A Guide to Developing an Environmental Management Plan for 'Industrial or Trade Activities' in the Auckland Region

Auckland Regional Council
August 2007, Version 04

INSTRUCTIONS: This Environmental Management Plan Guide is part of ARC's information to support 'industrial or trade' sites that need to develop an Environmental Management Plan to control pollution risks. If you have not received the other supporting documents (*e.g.* the EMP Template) contact an ARC Pollution Prevention Officer.

UPDATES: Contact an ARC Pollution Prevention Officer or go to:
www.arc.govt.nz → environment → pollution → land and water pollution → environmental management plan (EMP)
to check for updates before using this EMP Guide; the Guide will be reviewed and updated to ensure it continually improves and to ensure it remains up-to-date in terms of the ARC's 'industrial or trade' provisions.

Step 1: 'Your Site'..

    ❐   Task 1.1: Site and company description

    ❐   Task 1.2: Scope of the EMP

    ❐   Task 1.3: Site layout and drainage plan

    ❐   Task 1.4: Site receiving environments

    ❐   Task 1.5: Site activities, facilities and stores

    ❐   Task 1.6: Site consents and permits

Step 2: 'Your Pollution Risks and Controls'..

    ❐   Task 2.1: Identify your pollution risks

    ❐   Task 2.2: Identify your existing pollution controls

    ❐   Task 2.3: Identify improvements to your pollution controls

    ❐   Task 2.4: Address your pollution control actions

Step 3: 'Your Programmes and Systems'..

    ❐   Task 3.1: Inspection and maintenance programme

    ❐   Task 3.2: Stormwater management and monitoring programme

    ❐   Task 3.4: Training programme

    ❐   Task 3.5: Roles and responsibilities

    ❐   Task 3.5: Record keeping

    ❐   Task 3.6: EMP review

What Happens Next? ………………………………………………………………………………

Appendices

Supporting information:
- Refer to ARC website for further information on preparing an EMP, Industrial or Trade Process requirements, Pollution Factsheets and Environmental Operations Plans.

   www.arc.govt.nz → environment → pollution → land and water pollution

Introduction

This guide aims to assist 'industrial or trade' businesses to develop an Environmental Management Plan (EMP) to manage their land and water pollution risks. An EMP is a legal requirement for some 'industrial or trade' businesses in the Auckland region. An EMP is sometimes referred to as a 'Pollution Prevention Plan' as the main focus is preventing pollution, as opposed to managing all environmental issues. However, developing an EMP may also help businesses address a variety of environmental issues such as managing air contaminant discharges, wastewater and energy consumption.

Once a business has an EMP, it has an advantage as far as knowing the legal requirements and managing pollution risks according to best practice. EMPs can also help businesses increase efficiencies (*e.g.* moving risky activities into covered areas will minimise pollution risks and can increase productivity) and reduce costs (*e.g.* managing hazardous substances properly will reduce the likelihood of spills and can therefore minimise the associated costs of spill clean-up and potential fines).

In this section:	▪ Who needs an EMP? ▪ What is an EMP? ▪ What it is not ▪ Frequently asked questions	▪ How to use this EMP guide ▪ How to use the EMP template ▪ Before you start ▪ Process Summary

Who needs an EMP?

An EMP will generally be required for sites that undertake moderate and high risk 'industrial or trade' activities (as outlined in ARC's Proposed Auckland Regional Plan: Air, Land and Water) and sites that have on-going pollution issues. Some sites that require an EMP will also require an 'industrial or trade' consent. This consent is "to discharge contaminants onto or into land from an industrial or trade process", including where those contaminants may enter the stormwater system.

▪ **If you know you need an EMP, use this guide to develop one for your site**

▪ **If you are not sure, call an ARC Pollution Prevention Officer, read the 'Who needs an EMP?' factsheet in Appendix A or visit:**
www.arc.govt.nz → environment → pollution → land and water pollution → environmental management plan (EMP)

Request a copy from a Pollution Prevention Officer or view/print at www.arc.govt.nz/ environment / managing pollution and waste

Throughout this process remember that the purpose of your EMP is to prevent pollution of Auckland's natural environment, on which our economy and quality of life depend.

Only clean rain water should go into stormwater catchpits, pipes and land as this water flows to our streams, rivers, estuaries, harbours and underground waters.

Insert 'I only drain rain image' or "drains to sea image"

What is an EMP?

An EMP sets out how a business will undertake its operation to manage pollution risks. In terms of ARC's requirements for 'industrial or trade' activities, EMPs deal with pollution of land and water. Other aspects such as air pollution are covered separately.

(margin note: Air pollution – see …)

Your EMP will detail:
- **your site's** location, activities, materials, products
- **your site's risk** of causing land and water pollution and how you will manage these risks
- **programmes and systems** to ensure your EMP is effective in reducing your risks

How you manage the pollution risks from your site is the key focus of your EMP - to make the best management decisions, you need to know your site and your risks as thoroughly as possible.

> *Key points:*
>
> - *an effective EMP should be straight to the point and easy to follow*
> - *what's in your EMP will depend on your site, activities and associated risks*
> - *your EMP will be a live document that you will update as things change on your site*

What it is not

The ARC's 'industrial and trade' requirements focus only on risks of contaminants polluting land and water. Therefore the EMP you produce by following this Guide does not have to cover other environmental aspects such as air, wastewater or tradewaste discharges, water use or energy consumption *etc*. It will cover storage, containment and response to spills of hazardous substances, but not necessarily all the requirements of other legislation such as HSNO (Hazardous Substances and New Organisms Act and regulations).

(margin note: ✓ Scope of your EMP – see App ?/ www)

Your EMP can be expanded to cover as many environmental aspects as you want. Simply follow the same process set out in this Guide (*i.e.* identifying risks and working out how you will manage that risk) and add the information to your EMP. Make sure it is clear what parts of your EMP relate to what legislation / aspect.

- **Appendix B** has more info and contact details for other environmental aspects. For updates see www.arc.govt.nz → environment → pollution → land and water pollution → environmental management plan (EMP)

(margin note: ✓ Expanding your EMP – see App)

- ARC's **Environmental Operations Plan** can also help you expand your EMP (this is also found on the EMP web page).

Note that an EMP is different to an 'Environmental Management System' – see FAQs below.

Frequently Asked Questions

So that you can start to develop your EMP with everything clear, we have compiled a list of 'Frequently Asked Questions' (FAQs) in Appendix C, including questions such as:

(margin note: FAQs – see App ?/ www)

- who needs an EMP and why?
- why does the Auckland Regional Council require EMPs?
- what are the environmental and legal benefits of EMPs?
- what should be in an EMP?
- what should an EMP look like?
- how detailed should an EMP be?
- does an EMP affect contractors or lessees on-site?
- will an EMP conflict with or duplicate an existing Health and Safety Plan?
- can an existing 'management system' be used instead of an EMP?
- can existing informal systems be used to start an EMP?
- what will it cost to prepare an EMP?
- who needs an 'Industrial or Trade Process' resource consent?
- what other help is available?

How to use this Guide

This Guide has been produced to help you develop your EMP – it includes:

- **3 steps** that outline the tasks you need to do

  - Step 1: Your Site
  - Step 2: Your Pollution Risks and Controls
  - Step 3: Your Programmes and Systems

- a **template** showing a suggested format for your EMP

Each of the 3 steps has several tasks which produce an output that provides information that you will use in a subsequent task and/or that goes into the relevant section of your EMP. While working through this guide you can fill in the template as you complete the tasks.

