



Environmental Factor Guideline

Social Surroundings

The objective of the factor *Social Surroundings* is:

To protect social surroundings from significant harm.

Purpose

The purpose of this guideline is to communicate how the factor *Social Surroundings* is considered by the Environmental Protection Authority (EPA) in the environmental impact assessment (EIA) process.

Specifically, the guideline:

- defines the factor *Social Surroundings* and explains the associated objective
- describes EIA considerations for this factor
- describes issues commonly encountered by the EPA during EIA of this factor
- identifies activities that can impact social surroundings
- provides a summary of the type of information required by the EPA to undertake EIA related to this factor.

What are social surroundings?

The definition of environment in the *Environmental Protection Act 1986* (EP Act) includes social surroundings:

Environment, subject to subsection (2), means living things, their physical, biological and social surroundings, and interactions between all of these (Subsection 3(1)).

This means that, for the purposes of EIA, social surroundings is a part of the environment that may require consideration.

However, the EP Act includes an important qualification in its definition of social surroundings:

For the purposes of the definition of environment in subsection (1), the social surroundings of man are his aesthetic, cultural, economic and social surroundings to the extent that those surroundings directly affect or are affected by his physical or biological surroundings (Subsection 3(2)).

In effect, this means that for social surroundings to be considered in EIA, there must be a clear link between a proposal or scheme's impact on the physical or biological surroundings and the subsequent impact on a person's aesthetic, cultural, economic or social surroundings.

Further, the above must also be read in the context of 'significance' as defined in relation to significant proposals in subsection 37B(1) of the EP Act:

Significant proposal means a proposal likely, if implemented, to have a significant effect on the environment.

That is, for the EPA to consider social surroundings as a factor in EIA, a proposal's or scheme's effect on social surroundings, via its effect on the physical or biological environment, must be significant.

The environmental objective for Social Surroundings

The EPA's environmental objective for the factor *Social Surroundings* is: "To protect social surroundings from significant harm". The objective recognises the importance of ensuring that social surroundings are not significantly affected as a result of implementation of a proposal or scheme.

Considerations for environmental impact assessment

Considerations for EIA for the factor *Social Surroundings* include:

- application of the mitigation hierarchy to avoid or minimise impacts on social surroundings, where possible
- the aesthetic, cultural, economic and/or social values which may be impacted, and whether those values are significant
- the contribution implementation of the proposal or scheme may make to existing or predicted cumulative impacts to aesthetic, cultural or social values
- that emissions of noise, odour or dust are considered in the context of relevant legislation, criteria or standards
- the level of confidence with which the predicted impacts to social surroundings have been made, and what is the risk should those predictions be incorrect
- whether proposed management or mitigation of impacts to aesthetic, cultural, economic and/or social surroundings is technically and practically feasible.

Social surroundings and their significance

Aboriginal heritage and culture

Western Australia has numerous Aboriginal heritage sites which provide an important link for Aboriginal people to their past and their culture.

The *Aboriginal Heritage Act 1972* provides for the preservation of Aboriginal heritage sites. The Act requires the reporting of Aboriginal sites to the Registrar, and it is an offence to interfere with a registered site unless otherwise authorised under the Act.

It is also an offence to interfere with any Aboriginal site knowingly or where it would be reasonable to know, regardless of whether or not it is registered.

The EP Act can, in some instances, complement the AH Act, for example, in cases where actual physical protection of the environment is required to protect sites of heritage significance.

In addition to Aboriginal heritage, matters of Aboriginal cultural associations, including traditional Aboriginal customs, directly linked to the physical or biological aspects of the environment, may also be considered significant. This may include, for example, traditional hunting and gathering activities for native fauna and flora as bush tucker.

Natural and historical heritage

In addition to Aboriginal heritage, Western Australia has sites of natural and historic heritage. Many of these are acknowledged on heritage lists such as the State Register of Heritage Places, the National Heritage List and the World Heritage List.

Natural and historical heritage sites are important because they help us to understand our past, enrich our understanding of our society, and contribute to community and individual wellbeing.

For the purposes of EIA, natural or historic heritage sites listed on these lists and registers may have significant environmental values.

Amenity

Amenity is a broad term that generally means the qualities, attributes and characteristics of a place that make a positive contribution to quality of life.

For the purpose of EIA, amenity values include both visual amenity, and the ability for people to live and recreate within their surroundings without any unreasonable interference with their health, welfare, convenience and comfort.

Noise, odour and dust all have the potential to unreasonably interfere with the health, welfare, convenience and comfort of people.

Natural landscapes and views often contribute to visual amenity, such as areas of high heritage, cultural or social significance due to their natural features or scenic quality.

Amenity values can be highly subjective. What may have amenity value for one person, may not be valued by another. Similarly, people have different levels of perception or tolerance for things that may impact amenity, such as noise, odour and dust.

