

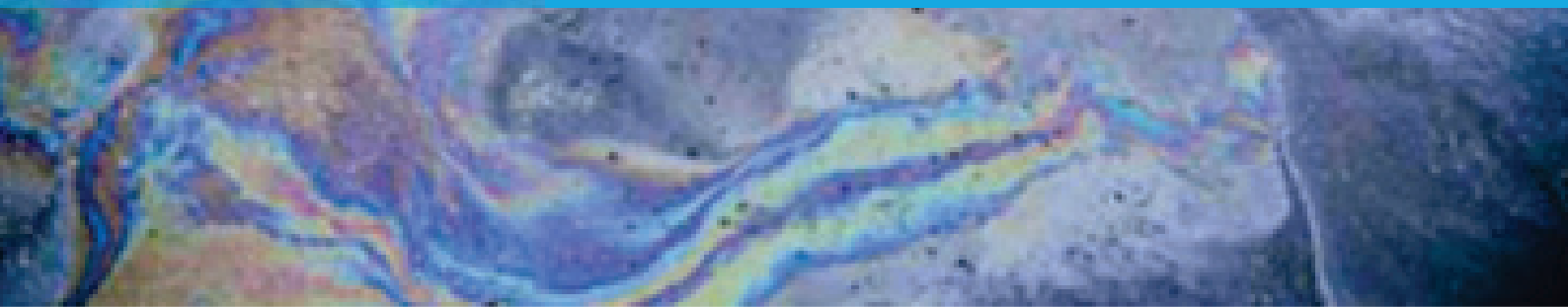


Te Kaunihera o Te Tairāwhiti  
**GISBORNE**  
DISTRICT COUNCIL

# Stormwater Management Plan Workbook

**FOR INDUSTRIAL AND TRADE ACTIVITIES**

GISBORNE DISTRICT COUNCIL



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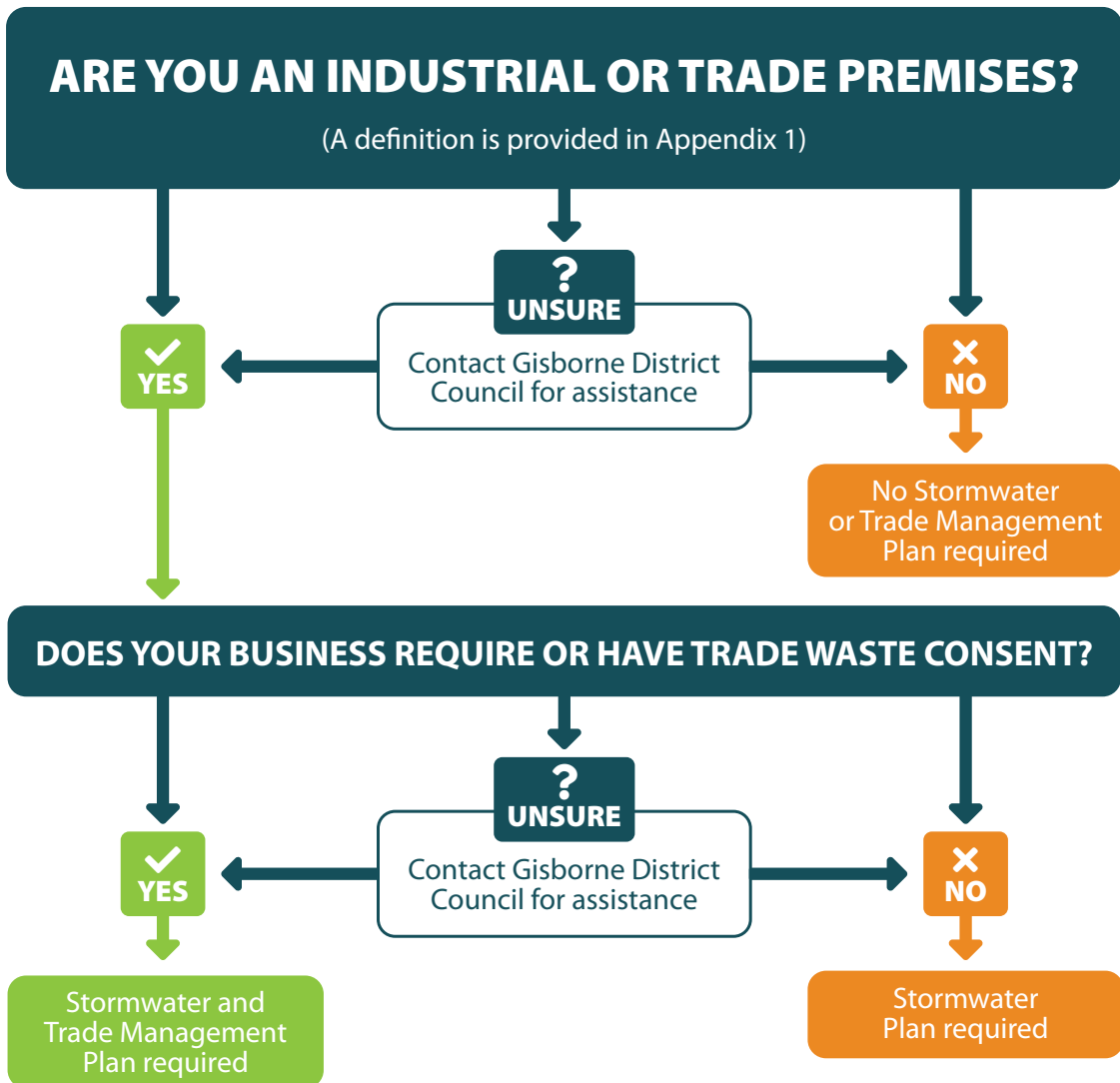
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## INTRODUCTION