  - ❍ **the EMP Template is available from the ARC website or on CD – call a Pollution Prevention Officer or download it from** www.arc.govt.nz → environment → pollution → land and water pollution

If you prefer to follow another format - simply make sure that you include all the information required by the tasks in this EMP Guide plus:

  - Document Control (see section X of the EMP Template)……………………..

Icons used in this EMP Guide:

☞   carry out a task

➤   insert the output from a task into the EMP template

Ⓐ   an appendix to the EMP Guide has further information

Ⓦ   the same and/or further information can be found on the ARC's 'EMP webpages'
      (a full list of the webpages and their contents is at the back of the EMP Guide)
_____

Tasks - each task briefly outlines what the task involves and why it needs to be done, and:

  Outputs shows what to insert into the EMP Template or how to use the info in the next task

  Tools and resources lists the supporting information sources to use during the task
_____

A **glossary** is at the back of the Guide – words underlined throughout the text of the guide are defined in the glossary (in the electronic version there are hyperlinks to the definitions)

Before you start

There are a couple of things to do before you start developing your EMP to make sure you get the most out of this process and your EMP is as effective as it can be:

☞ | **Set up your EMP Team**

Get together the people with relevant knowledge of your site and environmental impacts (both existing and potential) of your site's activities. Your team could include people from your company, contractors and external parties such as consultants.

- See Appendix X for a list of possible people to include
- A list of Industrial or Trade Process consultants can be found on the ARC website.

The number of people on your team and their level of expertise will depend on factors like the size, complexity and pollution risk of your operation.

☞ | **Gather any existing information**

You may already have information about your site layout, drainage and neighbouring environment and about your industry type (materials, risks and impacts) that will help you create a comprehensive EMP. Start by pulling all this together now - it will help you carry out the tasks in this EMP Guide.
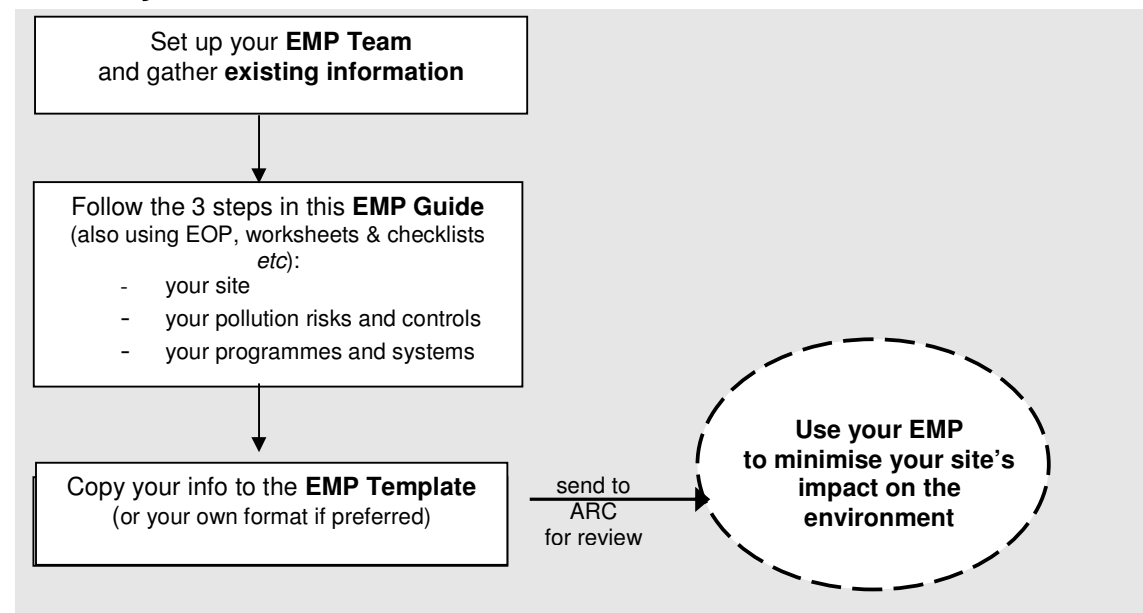
- see Appendix X for a list of information that you might need such as *site plans, process maps, structural trees*

There will also be helpful information listed under 'Tools and references' of each task that will help you undertake the task – key examples of ARC's tools for 'industrial or trade' activities include:

- the Environmental Operations Plan (EOP)
- Pollution Prevention Industry Guides
- Pollution Fact sheets

List info
p28,31 +
consents ..

Summary

```
┌─────────────────────────────┐
│   Set up your EMP Team       │
│ and gather existing          │
│        information           │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│ Follow the 3 steps in this   │
│ EMP Guide                    │
│ (also using EOP, worksheets  │
│  & checklists etc):          │
│   - your site                │
│   - your pollution risks     │
│     and controls             │
│   - your programmes and      │
│     systems                  │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐           ┌─────────────────────┐
│ Copy your info to the EMP    │  send to  │    Use your EMP      │
│ Template                     │──ARC─────▶│ to minimise your     │
│ (or your own format if       │ for review│  site's impact on    │
│  preferred)                  │           │  the environment     │
└─────────────────────────────┘           └─────────────────────┘
```

Step 1:   Your Site

In this step you will undertake tasks that will require you to record information about your site and also enable you to accurately describe your site's layout and drainage, its surroundings, and the consents and permits you currently hold. You need to know and record this information in order to go on to Step 2, when you will identify and manage the actual and potential risks of your operation causing pollution of land or water.

The tasks involve collecting or producing information that will be used in your EMP. You may already have some of this information, so you will just need to check that it is accurate and up-to-date. For some tasks you will however need to create information that you do not already have; you may need expert help with some of these tasks.

Your tasks

☐   **Task 1.1: Site location and company description**

☐   **Task 1.2: Scope of the EMP**

☐   **Task 1.3: Site activities, facilities and stores**

☐   **Task 1.4: Site layout and drainage plan(s)**

☐   **Task 1.5: Site receiving environments**

☐   **Task 1.6: Authorisations, consents and permits**

You can tick each task off as you complete it - when you have done all the tasks and copied the outputs into the EMP Template (as explained in the Introduction section of this EMP Guide), go on to Step 2.

☞ Task 1.1: Company description and site location

A company description and details of the site location is needed to give context for the EMP, including for new staff or contractors that are unfamiliar with your site. Briefly describe your company and site, including:

- **company operations** – include brief information on what your company does or produces (you will give more detail of your activities and facilities in Task 1.3). Include operations undertaken on the site, and also ancillary or support operations that occur in off-site areas.
- **staff numbers** – record how many staff are employed at the site and also detail **contractors** that you use for the site's operations
- **company structure** – include key responsibilities and reporting lines where relevant *e.g.* an organisational chart (you may need to update this info once you have finished your EMP to reflect new roles and responsibilities that may arise).
- **site address and legal description** – include address and legal details for all the areas your company utilises for the operation, and identify whether the company owns or leases the land

Outputs:

➢ Insert your site location and company description into section 1.1 of the EMP Template

Tools and references:

- ARC's EMP webpages – for further advice and examples
- landlord or rates bill for legal descriptions

☞ **Task 1.2: EMP Scope**

The scope of your EMP describes what the document covers. Describe the legal requirements and the aspects of your site and/or company that you will cover in your EMP:

- **legal requirements** – as outlined in the introduction to this EMP Guide, your EMP must address the ARC's 'industrial or trade' provisions – you will need to outline the status of your site under those provisions (including sector group type and activity area (see Schedule 3 that accompanies the provisions).

