



Environmental outcomes and outcomes-based conditions

Interim Guidance

Environmental Protection Authority

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1 Purpose

The purpose of this document is to:

- explain what environmental outcomes are and their application throughout the environmental impact assessment (EIA) process
- assist proponents to identify the environmental outcomes likely to result from their proposal as early as possible in the development of their proposal, and to continue to assess and refine the environmental outcomes throughout the assessment process
- outline the EPA's usual process for setting outcome-based conditions.

2 Introduction

In assessing proposals, a central consideration for the EPA is whether a proposal can be implemented in conformity with the achievement of its environmental objectives. Environmental outcomes are a key tool for the EPA to use in considering this.

The EPA's ability to consider whether its environmental objectives are met is improved when it is provided with information from the proponent about proposed environmental outcomes or information about residual environmental impacts, rather than just being provided with measures to minimise or manage impacts.

3 What is an environmental outcome?

An environmental outcome, in the context of EIA, is the state of the environment at a point in time during implementation or after a proposal has been implemented.

Environmental outcomes:

- reflect specific and measurable environmental states
- have a clear boundary, size, extent, or limit
- are associated with the achievement of one or more of the EPA's objectives for environmental factors (refer to the EPA's [Statement of environmental principles, factors, objectives and aims of EIA](#)).

The EPA believes the focus on environmental outcomes throughout the EIA process is a key mechanism to ensuring proposals can be implemented to be consistent with the *Environmental Protection Act 1986* (EP Act) principles and with the EPA's objectives for environmental factors.

In identifying environmental outcomes, it is important to distinguish the difference between an environmental outcome and a residual impact. Residual impacts are the impact/s of a proposal that are expected to remain after the application of the mitigation hierarchy. Environmental outcomes are the state of the environment at a point in time during implementation or after a proposal has been implemented. Residual impacts are "proposal-centric" whereas environmental outcomes are "environment-centric".

4 What are outcomes-based conditions?

Outcome-based conditions are the preferred condition type recommended by the EPA because they can provide:

- clarity on the environmental values to be protected, enhanced, conserved and maintained
- transparency as to the required environmental outcomes to be achieved by proponents
- flexibility for proponents to identify how to achieve an environmental outcome - consistent with adaptive environmental management and continuous improvement
- a best-practice regulatory approach
- alignment with the approach applied under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

5 Environmental outcomes throughout the EIA process

Environmental outcomes are relevant at every stage of assessment, as outlined in the EPA's Procedures Manual and associated Instructions, and as summarised below.

Note: Environmental outcomes are referred to as "likely" until they are substantiated and proposed by a proponent in a formal EIA application (i.e., referral, assessment or post assessment application), where they are referred to as "proposed" environmental outcomes.

| Stage 1 - Referral of a proposal to the EPA |
|---|
| <p>Proponents are encouraged to discuss likely environmental outcomes of their proposal and application of the mitigation hierarchy in pre-referral discussions with the EPA.</p> <p>If it appears the likely environmental outcomes of a proposal may be inconsistent with the EP Act principles and EPA objectives for environmental factors, the EPA encourages proponents to consider proposal alternatives and further apply the mitigation hierarchy.</p> <p>Proponents should discuss proposed environmental outcomes in referral documentation, as outlined in the EPA's Instruction and form: Referral of a proposal under section 38 of the EP Act.</p> |
| Stage 2 - EPA to decide whether to assess a referred proposal |
| <p>In deciding whether or not to assess a referred proposal the EPA will usually consider the proposed environmental outcomes of a proposal, and whether these are consistent with the EP Act principles and EPA objectives for environmental factors.</p> |
| Stage 3 - Assessment of proposals |
| <p>Proponents should assess likely residual impacts from the implementation of the</p> |

proposal in any assessment information they prepare, including any Environmental Review Document (see the EPA's [Instruction and template: How to prepare an Environmental Review Document](#) for more detailed information about the content required in an Environmental Review Document).

Once likely residual impacts from a proposal are assessed, the proponent should specify the related environmental outcomes they propose to achieve or ensure during and at the cessation of the implementation of their proposal. Examples of how to translate a likely residual impact (which is proposal-centric) into a proposed environmental outcome (which is environment-centric) are discussed in Section 6.

Proponents should then consider whether the proposed environmental outcomes are consistent with the EP Act principles and EPA objectives for the key environmental factors.

Proponents should also include details on whether and how the proposed environmental outcome can be assured by conditions or other statutory decision-making processes.

As in Step 1, if it appears the environmental outcomes of a proposal may be inconsistent with the EP Act principles and EPA objectives for environmental factors, the EPA encourages proponents to consider proposal alternatives and further apply the mitigation hierarchy.

