for screening and will not require EIA. As noted above, the exception to this is that the EIA Regulations provide the secretary of state (or the devolved administration) with the power to require any development, no matter its scale, to undertake an EIA.

Many of the thresholds are based on the **land area** required for the proposed development, with others based on the development's height, or its distance to controlled

Table 2.2 A summary of Schedule 2 thresholds and criteria in the EIA Regulations

Threshold/criterion	Appearances in Schedule 2, column 2	Percentage of uses in Schedule 2	Notes
Area or **land take** (Threshold)	40	68%	Ranging from 0.05 ha for the storage of petroleum, petrochemicals and chemical products to 5 ha for industrial estates and urban development
Distance within 100 m of controlled waters (Threshold)	7	12%	Where the following are proposed within 100 m of controlled waters ■ deep drilling (Schedule 2(2)(d)) ■ surface storage of natural gas/fossil fuels, or underground storage of combustible gas (Schedule 2(3)(c–e)) ■ waste disposal (Schedule 2(11(b)l) ■ sludge deposition (Schedule 2(11)(d)) ■ storage of scrap iron, including vehicles (Schedule 2(11)(e))
Height (Threshold)	2	3%	Related to wind energy (Schedule 2(3)(i)) and ski-lifts/cable-cars (Schedule 2(12)(a))
Specified (Criterion)	6	10%	Covering ■ waste disposal by incineration ■ pipelines carrying gas above 7 bar ■ extending a runway ■ >150 dwellings ■ >200 t of stored petrol/chemicals ■ >2 wind turbines ■ hydropower >0.5 MW ■ sites requiring an environmental permit related to radioactive substances ■ aquaculture producing >10 t fish (dead weight).
No criteria/threshold (All such proposals require EIA screening)	4	7%	Covering all proposals related to ■ coastal and marine erosion protection works ■ carbon capture and geological storage ■ extraction of minerals by fluvial/marine dredging ■ reclamation of land from the sea

Figure 3.3 The mitigation hierarchy. (Adapted from Fothergill, 2011)



Guiding principle

When developing mitigation, consider the following principles alongside the mitigation hierarchy

- the precautionary principle
- preventative action should be taken
- environmental damage should be rectified at source
- the polluter should pay

The mitigation process is an iterative one, continuous throughout the project design development. All options for mitigation should be considered at all stages of the potential project – construction, operation/occupation, decommissioning and restoration. Each stage should be included within the ES. The identification and incorporation of mitigation can only be effective if the EIA coordinator is engaged from the start.

A more recent development in UK EIA practice has been the uptake of terminology that aims to categorise mitigation in relation to how it relates to the development. This categorisation into primary, secondary and tertiary mitigation is intended to be used alongside the mitigation hierarchy, which should remain as the key guiding principle in developing mitigation. The three terms are defined by IEMA (2015b) as follows

- **primary**(/inherent) mitigation is an intrinsic part of the project design – it should be described in the design evolution narrative and included within the project description
- **secondary**(/foreseeable) mitigation requires further activity in order to achieve the anticipated outcome – typically, this will be described within the topic chapters of the ES, but often it is secured through planning conditions and/or management plans
- **tertiary**(/inexorable) mitigation will be required regardless of any EIA assessment, as it is imposed as a result of other legislative requirements and/or standard sectoral practices.

These categories are expanded upon in Table 3.3.

The descriptions of proposed mitigation need to be precise and clear, if a planning authority is to rely upon them for setting planning conditions in any subsequent approval (see below). The impacts remaining after mitigation and for which no mitigation is proposed or possible – the residual impacts – should be clearly identified, as these are the predicted impacts of the proposed development.

Any uncertainty should be reported, and monitoring proposals, to identify the actual effects and help correct any deficiencies in mitigation, should also be stated (see Section 3.5.3).

To help identify whether a proposed mitigatory action is feasible, issues such as its practicability, technological requirements and deployment cost all need to be considered and understood. The flow diagram (Figure 3.4) is a useful tool in helping identify whether mitigation is both necessary and deliverable.

7.6.7.2 Dust

- Damp down materials.
- Cover sources.
- Locate sources away from sensitive locations.
- Remove any material tracked out of the site.

7.6.7.3 Odour

- Maximise the distance between the source and the receptor.
- Enclose sources.
- Treat emissions or extracted air.
- Manage the process to minimise emissions.
- Use physical barriers.