    You may also choose to include any other legal requirements, regional and district/city plans or best practice measures and industry guidelines that are relevant to your business.

- **multiple processes on-site** – will your EMP cover your whole site and all of the processes that you carry out? For example, if you have a large, complex site with many different processes you may prefer to develop separate EMPs for discrete parts of your site or process rather than one large EMP for all the processes.

- **multiple sites** – if you have more than one site you can either include them all in one EMP or develop separate EMPs. If you choose to develop one EMP, ensure that all variable details (layout, receiving environments etc) are site-specific, and it is clear where procedures *etc* are generic or site-specific.

- **on-site and off-site activities** – your company may carry out some of its activities at a site but other activities may be carried out off-site. Your EMP is only required to cover activities that take place 'on-site'. You are, however, required to ensure that your off-site activities do not cause pollution. It is a good idea to have management plans in place for each activity you carry out off-site, and you can include these plans as an attachment to your EMP if you wish.

- **contractors** – if you have contractors your EMP needs to include the activities they undertake on your behalf in your EMP (this includes issues like ensuring waste disposal contractor(s) dispose of your waste(s) appropriately).

Outputs:

➢ Insert the details of the scope of your EMP in Section 1.2 of the EMP Template.

Tools and references:

- ARC's 'EMP webpages' for further descriptions and examples
- ARC's 'EMP webpages' for the latest 'industrial or trade' provisions and a list of other legal and non-legal requirements you may expand your EMP to cover.
- an ARC Pollution Prevention Officer can help with information regarding the requirements for your off-site activities

☞ Task 1.3: Site activities, facilities and stores

In order to identify your site's pollution risks accurately you need to pull together details of your on-site activities, as well as facilities you operate and substances you store. Use the description of your company from Task 1.1 and expand it to detail:

- what you do / make / process / handle on the site including the methods used
- the raw materials and chemicals you use, the processes they're used in and where on-site the processes occur
- the types of materials you store, volumes of those materials and where on-site storage areas are
- end-products and by-products, the volumes of both and where they are stored or used on-site
- wastes produced, the volumes of those wastes, where they are stored on-site and how they are disposed of
- other supporting activities like vehicle and equipment maintenance and washing, loading and unloading, product transfers and so on.

You can present this information in written descriptions, summary tables and/or diagrams. Make sure you cross-reference text, tables and diagrams to your 'Site Layout Plan' and ensure the locations of activities and facilities is accurate.

These activities, facilities and stores are the sources of the contaminants that your EMP must manage, so it is important to get this right. In Step 2, you will need to identify the risks and contaminants of concern posed by the <u>environmentally hazardous substances</u> that you use on-site.

Outputs:

- ➢ Insert all your information into section 1.3 of the EMP Template
- ➢ Attach any maps or plans in Attachment A to your EMP.

You will also use this information later on to help you with the tasks in Step 2

Tools and references:

- ARC's 'EMP webpages' for further descriptions and examples
- ARC's EOP sections on 'site design' and 'wastes' and example site plans

☞ Task 1.4: Site layout and drainage plan

Your EMP needs to include an accurate and up-to-date plan of your site showing the layout of key areas and drainage. Drainage includes both private (site) and public (council) stormwater and sanitary sewer / trade-waste. This information will help you develop other aspects of your EMP (especially identifying risk areas of your site and how contaminants can enter receiving environments). The 'site layout and drainage plan' will also become an essential part of your Spill Response Plan (which you create or update during Step 2).

A site layout and drainage plan needs to show:

- buildings and all outdoor activity areas
- storage areas - particularly for <u>environmentally hazardous substances</u> or materials
- stormwater flow paths and areas of ponding,
- private and public drains / pipework, manholes, catchpits and soakholes
- private and public sewer and tradewaste drains, manholes, pipework and cesspits

To create plan or confirm the accuracy of an existing plan you may need to involve a specialist to investigate your drainage systems (*e.g,* using CCTV or dye tests). For large or complicated sites, you may prefer to separate out the layout and drainage information and create two separate but linked plans (*e.g.* by including building outlines and site boundaries on your drainage plan).

Note: While undertaking this task keep a list of anything you spot that needs fixing such as trade-waste or sanitary sewers connected to stormwater pipes, or outdoor storage areas next to stormwater catchpits. You will use this information in Step 2 (when you identify and address your pollution risks).

Outputs:

➢ Insert a summary of your site layout and drainage into section 1.4 of the EMP Template

➢ Attach your 'site layout and drainage plan(s)' in Attachment A of your EMP template.

Keep a copy of your plan(s) and any notes regarding issues that need fixing to help with the Step 2 'Your Pollution Risks and Controls' tasks.

Tools and references:

- ARC's 'EMP webpages' for further descriptions and examples
- ARC's 'Site Layout and Drainage Plans' factsheet
- City/district council for public drainage and possibly private drainage info (check your building plans for 'as built' drawings of your site)
- ARC's EOP 'Drains' section checklists
- Expert advice *e.g.* environmental consultants that specialise in developing site layout and drainage plans

☞ Task 1.5: Site receiving environments

Receiving environments are those areas of land or water that can or do receive run-off or discharges from your site. Your EMP needs to include information on your site's 'receiving environments' of any contaminants (including contaminated stormwater) from your site.

Determine the pathways for contaminants (including contaminated stormwater) to enter the immediate and ultimate receiving environments of your site. If there is potential for contaminants to enter these systems, then describe:

- **immediate receiving environments** – including site soils/land and surface water (stormwater drains, streams) as well as underlying geology and shallow underground waters (this is especially important if you are situated in an area where stormwater is managed via soakage (*e.g.* soakholes)).

- **ultimate receiving environments** - including the streams or rivers that your stormwater flows into, and any environments which they in turn flow into (*e.g.* wetlands, estuaries and harbours) as well as any deeper underground waters.

This will help show you how your site is connected to the surrounding environment, how easily pollutants from your site can end up in the environment and how sensitive they are to potential pollution from your site. The extent to which you need to describe these receiving environments will depend on the type and amount of contaminants associated with your site's operation (if your operation requires an 'industrial or trade' consent then you will need to use this same information in the 'Assessment of Environmental Effects' that has to accompany you consent application).

Outputs:

➢ Insert your information into Section 1.5 of the EMP Template

➢ Attach any supporting maps, photos or plans in Attachment B to your EMP

You will also use this information later on to help you with the tasks in Step 2

Tools and references:

- ARC's EMP webpages – for further advice and examples
- Appendix H checklist ??
- city council drainage maps and plans (for drainage features on and near your site)
- information about your receiving environments from ARC and other sources:
  - topographical maps and aerial photographs
  - information on drainage, soils, geology, groundwater, aquifers, streams, rivers, wetlands, estuaries and harbours, including areas of particular environmental value and sensitivity
- expert advice *e.g.* environmental consultants
- EOP

☞ **Task 1.6: Authorisations, consents and permits**

Your EMP will help you comply with the ARC's 'industrial or trade' provisions and therefore manage your operation's land and water pollution risks. In this task you will list other authorisations (*e.g.* regional plan permitted activity rules), consents and permits that impact on your pollution prevention goals. These may be ones that you already comply with, or ones that you are working towards compliance or a consent/permit application. You only need to list those consents that relate to environmental performance or effects, for example, air discharge consents, stormwater divert and discharge consents, trade-waste permits. You do not need to list those relating to non-environmental factors such as health and safety or buildings.

