

# Environment Effects Act 1978 Advisory Note

## DELWP Impact Assessment Guidance Use of impact assessment and risk assessment in environment effects statements

Updated 10.2.2021

### Key messages

- The purpose of an Environment Effects Statement (EES) is to identify, assess and clearly characterise/describe likely environmental impacts/ effects, rather than environmental risks
- The EES is a key input to the Minister for Planning's assessment of the project's environmental impacts/ effects. In Victoria, statutory decision-makers must take the Minister's assessment into account prior to deciding on project approvals.
- It is recommended that environmental risk assessment is primarily used as a tool to identify and prioritise potential environmental issues/effects, as well as determine and justify the level of effort applied to each aspect of the impact assessment.
- It may be appropriate to discuss some issues/impacts that are unlikely to occur in terms of environmental risk, using likelihood and consequence.
- While an environmental risk assessment or risk register can be included with an EES, it is not required.
- The key residual impacts of the proposed project need to be clearly described and quantified (e.g., in terms of expected magnitude, extent and duration) taking into account the mitigation/management commitments.

### Risk-based approach for the EES

A good starting point for understanding the role of environmental risk assessments in EESs is the Ministerial guidelines, which state "A risk-based approach should be adopted in the assessment of environmental effects so that suitable, intensive, best practice methods can be applied to accurately assess those matters that involve relatively high levels of risk of significant adverse effects and to guide the design of strategies to manage these risks."

This does not mean:

- a full or detailed environmental risk assessment necessarily needs to be undertaken and included with the EES;

- an environmental risk assessment framework should be used for the EES as the basis for examining and assessing impacts; nor that
- potential issues associated with the proposal should be described in terms of risk.

There are of course some events that are unlikely to occur but are still possible. It may be difficult to assess the impacts of accidents, for example. In these cases, environmental risk assessment might be a helpful way of addressing and explaining how an unlikely event relates to potential for adverse consequences. We generally discourage use of phrases such as 'planned' or 'unplanned' risks in the EES since risk is inherently about events which may or may not occur.

It may also be useful at this point to distinguish the terms probability and uncertainty. A risk's probability (i.e. likelihood) is how frequently or likely the adverse

consequence is predicted to occur. However, uncertainty inherent in a risk analysis is about how certain (or not) one is in predicting the likelihood and consequence of a risk. Understanding of cause and effect involves varying degrees of uncertainty, depending on the scope and complexity of the issue and the environmental processes/ecosystems involved. Uncertainty is usually dealt with through an explanation of those aspects of the analysis that are uncertain and what our confidence in the predictions are. EESs need to provide clear identification of the uncertainty associated with predictions and describe what the implications of this level of uncertainty are. Discussion of uncertainty is just as important in regard to impact assessment as it is in risk assessment. This is sometimes addressed through examination of scenarios (such as a plausible worst case).

## Does an EES need to include an environmental risk assessment?

An environmental risk assessment is not required. However, as per the [Proponent Advisory Note – EES Commencement and Scoping](#) the following should be submitted with the proponent's draft EES study program:

- *Preliminary hazard or risk assessment; and*
- *Preliminary list of environmental issues/risks.*

These items are intended to inform the development and review of the draft EES study program, and check that the types and extent of investigations/studies proposed are proportionate to the risk of adverse effects.

An environmental risk assessment or risk register has become a common approach in impact assessment and is typically included with an EES (e.g. as a technical appendix to the EES main report) but is not explicitly required or necessary.

The risk assessment can be used as a tool to assist in the identification and assessment of impacts and examination of mitigation measures, but should not form the main basis/framework for the prediction and assessment of impacts in the EES.

## Environmental assessment frameworks

If an environmental risk assessment is proposed to be included in an EES, both the environmental risk assessment and impact assessment frameworks should be established in the early stages of the EES process, so that these can be applied consistently in all studies and the EES main report. It is suggested that both frameworks are summarised in the EES study program to allow the TRG to provide initial feedback on the proposed approach.

Components of a risk assessment framework, if proposed, could include:

- environmental risk assessment process applied;
- definitions;
- risk matrices with descriptions of likelihood and consequence;
- description of how the risk framework will be integrated with proponent systems; and
- description of process for review and reporting of risks during the project's life.

Components of the impact assessment framework could include:

- description of direct and indirect impacts;
- discussion of how magnitude, extent and duration of impacts will be considered;
- description of the mitigation hierarchy and how it will be applied;
- discussion of steps in impact assessment process leading to identification of (post mitigation) residual impacts;
- description of how the significance of residual impacts will be assessed/rated;
- discussion of how matters of national environmental significance will be assessed (with reference to the relevant guidelines); and
- the approach to assessment of cumulative impacts.

Importantly, the relationship between the environmental risk assessment and impact assessment needs to be described. While the environmental risk assessment

should inform the focus of the assessment of impacts, the primary approach to the assessment of impacts/effects in the EES should be that of the impact assessment framework. The environmental risk assessment (should it be utilised at all) should not detract from or confuse the presentation and reader's understanding of predicted impacts/effects.

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