These guidelines have been developed to assist trade or industrial premises in the Gisborne Region to comply with stormwater and trade waste requirements as outlined in the Gisborne Trade Waste Bylaw 2015, Gisborne District Council Water Supply Bylaw 2015, and Gisborne Regional Freshwater Plan – Decision Version August 2017.

These guidelines provide generic information requirements for management plans. Do not be overwhelmed by the comprehensive nature of this template, or the instructions provided, the level of detail required will depend on the complexity and risks associated with each activity and can be as simple or as complex as it needs to be. You can delete issues or even whole sections that do not apply to your company.

The purpose of a stormwater management plan is to minimise and, where practicable, avoid pollution from your site on an ongoing basis. The management plan is a dynamic tool that informs your everyday operations and processes. It is not an additional layer of procedures, but identifies how to best undertake specific tasks in order to adequately manage potentially pollution risks and ensure that only clean stormwater is discharged into the network.

**All industrial or trade activities require a separate Stormwater Management Plan for each site that the activity occurs on before 1st May 2020.**

**If the activity requires a Trade Waste Consent, then a separate Trade Waste Management Plan for each site is also required.**

### For existing industrial or trade activities:

- A separate Stormwater Management Plan for each site must be submitted to Gisborne District Council for approval and be operative prior to 1st May 2020.
- All operative Stormwater Management Plans must be reviewed annually by Gisborne District Council.
- If required, a separate Trade Waste Management Plan for each site must be submitted to Gisborne District Council for approval as soon as possible.
- All operative Trade Waste Management Plans must be reviewed annually by Gisborne District Council.

### For new industrial or trade activities:

- If required, Trade Waste Management Plans must be submitted to Gisborne District Council for approval prior to commencement of activity.
- Stormwater Management Plans must be submitted to Gisborne District Council for approval prior to commencement of activity.

An electronic copy of this guidance document will be provided if requested, including further information documents and a fillable form for completion of the management plans.