Your EMP can include the following information:

- consent/permit type and purpose (and number and expiry if already granted)
- status (*e.g.* does the site already hold the consent/permit?, have you applied?, or are you are investigating whether or not the consent/permit might be needed?)
- if the consent/permit is for a specific area specific volume of discharge
- issuing agency (*e.g.* ARC, ACC, Watercare Services)
- key conditions and monitoring required

Outputs:

➢ Insert a summary of relevant standards, consents and permits into section 1.6 (and Table 1 if appropriate) of the EMP Template.
➢ Attach copies of relevant parts of key standards, consents or permits in Attachment X to your EMP.

You will use this information later on to help you with the tasks in Step 2

Tools and references:

- ARC's 'EMP webpages' for further descriptions and examples
- ARC Pollution Prevention Officer for clarification of the latest requirements for 'industrial or trade' activities (permitted activities and consent activities)
- Appendix B and C or www.arc.govt.nz → council → consents for standards, consents or permits that may be relevant.

Step 2:   Your Pollution Risks and Controls

The purpose of an EMP is to minimise and where practicable avoid pollution from your site. These risks may arise from factors such as your site's layout, drainage and the activities you undertake. In this step you will use the information you have already gathered in Step 1 and identify your pollution risks, the ways you currently manage your pollution risks, and what improvements are needed.

Your tasks

The tasks in this step are:

❒   **Task 2.1:   Identify your pollution risks**

❒   **Task 2.2:   Identify your existing pollution controls**

❒   **Task 2.3:   Identify improvements to your pollution controls**

❒   **Task 2.4:   Address your pollution control actions**

You can tick each task off as you complete it – when you have done all the tasks and copied the outputs into the EMP Template (as explained in the Introduction section of this EMP Guide), go on to Step 3.

To help you with these tasks a series of 'Pollution risks and controls' tables have been developed so you can record your information in one place. However you can follow any format as long as your risks, controls and required actions are clear.   The following pages show three versions of the 'Pollution risks and controls' tables (with some example entries) – the tables can be used during each of the Step 2 tasks:

Pollution risks and controls – explanation of tables

"Draft copy"   Tasks 2.1, 2.2 and 2.3 will involve entering information about risks and controls into the table, and identifying further actions required to improve your controls.

"Final copy"   After you have addressed any immediate improvements to your controls (see Task 2.4), update the draft table and insert the final version into your EMP.

"Future actions"   Any outstanding actions (see Task 2.4) will then be listed in the 'Future actions' table and also inserted into your EMP.

Tips for completing Step 2

It is very important for you to assess your pollution risks thoroughly - we recommend that you:

- **involve your entire EMP Team and any other site staff or contractors** with detailed knowledge of particular aspects of your site, operations or industry

- **start with a desk-top session** to brainstorm all the known risks and the less obvious risks using all the information gathered about your site in Step 1

- **then ground-truth your findings** by doing a comprehensive site walk-about (starting at the beginning of your process through to the end) to identify all your risks and controls

Look out for less obvious risks by asking yourself "What if … "

- "What if the forklift tracks contaminants from the warehouse to the yard?"
- "What if that container corroded, was overfilled or punctured and there was a spill?"
- "What if rainwater in the chemical storage bund becomes contaminated?"
- "What if there was a spill in this area and the stormwater shutoff valve failed?"

The 'Tools and References' listed under each task should provide most companies with sufficient information; if any further assistance is required, contact an ARC Pollution Prevention Officer.

Remember: the primary reason for an EMP is to manage pollution risks to land and water, including stormwater – you may wish to briefly re-read the Introduction before doing these Step 2 tasks.

Your EMP Team – see App ?/ www

Pollution risks and controls – <u>draft copy</u>

This 'draft copy' of the 'Pollution risks and controls' table can be used to record the information you will create while working through Step 2.

Area of site [1]: Chemical storage area in Warehouse B
Activity / **facility** / **store** [2]: Activity – Chemical delivery

Pollution risk and contaminants of concern		Existing pollution controls		Comply? [7]	Improved or new pollution controls required [8]	
Pollution risk [3]	Contaminant(s) [4]	Structural [5]	Procedural [6]	Yes or No	Structural [5]	Procedural [6]
Spills during unloading of chemicals	▪ Hydrocarbons, dissolved metals, glycols - refer 'Chemical Inventory' for Warehouse B	▪ Bunding of chemical delivery area, and ground sealed (bunding complies with Council 'ITA' requirements)	Procedure X.X (refer Appendix E) – including: ▪ Deliveries only within bunded area ▪ Contractors use safe practices (pallets, wrapping, trolleyjacks) Inspection X.X (refer Appendix G) ▪ Regular checks of seal and bund integrity etc Training (refer Appendix I) ▪ Staff/contractors trained in Procedures and Inspections	**No** – existing controls do not include Spill Response	▪ n/a - no further structural controls required	▪ Procedure / Spill Response required for Staff and Contractors to follow in the event of a spill or leak
Traces contaminants tracked from bunded chemical delivery area to yard	▪ Hydrocarbons, dissolved metals, glycols - refer 'Chemical Inventory' for Warehouse B	▪ Yard area sealed	Inspection X.X (refer Appendix G) – including: ▪ Yard area regularly swept and residues collected for disposal ▪ Integrity of concrete checked 6 monthly	**No** – existing controls do not deal with trace contaminants in stormwater	▪ Stormwater Treatment – oil interceptor and sand/peat filter for trace hydrocarbons and metals in yard stormwater	▪ Procedures required for operation and maintenance of stormwater treatment devices

Explanation:

1. '**Area of site**' - the location of activity / facility / store
2. '**Activity** / **facility** / **store**' - the specific aspect of your site processes
3. '**Risk**' - the pollution risk(s) that your activity / facility / store poses (either actual or potential risk(s))
4. '**Contaminants**' - the pollutants that are either inherent in the materials you use or formed as a by-product or waste product
5. '**Structural controls**' – physical structures that are built / used to manage environmental risks (see Task 2.2 for examples)
6. '**Procedural controls**' – procedures / steps you follow to manage pollution risks (see Task 2.2 for examples)
7. '**Comply?**' - indicates if your existing controls (structural and procedural) will manage your pollution risks and comply with relevant legal requirements (see Task 2.3)
   A 'No' in the 'Comply?' column means action is required before your table is finalised OR an action needs to be added to your 'Future Actions' table for your EMP
8. '**Improved or new pollution controls required**' – the actions required to ensure your controls do comply (see Task 2.3)

Pollution risks and controls – _final copy_

This is the table you will create by finalising the draft copy of the table (above) after addressing any immediate pollution control actions (see Task 2.4).