Stage 4 - EPA report on the assessment of a proposal

In its Assessment Report to the Minister, the EPA will consider likely residual impacts and proposed environmental outcomes, including whether these are consistent with the EP Act principles and EPA objectives for the final key environmental factors.

The EPA will also consider whether to recommend conditions to ensure environmental outcomes are met. The EPA prefers outcome-based conditions where practical, leaving the proponent flexibility in how the outcome-based condition is achieved.

The EPA will also consider whether to recommend that outcome-based environmental management plan conditions should be imposed to provide assurance that environmental outcomes can be met (see the EPA's [Instruction and template: How to prepare EP Act Part IV Environmental Management Plans](#) for further detail about the content of outcome-based environmental management plan conditions).

Note: If there is inconsistency between proposed environmental outcomes and the EP Act principles and/or EPA objectives for the final key environmental factors, the EPA may take this into account when recommending whether or not the proposal may be implemented.

Stage 5 - Decision on proposal and implementation of proposals

Requests for an amendment to an approved proposal or implementation conditions will usually be considered in the context of current compliance and environmental performance of an approved proposal. This includes whether proposed environmental outcomes, and outcome-based conditions, have been achieved and / or maintained.

In assessing a proposed amendment, the EPA will also usually consider whether the environmental impacts of the amendment are likely to be consistent with the achievement of any outcome-based conditions in place for the approved proposal.

6 Requirements of proponents – identifying proposed environmental outcomes

The EPA requires proponents to identify the environmental outcomes likely to result from their proposal as early as possible in the development of their proposal, and to continue to assess and refine the proposed environmental outcomes throughout the assessment process.

This process should begin in the pre-referral discussions. This enables proponents to consider from the outset whether likely outcomes appear to be inconsistent with the EP Act principles and EPA objectives for environmental factors. Proposed environmental outcomes should also be included in the referral document, so they can be considered during public comment on the referral, and in the EPA's decision whether or not to assess a proposal.

Proponents should apply the mitigation hierarchy to reduce the environmental impacts of their proposal at pre-referral and referral, and then continue to apply the mitigation hierarchy throughout any further assessment phase as more information about the proposal and its impacts is known. Proponents should then assess likely residual environmental impacts as a result of their proposals.

Once the likely residual impacts (proposal-centric) from a proposal are assessed, proponents should then propose the environmental outcomes (environment-centric) they believe are achievable during and after the implementation of their proposal up until the proposal is fully implemented. This process should take into account whether the proposed environmental outcomes are consistent with the EP Act principles and EPA objectives for environmental factors.

An example of this process is: if the residual impact of a proposal was a low risk of the introduction of new weed species, the proponent may consider it achievable to ensure no weeds were introduced and propose an environmental outcome for the proposal of “no introduction of weeds to the development envelope”. Achievement of this outcome would be consistent with the EPA's objective for its flora and vegetation environmental factor.

Another example is: if the residual impact of a proposal was that discharge of brine to the marine environment of x ML/d with a salinity of y mg/L was not likely to cause a significant impact on marine environmental values, the proponent may propose an environmental outcome of “meet the (specified criteria – consistent with high level of environmental protection) for [specified environmental value] within z m of the outfall”. Achievement of this outcome would be consistent with the EPA's objective for its marine environmental quality environmental factor.

Examples of how to propose environmental outcomes which a proponent believes are achievable during the implementation of their proposal are included in section 8 and are set out for each environmental factor.

If their proposal is approved with outcome-based conditions, proponents are then responsible and accountable for achieving the specified environmental outcomes in

those conditions, subject to the usual legal defences that all conditions are, such as taking reasonable precautions and exercising due diligence.

Proponents may contact the Department of Water and Environmental Regulation (DWER) if they need assistance to prepare an environmental outcome.

7 Setting outcomes-based conditions

Outcome-based conditions are not prescriptive. They allow opportunities for proponents to be pragmatic and innovative about how to achieve the environmental outcome set in the condition, and to adopt an adaptive environmental management approach to ensure conditions are met and/or to demonstrate continuous improvement.

Outcome-based conditions will usually be recommended by the EPA in its assessment report. If outcomes-based conditions are recommended, they will take into account, but not simply adopt, any environmental outcomes proposed by the proponent.

Outcome-based conditions will:

- be associated with the achievement of one or more EPA objectives for environmental factors
- be measurable and achievable
- set a clear boundary, size, extent, or limit.

Outcome-based conditions state an environmental outcome which is required to be met.

They can also include a “surrogate outcome”, which is performance based. A surrogate is a physical, chemical or biological characteristic that supports an aspect of the environment. An example of this is water quality, as habitat condition could be a surrogate for the condition of an aquatic species.

