

ENV-08 ENVIRONMENTAL ASPECTS AND IMPACTS

A INTRODUCTION

PURPOSE

- To identify all environmental aspects associated with construction activities.
- To determine which aspects have, or may have, significant impacts on the environment.

DEFINITIONS

Environmental Aspect An element of an organisations activities, products or services that can interact with the environment (ISO 14001).

Significant Environmental Aspect An environmental aspect that has or can have a significant environmental impact.

Environmental Impact Any change to the environment, whether adverse or beneficial, wholly or partially, resulting from an organisation's environmental aspects (ISO 14001).

Significant Environmental Impact A significant unauthorised discharge to the environment which may constitute a breach of regulatory or contract requirements.

JSEA Job Safety and Environmental Analysis

REFERENCES

The following documents are associated with this procedure:

Standard Forms

Environmental Hazards Register (Generic)

Environmental Hazards Register (Project)

Environmental Impact Score-sheet

Work Plans

JSEA's

B PROCEDURE

| Activity | Responsibility | Key Actions | Records | References |
|---|--|--|--|----------------------------------|
| 1. Identifying Project Environmental Aspects | Project Environmental Representative* | <ul style="list-style-type: none"> Review project activities and identify project-specific environmental aspects Refer to generic hazard register as appropriate Prepare project hazard register Review and update register as new activities with environmental aspects / impacts occur | Hazard Register Hazard Register Environmental Objectives | |
| 2. Assessing Significant Environmental Impacts | Project Environmental Representative * | <ul style="list-style-type: none"> Identify environmental impacts that may arise from the environmental aspects identified Assess the impacts which are likely to have significant environmental effects | Impacts Score-sheet | Std form |
| 3. Mitigating Environmental Impacts | Project Environmental Representative | <ul style="list-style-type: none"> Coordinate the preparation of environmental work plans and/or JSEA's to avoid, remedy or mitigate significant environmental impacts | Work Plans / JSEA's | |
| 4. Meeting Regulatory Requirements | Project Environmental Representative | <ul style="list-style-type: none"> Identify the relevant regulatory requirements associated with significant environmental impacts and include compliance conditions and responsibilities in work plans / JSEA's | Work Plans / JSEA's | Legislation Resource Consents |

* The Business Unit Environmental Representative provides advice and support as appropriate.

C NOTES

1.0 Environmental Aspects and Impacts

Project-specific environmental aspects and impacts are identified and then recorded on the Environmental Aspects and Impacts Register (Project). The register should be re-evaluated and updated on a regular basis as environmental aspects and impacts change during project execution.

2.0 Assessing Significant Environmental Impacts

Potential environmental impacts need to be evaluated and controlled in advance of physical works.

A rating system is used to evaluate the significance of environmental risk (or impact) by relating the likelihood of the event occurring to the environmental consequence.

RISK = LIKELIHOOD + CONSEQUENCE

The following matrix provides a simple method for assessing each potential environmental impact that may have an effect on the environment. When assessing the consequence, particular consideration should be given to whether or not the potential impact may breach legalisation (for example a resource consent condition).

| | | CONSEQUENCE | | |
|------------|------------|-------------|----------|--------|
| | | MINOR | MODERATE | MAJOR |
| LIKELIHOOD | PROBABLE | Medium | High | High |
| | POSSIBLE | Low | Medium | High |
| | IMPROBABLE | Low | Low | Medium |

The rating for each environmental impact should be recorded in the 'Environmental Aspects and Impacts Register (Project)'.

In deciding how to manage environmental risk, consideration should be given to the following hierarchy of control (in order of priority):

- **AVOID** - How can we avoid the environmental impact?
- **REMEDY** – How can we reduce or put right the environmental impact?
- **MITIGATE** – How can we lessen or offset the environmental impact?

As a guide, those risks that score a **High** or **Medium** are considered to be **Significant** and should be planned in advance of the works occurring.

Special consideration should be given to those risks where specific resource consent conditions apply.

3.0 Worked Example

Aspect: Contractor regularly delivers diesel for heavy machinery working adjacent to a river.

Impact: Spilled diesel may enter river during refuelling with the potential for bird and fish kills.

| | | CONSEQUENCE | | |
|------------|------------|-------------|----------|--------|
| | | MINOR | MODERATE | MAJOR |
| LIKELIHOOD | PROBABLE | Medium | High | High |
| | POSSIBLE | Low | Medium | High |
| | IMPROBABLE | Low | Low | Medium |

Enter the details into the Project Environmental Hazard Register. Score as a **Medium** risk.

Consider what control measures are available to avoid, remedy or mitigate the risk.

In this example, methods of avoiding environmental damage include:

- ensuring the refuelling contractor and machine operator are present throughout refuelling
- only refuel in areas remote from the rivers edge

Mitigation measures include ensuring spill equipment is available should diesel get into the waterway.