Area of site: Chemical storage area in Warehouse B
Activity/facility/store: Activity – Chemical delivery

Pollution risk and contaminants of concern		Existing pollution controls		Comply? [7]
Pollution risk [3]	Contaminant(s) [4]	Structural [5]	Procedural [6]	Yes or No
Spills during unloading of chemicals	▪ Hydrocarbons, dissolved metals, glycols - refer 'Chemical Inventory' for Warehouse B	▪ Bunding of chemical delivery area, and ground sealed (bunding complies with Council 'ITA' requirements)	Procedure X.X (refer Appendix E) – including: ▪ Deliveries only within bunded area ▪ Contractors use safe practices (pallets, wrapping, trolleyjacks) ▪ Spill Response Plan Inspection X.X (refer Appendix G) ▪ Regular checks of seal and bund integrity etc Training (refer Appendix I) ▪ Staff/contractors trained in Procedures (including Spill Response) and Inspections	Yes
Traces contaminants tracked from bunded chemical delivery area to yard	▪ Hydrocarbons, dissolved metals, glycols - refer 'Chemical Inventory' for Warehouse B	▪ Yard area sealed	Inspection X.X (refer Appendix G) – including: ▪ Yard area regularly swept and residues collected for disposal ▪ Integrity of concrete checked 6 monthly	**No** – see 'Future Actions' table

Pollution risks and controls – _future actions_

This is the table you will create for any actions you cannot address immediately (see Task 2.4).

Area of site: Chemical storage area in Warehouse B
Activity/facility/store: Activity – Chemical delivery

Risk identification and contaminants of concern		Improved or new pollution controls required		Pollution Risk Priority	Order for Completion	Timeframe	
Risk	Contaminant(s)	Structural	Procedural			Initiation	Completion
Traces contaminants tracked from bunded chemical delivery area to yard	▪ Hydrocarbons, dissolved metals, glycols - refer 'Chemical Inventory' for Warehouse B	▪ Stormwater Treatment – oil interceptor and sand/peat filter for trace hydrocarbons and metals in yard stormwater	▪ Procedures required for operation and maintenance of stormwater treatment devices	1	1	▪ May 2008 (oil interceptor) ▪ August 2008 (sand/peat filter)	▪ May 2008 (oil interceptor) ▪ October 2008 (sand/peat filter)

☞ Task 2.1: Identify your pollution risks

Your EMP needs to include a comprehensive list of risks that the operations on your site pose to land and water. Include risks from day-to-day activities and things you store on-site all the time, as well as unusual events like spills and emergencies. For each risk you need to identify the contaminant(s) of concern – this will enable you to determine, in a later task, what type of controls you need to manage your risks and how to respond to spills of a particular substance.

For this task, you need to identify all risks regardless of these factors. In Task 2.2 you will list all the controls you have in place for each of your pollution risks (if you prefer, you can do Task 2.1 and 2.2 at the same time, *i.e.* listing the risks and each of their controls at the same time). To make sure you cover all risks, think about your:

- **activities** – all activities pose some level of risk. Consider the risks for each activity, from delivery and handling through to products and waste, as well as where the activity is carried out. For example, are the activities undertaken in a way, or with specific equipment, or in a specific location that minimises the release of contaminants?
- **facilities** – every facility will have some level of risk associated with it. Consider the risks from the various facilities on-site such as plant/equipment, re-fuelling or vehicle/equipment washing and maintenance areas. For example, are they set up, operated and maintained so as to avoid contamination of land and/or water/stormwater?
- **stores** – the storage of any 'environmentally hazardous substances' poses pollution risks. What exactly do you store on-site?, and how much? Are your storage areas designed and operated correctly? Could something go wrong with the tanks or bunds? Do underground tanks have leak detection (or ullage) systems?
- **site coverage** – sealed and unsealed areas pose different risks. In sealed areas contaminants (from spills or general activities) can enter the site's stormwater system. Whereas on unsealed areas (or sealed areas with integrity problems) those contaminants could soak into the ground resulting in possible soil and/or groundwater contamination.
- **site drainage** – aspects of the site's drainage can pose risks to land and water. For example, do any areas drain to stormwater that should actually drain to trade waste? Is there any chance of cross-connections between stormwater and trade waste/sewer systems? Could there be problems with pipe and/or shutoff valve integrity?

Outputs:

➢ List your pollution risks in the 'Pollution risks and controls' table – working copy (use/copy the version in the EMP Template, and refer to the examples at the start of Step 2)

  - you can split your site into areas or deal with different aspects of your operation, and use a new copy of the 'Pollution risks and controls' table for each area / aspect
  - for each risk, put the contaminant of concern in the adjacent column

  You will add more info to the working copy over the next few tasks, and later you will finalise the table and insert it into your EMP (*i.e.* Section 2, Table 2 of the EMP template).

➢ Write a brief summary of all the risks you have identified, and further details of the most significant risks *i.e.* the ones with the most significant pollution impact. Insert this information into Section 2.1 of the EMP Template.

  - include all risks regardless of whether controls are in place or not.

Tools and references:

- the example 'Pollution risks and controls' table – working copy (at the start of Step 2)
- the info you collated in Step 1 (Site Layout and Drainage Plans, process diagrams *etc*)
- ARC's EMP webpages – including pollution risk examples for different industries
- ARC's 'Pollution Prevention Industry Guides' and fact sheets
- ARC's EOP sections on 'Drains', 'Site Design', 'Housekeeping', 'Spills' and 'Wastes'
- any industry/association codes of practice, standards, or guidelines
- any best management practice information, including international sources
- Appendix I – 'How to identify environmental risks' (including contaminants of concern)

Tip: Remember to follow the 'Tips for completing Step 2' (first page of Step 2).

☞ Task 2.2: Identify your <u>existing</u> pollution controls

Each risk identified in task 2.1 must be managed to avoid or minimise pollution of the environment. Risks are managed using 'controls'. You will already have a number of controls in place on you site, and this task involves you identifying those existing controls. There are two types of controls:

▪ **structural controls** are physical structures that are designed to control the movement of materials/contaminants (including contaminated stormwater) around your site. Structural controls can be big or small and are usually permanently in place – *e.g.*: dedicated storage facilities (for chemicals, raw materials, products and wastes), secondary containment devices such as bunds, stormwater treatment devices such as a sand filter

▪ **procedural controls** are written or informal descriptions of how and where you carry out key activities on your site. They include written standard operating procedures (SOPs) for routine activities as well as for spills and emergencies *e.g.* SOPs for handling, filling or emptying containers and inspection and maintenance of bunds and associated valves

Each risk is likely to require a combination of both structural and procedural controls. For example, to manage the risk of chemical spills you may have bunding as a structural control, and procedures for chemical delivery, handling *etc* and spill response as procedural controls.

This task involves you identifying the controls (structural and procedural) that you *already* have in place. In subsequent tasks you will identify further controls that are required and you will then need to install/develop them, and update the information you collate during this current task.

Outputs:

➢ List your existing structural and procedural controls for each risk in the 'Pollution risks and controls' table – working copy (*i.e.* 'Existing risk management controls' columns)

  ▪ if your company has details of existing controls in documents such as operating manuals, you can list the ones that relate to pollution risks in your EMP and attach copies of them (if there are too many to include, you can attach the key ones).