An outcome-based condition could include:

1. an impact that must be **avoided**
Example: The proponent shall implement the proposal to ensure there is **no change** from the baseline cover and composition of seagrass and macroalgal communities outside the 200 m buffer zone from the discharge pipe as a result of the proposal.
2. a level of impact that must not be **exceeded**
Example: During operations the proponent shall not take groundwater if the drawdown of the local calcrete aquifer outcrop **exceeds** 5 m over an area greater than 50 per cent of the local calcrete aquifer extent.
3. a level of **protection** that must be achieved
Example: The proponent shall maintain the water quality in area x consistent with the environmental quality criteria for the high level of ecological protection of ecosystem health established in the Cockburn Sound in the *State Environmental (Cockburn Sound) Policy 2015*.

Example. The proponent shall maintain a high level of ecological protection (as defined in a specified Technical Guidance or other Guidance) for marine waters within the Rottneest Island Marine Reserve boundary.

Compliance with some outcome-based conditions can be subject to annual compliance reporting arrangements. For others, the EPA will require information about monitoring programs: baseline environmental condition, indicators, response actions, reporting and adaptive management approaches to achieve environmental outcomes. Details on these are outlined in the EPA’s [Instruction and template: How to prepare EP Act Part IV Environmental Management Plans](#) for more detailed information about the content of outcome-based environmental management plan (for monitoring) for the relevant conditions.

8 Examples of environmental outcomes

Table 1: Example of how to propose environmental outcomes

| Theme | Factor | Example of environmental outcomes |
|-------|----------------------------------|---|
| Sea | Benthic Communities and Habitats | <ul style="list-style-type: none"> • Direct disturbance of benthic communities and habitats to be confined to proposal footprint • No serious damage to benthic communities and habitats outside the Zone of High Impact • No impacts to benthic communities and habitats within the Zone of Moderate Impact unless they are recoverable • No impacts outside the Zone of Moderate Impact, including no impact in in the Zone of Influence |
| | Coastal Processes | <ul style="list-style-type: none"> • Direct disturbance to be confined to proposal footprint • Flow rates over x tidal flat to be no more than y m/s • No wrack accumulation on x beach which has an adverse impact on social amenity including odour or public beach access • No sediment deposition or accumulation which adversely affects the natural breeding behaviour of x fauna • No detectable impact to seagrass communities |
| | Marine Environmental Quality | Return discharge water to the marine environment will not exceed the following water quality parameters: <ul style="list-style-type: none"> • Turbidity: median > 80th percentile reference site • Temperature: 20th or > 80th percentile of baseline or reference site • Dissolves Oxygen: < 60% saturation |
| | Marine Fauna | No introduction of marine pests as a result of the proposal |
| Land | Flora and Vegetation | <ul style="list-style-type: none"> • Direct disturbance to be confined to proposal footprint • No direct disturbance in exclusion areas • No impact on black cockatoo breeding trees |

| | | |
|---------------|-----------------------------------|--|
| | | <ul style="list-style-type: none"> • No impacts on TECs outside development envelope • No introduction of weeds into development envelope |
| | Landforms | <ul style="list-style-type: none"> • Landforms not to exceed x m • Landforms to meet x safety factor • No disturbance of landforms within x of y sensitive receptor • Final landform to be consistent with undisturbed landforms in region (within 100 km) |
| | Subterranean Fauna | <ul style="list-style-type: none"> • No disturbance of subterranean fauna within exclusion zones • No disturbance of subterranean fauna habitat outside development envelope • For any new species – no disturbance unless found in a sustainable population outside the development envelope |
| | Terrestrial Environmental Quality | <ul style="list-style-type: none"> • No process waste to be disposed of on Swan Coastal Plain • No contamination of soil outside proposal footprint |
| | Terrestrial Fauna | <ul style="list-style-type: none"> • No disturbance of fauna habitat within exclusion zones • No disturbance of native fauna habitat outside development envelope • For any new species – no disturbance unless found in a sustainable population outside the development envelope |
| Water | Inland Waters | Water quality parameters (pH, salinity, water temperature and dissolved oxygen concentration) of an individual surface water site will be maintained to pre-disturbance levels or a suitable reference site. |
| Air | Air Quality | The SO _x and NO _x concentrations measured at site x shall not exceed x concentration. |
| | Greenhouse Gas Emissions | <ul style="list-style-type: none"> • Net zero emission by 2050 along (at a minimum) a straight line trajectory based on emissions measured at 5 year intervals • X % reduction by 2030 |
| People | Social Surroundings | <ul style="list-style-type: none"> • No direct or indirect disturbance of the exclusion zones • No interruption of access for traditional use or custom • No exceedance of EP Noise Regulations at x • No direct disturbance in the buffer separation zone |
| | Human Health | <ul style="list-style-type: none"> • No air-borne asbestos above background levels • No radiation above background levels |