7.6.8 Top tips

Providing early advice at the design stage on potential air quality impacts can be invaluable to avoid significant effects and/or to incorporate changes at an early stage in the process.

7.7. Climate change

7.7.1 Introduction

Climate change expert briefing

By

- **Joanna Wright** – Director of Environmental Planning, LUC

Climate change is widely recognised as being one of the greatest economic, environmental and social challenges facing the world today. As a consequence of climate change, temperatures will continue to increase, with more droughts and heatwaves, sea levels will continue to rise and precipitation patterns will change, with more risk of flooding. Hurricanes and cyclones are likely to become stronger and more intense, and the risk of wildfires greater. Impacts on natural and human systems, which are being experienced already across the globe, include a reduction in the diversity of ecosystems and even species extinction, the disruption of food production and water supply, damage to infrastructure and settlements, and consequences for mental health and human wellbeing, including greater risk of illness and even death.

There is a need to consider climate change in EIA for the following reasons

- Climate change has become a more-important issue in policy and plan making, and this should be reflected in project level assessment and decision-making processes.
- Climate change will continue to cause damage to the environment and to compromise economic development. It is therefore appropriate to assess the impact of projects on climate, including measures to avoid or reduce the generation of greenhouse gas emissions (**climate mitigation**) and also the vulnerability/resilience of projects to climate change (**climate adaptation**).

Key fact

Adaptation is the process that a receptor or project has to go through to ensure it maintains its resilience to climate change

Mitigation refers to measures included in a project to reduce emissions of greenhouse gases, and is not to be confused with the broader application of the term 'mitigation' in EIA

Climate change is a relatively new topic in EIA. Guidance is evolving, and there is also no prescribed way in which climate change should be incorporated into an ES, with some incorporating climate change in existing chapters (from policy context and review of alternatives through to the individual impact assessments) and others preferring to pull together all relevant considerations in a single chapter. It is therefore important that EIA practitioners continue to approach the assessment of climate change with 'a good heart', debate methodological challenges and share examples of good practice.

7.7.2 Key information – regulations, standards and stakeholders

There are strong international and national regulatory policy drivers for taking action to address climate change. These include but are not limited to the following

- **The Paris Agreement** (UN, 2015). In December 2015, 196 Parties to the UN Framework Convention on Climate Change signed a legally binding framework for an internationally coordinated effort to tackle climate change: the Paris Agreement. Article 2 sets out the ambition of holding the increase

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ISBN 978-0-7277-6141-5
http://dx.doi.org/10.1680/eiah3e.61415.163

Appendix 1
Links to key consultees, organisations and stakeholders across the UK'S EIA regimes

The lead government department on environmental impact assessment (EIA) legislation has traditionally been the **Ministry for Housing, Communities and Local Government** (MHCLG)

- **MHCLG**, 2 Marsham Street, London SW1P 4DF
  W: https://www.gov.uk/government/organisations/ministry-of-housing-communities-and-local-government

Devolution, however, has led to variation and differences across the UK. While a small number of EIA regulations apply across the whole of the UK, such as the Marine Works (Environmental Impact Assessment) Regulations 2017 (SI 2017/588), engagement will always be required with the most relevant administration in the part of the UK where the proposed development is located. As such, the first section of this appendix (UK-wide EIA bodies) focuses on EIA practice-related professional bodies, followed by other UK-wide stakeholders. Government department and statutory consultee links and contact details are then provided under the heading for each of the UK's nations.

UK-wide EIA bodies

Contact information is provided for UK-wide EIA-related professional bodies/institutions, followed by details of other national stakeholders, including key non-governmental organisations and university departments noted for their specialism in EIA.

EIA professional/networking organisations

- **IEMA** (formerly: Institute for Environmental Management and Assessment (1999–2017), and Institute for Environmental Assessment (1990–99)),
  City Office Park, Tritton Road, Lincoln LN6 7AS
  E: info@iema.net
  W: https://www.iema.net

  IEMA operates

  - **EIA Quality Mark**: https://www.iema.net/eia-quality-mark
  - **EIA Practitioner Register**: https://www.iema.net/specialist-registers/eia-practitioners
- **Ireland and UK branch of the International Association for Impact Assessment**
  E: fischer@liverpool.ac.uk
  W: https://www.iaia.org/ireland-uk-branch.php