➢ You will need to include a summary of your controls in your EMP. You can start compiling a summary now, however you won't be able to finalise it until you have finished all the tasks in Step 2. Once you have finished Step 2 you will need to include the following in your EMP:

  i) a final copy of the 'Pollution risks and controls' table (see section 2.2 of the EMP template)

  ii) a summary of the pollution controls (see section 2.2 of the EMP template)

  iii) copies/plans/design details of structural controls (see Attachments D and E of the EMP template) and a copy of all the written procedural controls (see Appendix X.X)

Tools and references:

- the example 'Pollution risks and controls' table – working copy (at the start of Step 2)
- the info you collated in Step 1 (Site Layout and Drainage Plans, process diagrams *etc*)
- ARC's EMP webpages – including pollution control examples for different industries
- ARC's 'Pollution Prevention Industry Guides' and fact sheets (*e.g.* Spill Response fact sheet)
- ARC's EOP sections on 'Drains', 'Site Design', 'Housekeeping', 'Spills' and 'Wastes'
- any industry/association codes of practice, standards, or guidelines
- any best management practice information, including international sources
- Appendix J for more info on structural and procedural controls for pollution risks

Tip: If you haven't involved a consultant so far, consider contacting one now as they are likely to be able to provide expertise in this area, including new and innovative options.

☞ Task 2.3: Identify <u>improvements</u> to your pollution controls

Now that you have outlined the existing structural and procedural controls for your site's risks, you need to work out what improvements or additions are needed in order to further reduce your risk of polluting. Improvements that are *required* will be those that ensure you will comply with your legal obligations. Actions you need to take will include:

- **improvements to existing pollution controls –** where an existing control is inadequate *e.g.* where a bund is undersized or where a procedure is ineffective because there is no way of reporting problems or results or ensuring the problem does not reoccur.

- **new pollution controls** – where there is no existing control in place *e.g.* storage tanks with no bunding or where there is no written Spill Response Plan in place.

This EMP Guide relates to 'legal compliance' with the 'industrial or trade activity' provisions of the ARC's ALW Plan. However you can extend this assessment to include any other legal requirements (from ARC or other agencies), as well as any voluntary 'best practice' measures your company or industry/trade association is committed to (as per your 'EMP Scope' from Step 1, Task 1.2). You will just need to ensure the controls relating to achieving compliance with ARC's 'industrial or trade activity' provisions are clearly identified.

If you identify actions that you need to take to achieve legal compliance, you do not necessarily need to complete all the actions prior to finishing your EMP. Any actions you plan to do later just need to be included in your 'Future Actions' table with timeframes for completion etc.

Outputs:

➢ Assess you existing controls to determine whether they are sufficient to achieve legal compliance and put a 'Yes' or 'No' in the 'Comply?' column of your 'Pollution risks and controls' table – working copy.

  ▪ to demonstrate compliance to ARC your procedural controls need to be written down, so now is the time to write up any existing informal procedures that your activity follows

➢ For every 'No' (*i.e.* where compliance isn't being achieved), include details of what is needed to achieve compliance (either an improvement to an existing control or development of a new control) in the 'Improved or New Pollution Controls' columns in the 'Pollution risks and controls' table.

Tip: Keep notes of the process you follow and the decisions you make – this information is needed in subsequent tasks for prioritising and implementing your actions, and also in the future when you review your EMP.

Tools and references:

- the tools and references you used in Task 2.2, especially:
    - the example 'Pollution risks and controls' table – working copy
    - ARC's 'Pollution Prevention Industry Guides' and fact sheets
    - ARC's EOP sections on 'Drains', 'Site Design', 'Housekeeping', 'Spills' and 'Wastes'

plus:

- ARC's 'industrial or trade activity' provisions from the ALW Plan (go to www.arc.govt.nz)
- ARC's EMP webpages – including examples of how to check for compliance.
- ARC's Technical Publication 10 'Stormwater Management Devices Manual' if you have or might need stormwater treatment devices to polish contaminants entering stormwater
- Appendices A and B re assessing compliance with ARC's 'industrial or trade activity' provisions.

Note: If you think/know you store chemicals that fall under the requirements of the HSNO legislation, you will need to demonstrate compliance with those requirements - for further information contact ERMA on (04)916-2426 or go to www.ermanz.govt.nz.

☞ ## Task 2.4: Address your pollution control actions

In Task 2.3 you identified a number of actions that your company needs to take to manage your pollution risks and comply with ARC's 'industrial or trade activity' provisions. During this final task of Step 2 you will now address those actions by completing the ones you can do immediately, and in some cases by compiling a list of actions to complete at a future date:

- **complete your 'immediate actions'** – you will need to refer back to all the 'Tools and References' identified in previous tasks to ensure that the resulting pollution controls are correct (*e.g.* any new structural controls such as bunds are built to spec and any new procedural controls are effective). Also remember that most new structural controls will need an accompanying procedural control (*e.g.* a new bund will require a procedure for staff managing the bund).

- **compile your list of 'future actions'** – any actions that cannot be addressed prior to finalising your EMP need to compiled into a list along with timeframes.

If you have lots of actions and need to decide what order to tackle them, you may want to consider factors such as 'pollution risk priority' (*i.e.* level of pollution risk that may arise if you delay completing the action) and of course business issues (*e.g.* costs, resources, timing constraints). For any actions that you decide to complete in the future (*i.e.* after finalising your EMP), you will need to include timeframes for initiation and completion. When reviewing your draft EMP, ARC will assess the timeframes for your 'future actions' and may request supporting information; the timeframes must reflect 'pollution risk priority' as well as business issues.

Outputs:

➢ As you complete each of your 'immediate actions', you will need to update the information relating to your pollution controls in your EMP – this will include:

- the ''Pollution risks and controls' table – working copy' *i.e.* adding the new control into the 'existing controls' columns to show that they have been installed/developed

- the 'Pollution Controls' summary information (section 2.2 of the EMP template)

- copies/plans/design details of improved and new controls (Attachments D and E)

Remember to update your Step 1 outputs, especially your Site Layout and Drainage Plan(s).

➢ Once you have completed all of your immediate actions, you need to finalise your 'Pollution risks and controls' table and insert into section 2.2 of the EMP template. You can use the ''Pollution risks and controls' table – final copy' (see example tables at the start of Step 2) by transferring the relevant columns from your 'working copy' of the table.

- *the remaining information will relate to outstanding actions, and these will be collated into a separate table for future actions (see below)*

➢ Create your list of 'future actions' for the actions will complete later (see example tables at the start of Step 2), and insert into Section 2.2.2 and Table 2.2 of the EMP template.

- *ARC may request information explaining the timeframes for these future actions (including how you determined the 'pollution risk priority' for the actions and the factors that determined the proposed timeframes)*

Keep notes of the process you follow while improving or adding to your controls – this information may be useful in the future when you review your EMP (see Task 3.6).

Tools and references:

- the example 'Pollution risks and controls' table – 'working copy', 'final copy' and 'future actions' plus all the tools and references from previous tasks (in particular Task 2.3) regarding how pollution controls should be developed to ensure they are effective, especially

- ARC's Pollution Prevention Industry Guides', fact sheets, EOP, EMP webpages, Technical Publication 10 (stormwater treatment devices), Appendices A and B (assessing compliance with ARC's 'industrial or trade activity' provisions, Appendix J 'Structural and procedural controls for pollution prevention', Appendix L 'How to write an operating procedure'

- Appendix X 'How to prioritise actions based on pollution risk' [include business issues]

DRAFT

Step 3: Your programmes and systems

In Step 1 and 2 you gathered information about your site and identified the associated pollution risks, and the controls you will use to manage those risks. In this final step you will put in place the programmes and systems that will ensure your controls are implemented and are effective in minimising pollution from your site.