Economic

While the EP Act defines social surroundings to include a person's economic surroundings, this does not mean that a proposal's economic benefits, such as job creation or revenue generation, can be considered as part of EIA under Part IV of the EP Act. Rather, the EPA may assess the impacts of a proposal on the economic surroundings of a proposal, that is, economic impacts related to the physical area involved in a proposal. For example, this could include the economic impacts on farmers who own farmland adjacent to a proposed coal mine, which may be affected by impacts on water supply caused by the proposal.

While EIA of impacts to economic surroundings is not common, the EPA will consider significant economic impacts resulting from any significant impact of a proposal or scheme on the physical or biological surroundings.

Issues

The following issues are matters that are commonly encountered by the EPA due to the nature of proposals that are referred to it. Background on these issues is provided here to help proponents and the community engage with EIA. This issues section will be updated from time to time to reflect new issues as they arise in referrals and EIA.

Predicting the impacts of noise, dust and odour

While modelling the potential impacts of noise and dust may be technically complex, methodologies and practices are generally well understood and accepted. Predictions can also be validated with on-site measurements or proxy data, as noise and dust can be quantitatively measured.

Odour, however, cannot be measured accurately and predictions of impacts rely on subjective testing. Tolerance for odour also tends to vary from person to person. This can make EIA of these predicted impacts challenging.

For proposals or schemes that may emit noise, dust and/or odour, the EPA encourages proponents to engage expert technical consultants and consult relevant government agencies early in the design phase as this can make avoidance or mitigation easier and potentially avoid the need for formal EIA.

Separating industry and sensitive land uses

Most issues to do with amenity relating to noise, odour and dust can be avoided with appropriate separation distances. The application of separation distances between industry and sensitive land uses, through the land use planning system, can ensure that both intended and unintended emissions do not adversely impact on people. Without separation, problems can arise which cause high levels of concern for individuals and communities and which are difficult to solve.

While amenity matters are usually managed through land use planning and regulation, occasionally implementation of a proposal or scheme may have a significant effect on amenity and warrant consideration in EIA. Sensitive premises such as residential development, childcare and schools, or health campuses may be impacted if they are to be located close to existing industries, or if industry expands near existing sensitive premises.

The EPA expects proponents or, in the case of a scheme, planning authorities, to consider and/or design proposals with appropriate distances in mind, informed by recognised published separation distance guidelines to ensure human health and wellbeing, local amenity and aesthetic enjoyment continue.

Cumulative emissions

With respect to noise, dust and odour, implementation of any single proposal or scheme may not significantly impact a sensitive receptor, such as residential development. However, a combination of proposals may generate cumulative emissions that are above acceptable levels.

Understanding the interaction of cumulative emissions, often in combination with seasonal weather factors, is important to accurately predict the level of potential impact. Therefore, when undertaking EIA on a proposal or scheme, existing and forecast development activity that also generate emissions is likely to be a consideration. Proponents are encouraged to include this analysis in their referral and environmental review documentation.

Identifying Aboriginal sites and significant cultural associations

Most of Western Australia is remote and Aboriginal people have lived throughout the entire state. As such, the EPA recognises that not all significant Aboriginal heritage is registered. It is important that the necessary surveys and consultations are undertaken to ascertain the presence of objects or sites customarily used by or traditional to Aboriginal people that are important and significant.

There is even less documentation or awareness of Aboriginal cultural associations with the environment and this may only be gained by consulting and engaging with the relevant Aboriginal people of an area and discovering how Aboriginal people connect with the land to go about their traditional activities such as hunting, learning, teaching, collecting and healing.

Impacts

Development activities that have the potential to impact social surroundings include, but are not limited to:

- activities that disturb the ground in a way that may impact cultural associations and heritage (Aboriginal, natural and historical)
- activities that may impact the amenity of social surroundings, such as:
 - developments that generate noise or vibration in proximity to sensitive premises
 - activities that generate dust, including earth moving, processing, transport, stockpiling or loading of materials
 - industrial activities that generate dust or odour
 - rural activities such as piggeries or poultry farms, and treatment facilities such as wastewater treatment plants that generate odour
- activities that may impact aesthetic values, such as:
 - large scale quarry or mining activities on landscapes of significant aesthetic value
 - major tourism or other developments in or adjacent to natural areas with significant aesthetic values.

Information required for EIA

Where social surroundings has been identified as an environmental factor the EPA may require the proponent to include information or studies within the following broad topics:

- Aboriginal heritage and cultural surveys, which may include anthropological and/or archaeological surveys, as well as proposed impact avoidance and mitigation measures
- a description of natural and historical heritage values that may be impacted, as well as proposed avoidance and mitigation measures
- landscape and visual impact assessment studies based on recognised methodology
- analysis, modelling and predictions of impacts from odour, dust and noise, including likely impacts during, worst, best and most likely case scenarios
- characterisation of proximity to sensitive receptors
- summary of proposed technologies, emission reduction equipment and management practices
- description of proposed management and monitoring arrangements
- analysis of cumulative impacts, including existing and reasonably foreseeable emission sources.

Environmental Protection Authority 2016, *Environmental Factor Guideline: Social Surroundings*, EPA, Western Australia.

This document is available in alternative formats upon request.

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(To assist persons with hearing and voice impairment)

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