Aim

This procedure aims to allow environmental aspects and impacts to be identified and then assessed to determine which ones are considered to be significant.

The Manager, Environmental Manager or Environmental Co-ordinator shall ensure that all environmental aspects and impacts are satisfactorily assessed, controlled and monitored.

Identification of Environmental Aspects

Environmental Aspects are the activities that have a potential to cause environmental impacts and over which JNC Group Australia Pty Ltd has influence (this may include activities of subcontractors and suppliers).

JNC Group Australia Pty Ltd shall identify and conduct an assessment of any activity which may cause an impact (either positive or negative) to the environment. This will include aspects from workshops, maintenance facilities, on site construction and office. When identifying aspects, consideration should be given to potential emergency situations, normal and abnormal operating conditions.

Identifying Impacts

Environmental Impacts are the consequences arising from environmental aspects. It is possible that from one aspect there may be a number of impacts on the environment. Impacts to all segments of the environment should be considered including positive impacts. You are required to identify those significant impacts that can adversely affect the environment. In order to do so the risk assessment process below is to be used.

Risk Level

Risk level is the combination of the probability or likelihood of an environmental aspect impacting on the environment and the significance of the impact.

\[
\text{Risk Level} = \text{Probability} \times \text{Significance of Impact}
\]
Probability

This is the likelihood of environmental aspects having a significant impact on the environment. To make the “best estimate” of the probability the following should be considered:

- How often the work activity is carried out and the duration of the activity
- Skill levels of employees
- Environmental incident reports
- Statistics
- Industry alerts of incidents
- Adequacy of risk control measures in place
- Information gained during identification of aspects and impacts
- Environmental legislation

The probability of a work activity having an impact on the environment during the project time frame can be categorised as follows:

- **frequent** likely to occur repeatedly
- **probable** likely to occur several times
- **Occasional** likely to occur sometimes
- **Remote** not likely to occur but possible

Significance of Impact (Analysis)

Assuming that there is an impact on the environment, the next step is to analyse its significance. The analysis should consider

- Legislation and regulations in place relating to the aspect
- Best available technology
- The state of knowledge about the environmental impact or risk and any way of removing or mitigating that impact or risk
- The availability & suitability of ways to remove or mitigate that impact or risk
- Ways to measure whether you are meeting applicable requirements
- Financial aspects - The cost of removing or mitigating that impact or risk
- Previous projects with similar aspects and impacts
- Capability and available resources of the company
- Interested parties such as residents, community environment groups
- Level of control or influence that the contractor has over the aspect

Level of Risk

The level of risk is determined by taking into account the environmental sensitivity of the area, the frequency of the activity, the severity of the impact and in some cases, the scale of the work being carried out.
Once you have estimated the probability and the significance of the impact, the risk assessment matrix (see below Figure 1) can be used to determine the level of risk associated with each identified impact. The level of risk is categorised as low, medium or high.

The probability of an impact on the environment is listed across the top of the risk assessment matrix below, and the significance or severity of the impact is listed on the left-hand side. The point at which the probability & severity of the impact intersect – is the determined level of risk.

<table>
<thead>
<tr>
<th>Significance or Severity of Impact</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequent</td>
</tr>
<tr>
<td>Catastrophic</td>
<td>HIGH</td>
</tr>
<tr>
<td>Significant</td>
<td>HIGH</td>
</tr>
<tr>
<td>marginal</td>
<td>HIGH</td>
</tr>
<tr>
<td>negligible</td>
<td>MEDIUM</td>
</tr>
</tbody>
</table>

Figure 1

**Risk Control**

Where a risk to the environment has been identified, controls must be introduced to reduce risk levels to an acceptable level. (Refer to Form-04)

The first option must always be to eliminate the risk if practical. If elimination is not practical you may then seek to minimise its impact on the environment.

In developing environmental controls you must include as controls any environmental requirement that is required by law or your contract with the client or applicable permits.

There are 4 levels of risk control:
1. Discussion at the Toolbox Meeting for a very low risk
2. Environmental Instruction
3. Environmental Procedure
4. Environmental Management Plan

One of the above 3 written or prepared control measures would be used to train employees and to give the client or others an indication of the control measure we intend to use.
The first level is development of an Environmental Instruction, Second level is preparation of an environmental procedure and the Third level would be preparation of a specific Environmental Management Plan because there is a number of risks at a significant level, or if the client requires an EMP.

Monitoring

As part of the Job Environmental Analysis (JEA’s), control mechanisms are established and consideration should be given for the need for regular monitoring. Some conditions that would determine the need for monitoring would include

- Seriousness of the risk
- Experience & skill of employees involved
- Legislative or client requirements

Some examples of monitoring include

- Regular checks on noise levels near property
- Regular checking on the level of dust and its effect on traffic or the public
- Supervision of the works
- Checklists associated with work procedures
- Hold points or critical inspection points
- Records or regular monitoring, testing or inspections

In High risk situations it is recommended that environmental monitoring includes gathering verifiable evidence that shows compliance. Examples: photos showing sediment controls, noise levels measurements etc. Environmental Hazard Identification, Risk Assessment & Control Process chart.

See below:
Identify Environmental Aspects & Impacts
- PMP – Pre-commencement checks, work method statements, toolbox meetings
- Hazard inspections using SCIMS Forms 01, 04

Estimate the probability of impact on environment
- Frequent or
- Probable or
- Occasional

Estimate the consequence of injury or illness
- Catastrophic
- Significant
- Marginal

Determine Level of risk using the Risk assessment Matrix and complete JEA’s in PMP for project and also complete register of Identified environmental Risks in the PMP
Level of risks are categorised as

Prioritise the risk for risk control
- For new environmental aspect & impact identified use Environmental Impact Analysis & Risk Control Form-04, or add these to your Environmental Management Plan for the project

Monitoring
- Monitor hazard controls and record outcomes on Daily Log.