Your tasks

☐   **Task 3.1:   Inspection and maintenance programme**

☐   **Task 3.2:   Stormwater management and monitoring programme**

☐   **Task 3.3:   Training programme**

☐   **Task 3.4:   Record keeping**

☐   **Task 3.5:   Roles and responsibilities**

☐   **Task 3.6:   EMP review**

You can tick each task off as you complete it - when you have done all the tasks and copied the outputs into the EMP Template (as explained in the Introduction section of this EMP Guide), go to the final section, 'What happens next?'.

Note: The tasks in this final step may bring to your attention new pollution risks or controls that you hadn't previously thought of. If this happens, you will need to revisit the relevant Step 2 tasks and update the information and outputs as you go.

.

DRAFT

☞ Task 3.1: Inspection and maintenance programme

In Step 2 you listed all the structural and procedural controls you have to deal with your site's pollution risks. To ensure your EMP is effective in preventing pollution you need to ensure structural controls are in good working order and that the procedural controls are being followed. The way to do this effectively is to develop an inspection and maintenance programme. This programme will formalise the way you will check that your controls are preventing pollution; and if the controls aren't working, you will be able to fix the problem (*i.e.* repair the bund or re-train staff on procedures).

The key components of any inspection and maintenance programme are to:

- cover every **pollution risk** – to do this you could focus on your pollution controls. For some controls this will be straight forward *e.g.* checking staff are storing items in the right place and disposing of waste correctly, checking waste oil igloos are not overtopping and bunding is intact. However for some controls it will be more complicated *e.g.* checking the integrity of pipes to ensure wastes aren't leaking into site soils/groundwater or stormwater.

  Note that stormwater treatment devices often require more comprehensive checks and more intensive maintenance – they are therefore covered in a separate 'Stormwater management and monitoring programme' (see Task 3.1).

- ensure the **frequency** of checks and repairs are sufficient to stop problems before they start causing pollution – to achieve this some will need to be done more regularly than others (*e.g.* daily rather than once a month). Some might need to be done after rainfall when stormwater pollution is most likely. The likelihood of pollution occurring also needs to be taken into account – *e.g.* an older tank will require more frequent checks. The severity of the pollution may also be a factor – *e.g.* highly toxic substances should be checked more closely.

- make sure the person(s) doing the check knows **what to look for**, what to **record** and what to **do if there is a problem** – to do this you can develop checklists to follow (and tick off). The checklists need prompts to ensure corrective actions are taken if a problem is found. For maintenance work on plant and equipment, instructions from manufacturers can be followed; however you may need to expand them to ensure pollution risks are managed comprehensively.

  Your completed inspections checklists and maintenance logs will create a 'paper trail' to demonstrate that your inspection and maintenance programme is being followed. See task 3.4 'Record keeping'.

Your programme is likely to be made up of a series of instructions (written steps, flow diagrams *etc*) and supporting forms or checklists. This should allow the user to easily understand what is required, when, and what to do if there is a problem. In addition to creating a 'paper trail' the completed forms/checklists can also be referred to when identifying changes to improve your EMP (see 'EMP review', Task 3.6).

Outputs:

➢ Include a summary of your programme Section 3.1 of the EMP Template

➢ Attach a copy of the programme (instructions, checklists, forms *etc*) as Attachment F to the EMP Template.

Tools and references:

- ARC's EMP webpages – including example inspection / maintenance programmes
- ARC's EOP 'Good housekeeping' section
- Appendix M 'Inspection and maintenance checklists examples'
- Appendix X Corrective Actions

Any consent conditions or other requirements for specific inspections / maintenance

☞ **Task 3.2: Stormwater management and monitoring programme**

If you have stormwater treatment devices on-site you will probably need a separate programme for the operation and maintenance (rather than including them in your 'Inspection and maintenance programme' (Task 3.1)). The conditions on some resource consents require some sites to prepare a stormwater management and monitoring plan.

If you don't have any stormwater management and monitoring requirements on your site, and you don't have a stormwater treatment device, you can skip this task.

Typical consent conditions relating to operation and maintenance plans for stormwater systems may require:

- operational details, maintenance requirements and inspection checklists for all components of the site's stormwater system, including all stormwater pipes, catchpits, soakholes and treatment practices (sandfilters, interceptors and rain gardens etc) under typical and storm flow conditions

- frequency of regular and one-off (*e.g.* post storm) maintenance and inspections

- the methods, procedures and frequencies for undertaking stormwater discharge monitoring

- the methods and procedures for investigating and reporting on any stormwater discharge monitoring results that exceed any contaminant concentration trigger levels

- details of the person or body who will hold responsibility for the ongoing operation, maintenance and monitoring of the stormwater system,

You will also need to identify the location of any more detailed information such as where monitoring records will be kept and who will be responsible for taking any actions that may be needed.

Outputs:

➢ Summarise your stormwater management and monitoring programme in Section 3.2 of the EMP Template

➢ Attach your stormwater management and monitoring plan as Attachment G to the EMP Template.

Tools and references:

- ARC's EMP webpages – including example stormwater plans / programmes
- any relevant consent conditions (if you have a consent)
- the typical conditions above
- ARC's EOP 'Good housekeeping section'
- TP10 checksheets
- Appendix N, How to prepare a stormwater monitoring and maintenance programme

☞ Task 3.3: Training programme

Each person in your organisation has a role to play in preventing pollution and making your EMP work. Everyone will need some form of training to help them do it. The most well written EMP will not prevent pollution if staff are not trained about your risks and how to do things.

Any contractors you use and any lessees on your site must also know about their responsibilities to avoid pollution so that any problems do not become your liability. You can train them yourself, or ask them to provide evidence that they have given their staff the right training on the parts of your EMP that relate to their work.

An effective training programme will:

- include an induction and refresher training for all staff (and contractors as appropriate)
- cover general environmental issues and the purpose of pollution prevention goals
- outline site specific details relevant to achieving pollution goals (see Step 1 tasks) – this is a good time to point out to staff exactly where the stormwater from your site goes, and how sensitive most of those receiving environments are to pollution
- provide details on specific pollution controls relevant to individual job areas/ responsibilities
- include overview and 'hands-on' spill response training (preferably all staff should be trained so they can all help if a spill occurs)

You will need to keep good records of who is trained, when and in what aspects – this paper trail is vital in demonstrating you are implementing your EMP (see 'Record Keeping, Task 3.4). Training staff and contractors on your EMP can be integrated into an overall environmental and health and safety training programme.

Outputs:

➢ Insert a summary of your training programme in Section 3.3 of the EMP Template
   - Table 3.3 in the EMP Template

➢ Include copies of training material and any record keeping forms *etc* in Attachment I to the template.

