



National
Operational
Guidance

Section

Environmental risk assessment



NFCC
National Fire
Chiefs Council

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Environmental risk assessment

Incident commanders should conduct an assessment of the environmental risk at incidents they attend. This will help them to identify the potential risks posed by fire service actions on the environment and the control measures, which can be applied to reduce or, where possible, prevent environmental damage.

An environmental risk assessment should identify:

- Nearby population
- Livestock
- Location of local watercourses
- Location of SSSI/sensitive habitats and their proximity to the incident
- Incident location in relation to sensitive groundwater.
- Local drainage
- Polluting materials
- Type of media being used
- Quantity of firewater run-off being produced
- Volume/properties of any spilt materials
- Weather conditions

A [template](#) has been prepared to complete an environmental risk assessment. For smaller incidents the [environmental risk assessment](#) may be included as part of the [dynamic risk assessment](#).

For larger, more protracted incidents or where a known risk to the environment has been identified, a formal [environmental analytical risk assessment](#) should be completed and recorded.

Any risk to the environment either known or suspected should be communicated to those attending the incident and where appropriate, the relevant agencies. Information on environmental risk assessment is contained in Section 3.4 of the [Environmental Protection Handbook](#).

Source-Pathway-Receptor model

Pollution control should be carried out using a Source-Pathway-Receptor model. The first action is to identify any hazards to the environment (the source). When a hazard is identified, measures should be taken to prevent or reduce the risk of pollutants reaching (via a pathway) vulnerable parts of the environment (the receptor). For example, contaminated fire water (the source) could travel via surface drains (the pathway) into a local watercourse (the receptor).



SOURCE

For example:
Contaminated
firewater run-off,
toxic smoke plume

PATHWAY

For example:
Air, surface drains,
permeable ground

RECEPTOR

For example:
People, aquatic
ecosystem, fishery,
livestock