Tools and references:

- ARC's EMP webpages – including example training programmes
- Table 3.5 in the EMP template
- Appendix P, Help with planning your environmental training

) **Task 3.4: Record keeping**

Good records are the paper trail that proves you are following your EMP and that it is working as intended. Keeping records from your 'inspection and maintenance programme', your 'stormwater management and monitoring programme' and your 'training programme' will be useful to demonstrate that you have been following your EMP should a compliance issue arise or if there is a pollution incident (such as a spill on-site). The type of records from these programmes will include:

- completed forms, checklists and maintenance logs

- identified problems and corrective actions undertaken

- monitoring data / results (*e.g.* for stormwater treatment device monitoring)

Some other types of records will also be valuable for assisting with the implementation of your EMP and/or your 'EMP Review' (see Task 3.6). These include:

- incident forms (especially pollution incidents and response)

- internal and external communications regarding the EMP (*e.g.* with waste disposal contractors where you specify that your waste must be disposed of appropriately)

- results of internal or external assessments and compliance visits

You will need to decide which records you will keep, how and where they will be kept (hard copies and/or electronic format), and for how long. If you have a resource consent, keep key records (*e.g.* on discharge monitoring) for the whole time period for which the consent is issued, as they will be very helpful when you need to reapply. You will also need to decide who will be ultimately responsible for these records (see 'Roles and responsibilities, Task 3.5).

Outputs:

➢ Write a summary of your record keeping system in Section 3.4 of the EMP Template
Use Table 3.4 in the EMP template

Tools and references:
- ARC's EMP webpages – including example record keeping systems
- All forms, checklists and records you have created during Steps 1, 2 and 3
- Appendix S, Record keeping

☞ Task 3.5: Roles and responsibilities

Nearly every member of your business (and your contractors) will have a role or responsibility in ensuring your EMP is followed and that it is effective in preventing pollution. In order for staff and contractors to understand what is required, you will need to record this information in your EMP. In some cases specific responsibilities could also be recorded in individual's job descriptions.

Key examples of responsibilities for your EMP might be: shop floor staff being responsible for following the EMP procedures, supervisors checking pollution controls are working (*e.g.* bunds are sound and procedures are being followed), contractors disposing of waste according to contractual agreements, human resources staff ensuring staff are trained, administration staff keeping records appropriately, and management staff actioning additional pollution controls on time, undertaking EMP reviews and tracking consent compliances.

Roles and responsibilities (and associated reporting lines) can be recorded in various ways. You could do this by creating:

- **role diagrams** showing company structure, the roles of your staff as they relate to the EMP and environmental issues, and reporting lines

- **responsibility summaries** detailing what EMP tasks have been assigned to which roles / individuals

Reporting lines ensure that the right people find out about pollution issues and that things such as corrective actions, improvements, reviews and training get done. One way of ensuring reporting lines are followed is to require the responsible person to sign off on actions or programmes (*e.g.* sign off may be required at the end of each week to show that all inspections and maintenance programmes have been carried out and any necessary corrective actions have been taken).

Outputs

➢ Summarise the roles and responsibilities for your EMP in section 3.5 of the EMP Template - include a summary diagram or table showing responsibilities and reporting lines

➢ Attach any further supporting information in Attachment X

Tools and references

- ARC's EMP webpages – including example role/responsibility summaries
- Appendix R, Roles, responsibilities and reporting lines

☞ Task 3.6: EMP Review

You will need to review and update your EMP regularly to ensure it reflects the current situation on your site and takes into account changes you have made since the first version. These changes may be the result of company or site expansion, taking on new staff or undertaking new activities or processes. However, even if nothing changes on site you still need to routinely review your EMP to ensure it continually improves. Opportunities for improvement might be raised informally by staff or contractors, formally through the forms completed during inspections and maintenance (and associated corrective actions), or through the monitoring data collected from your stormwater treatment devices (if you have them). National and international advances in best practice pollution controls should also be reviewed at this time to check if any additional controls should be considered for you site.

An annual review is required as a minimum; however in some circumstances a more frequent review or update may be needed. This may arise due to an incident such as a spill highlighting a major gap in your pollution controls, or an inspection may highlight an on-going problem that requires a significant change to stop it re-occurring. Similarly, monitoring data may show that a treatment device hasn't been installed properly and it may need to be altered.

The annual review of the EMP should include things like:

- any significant changes to the site's activities, facilities, or pollution controls

- key changes to the company (e.g. restructuring, contractors)

- changes in industry best practice standards or recommended pollution controls

- changes in legal requirements or ARC or industry recommendations

- results of: inspection and maintenance programmes, and logs of incidents, corrective actions, internal or external assessments (including ARC compliance reports)

- public complaints

- specific results of your stormwater management and monitoring programme compared with consent requirements (if you have one)

Any changes to your EMP need to be reflected in the information in your EMP about your site, your pollution controls and/or your programmes and systems. Each of these will therefore also need to be updated.

If large parts of your EMP change, the entire EMP will need to be re-submitted to ARC (along with a summary of the changes); however if only minor changes are made, a summary of those changes should suffice. In addition to advising the ARC you will of course also need to advise or re-train staff and contractors.

Outputs:

- Outline how you will review your EMP in Section 3.6 of the EMP Template

- Include any forms relating to your EMP review as Attachment K to the EMP Template

---

Tools and references:

- ARC's EMP webpages – including example EMP Review processes
- ARC's EOP 'Environmental Management' section

What happens next?

Now that you have finished all the tasks in each of the 3 steps of this EMP Guide, you need to:

☐   Read and fine-tune your EMP

☐   Put in place a document control system

☐   Submit your EMP to the ARC

☐   Make your EMP happen on the ground

☞ **Read and fine-tune your EMP**

You now need to go back through your EMP and ensure there are no gaps and identify anything that may need fine-tuning / tweaking. Some sites may be able to share information with other businesses within their sector and/or get someone independent of the development process to review the EMP.

- see ARC's 'EMP webpages' for model EMPs that you can compare your EMP to.

☞ **Put in place a document control system**

To make sure people don't use out of date versions of your EMP documents you will need some form of document control system. You may find it helpful to clearly identify documents with issue/revision date, revision number and approver details *etc*. You will also need to set up a system of naming and storing your electronic files that will easily allow you to know what versions are the latest.

- see 'Document Control Statement' at the start of the EMP Template
- see ARC's 'EMP webpages' for further advice

☞ **Submit your EMP to ARC**

You will need to submit your EMP to ARC so that it can be checked by a Pollution Prevention Officer. The officer will go through your site information, your pollution controls and your programmes and systems and give you feedback on any changes that are required or recommended.

- see ARC's 'EMP webpages' for further advice, including timeframes for when you should submit your final draft EMP (*e.g.* if you are applying for an 'industrial or trade' resource consent, ARC recommends you submit a draft EMP prior to lodging your consent application)

☞ **Make your EMP happen on the ground**

The key part of this entire process is ensuring you make your EMP happen on the ground! All the effort you've put into developing your EMP will be wasted if it is not implemented effectively. Good environmental management requires on-going input from all of your staff, management, contractors and suppliers to keep things on track and ensure your site plays its role in improving the quality of the Auckland environment.

- if you have any queries or want any advice now or in the future, contact a Pollution Prevention Officer. The officer can offer suggestions to address problems or point you in the direction of new best practice options and initiatives.
- check the ARC's 'EMP webpages' regularly as new information will be continually added to the website about best practice and based on feedback from sites on how to make the process of developing and implementing your EMP easier.