### For further information please contact Gisborne District Council:

**Telephone:** 06 867 2049

**Stormwater:** Environmental Risk Team

**Trade Waste/Wastewater Management:** Wastewater Treatment and Compliance Engineer or Tradewaste Support Officer

**Email:** water.managementPlans@gdc.govt.nz

## DEFINITIONS

Copied From the Gisborne Regional Freshwater Plan and Gisborne Trade Waste Bylaw 2015.

### Chronic toxicity

Adverse effects caused by a toxic agent which occur either after prolonged exposure or an extended period after initial exposure.

### Contaminant

Any substance (including gases, odorous compounds, liquids, solids and micro-organisms), or energy (excluding noise), or heat, that either by itself or in combination with the same, similar, or other substances:

- a. When discharged into water, changes or is likely to change the chemical or biological condition of the water; or
- b. When discharged onto or into land or air, changes or is likely to change the physical, chemical or biological condition of the land or air onto or into which it is discharged.
- c. When discharged to the Sewer system may cause; damage; or potentially damage the system or interfere with the treatment process; or risk non-compliance with any consent.

### Domestic Sewage

Means foul water (with or without matter in solution or suspension therein) discharged from premises used solely for residential purposes, or wastes of the same character discharged from other premises, but does not include any solids, liquids, or gases that may not lawfully be discharged into the Council's sewerage system and may include geothermal water.

### Hazardous substance

Any substance:

- a. With 1 or more of the following intrinsic properties:
  - i. Explosiveness;
  - ii. Flammability;
  - iii. A capacity to oxidise;
  - iv. Corrosiveness;
  - v. Toxicity (including chronic toxicity);
  - vi. Ecotoxicity, with or without bioaccumulation; or
- b. Which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any 1 or more of the properties specified in paragraph a.

### Hazardous waste

Any waste that contains:

- a. A hazardous substance, or
- b. Infectious substances that are known, or reasonably expected, to contain pathogens, including bacteria, viruses, rickettsia, parasites, fungi or recombinant micro-organisms (hybrid or mutant) that are known, or reasonably expected, to cause infectious disease in humans or animals that are exposed to them, or
- c. Radioactive material containing a radioactive substance giving it a specific radioactivity exceeding 100 kilobecquerels per kilogram and a total radioactivity exceeding 3 kilobecquerels.

### Industrial or trade premises

- a. Any premises used or intended to be used for industrial or trade purposes (such as, but not limited to, food premises, workshops, wash pads, or large processing plants); or
- b. Any premises that discharge wastewater that is not of a domestic origin; or
- c. Any premises used or intended to be used for the storage, transfer, treatment, or disposal of waste materials or for other waste management purposes, or used for composting organic materials; or
- d. Any other premises from which a contaminant is discharged in connection with any industrial or trade process -

but does not include any land used for primary production.

### Industrial or trade process

Includes every part of a process from the receipt of raw material to the dispatch or use in another process or disposal of any product or waste material, any intervening storage of the raw material, partly process matter, or product.

### Pollution

Any direct or indirect alteration of the physical, thermal, biological, or radioactive properties of any part of the environment by discharging, emitting, or depositing wastes or substances so as to affect any beneficial use adversely, to cause a condition which is hazardous or potentially hazardous to public health, safety or welfare, or to animals, birds, wildlife, fish or aquatic life, or to plants.

**Pre-Treatment**

Any processing of trade waste or stormwater designed to reduce or vary any characteristic in a waste or stormwater before discharged to:

- a. The Council's sewerage system or stormwater system
- b. The natural environment

Means any processing of trade waste designed to reduce or vary any characteristic in a waste before discharge to the Council's sewerage system in order to comply with a trade waste consent.

**Public Sewer or Wastewater Network**

The main public sewer and lateral connections that carry away wastewater and trade waste from the point of discharge. The public sewer is owned and maintained by the Council.

**Public Stormwater Network**

A network of pipes, swales, drains and channels, wetlands, infiltration basins, detention ponds and other treatment devices, for the purposes of conveying, treating, storing or discharging stormwater, operated by the Gisborne District Council.

**Prohibited Trade Wastes**

A trade waste that has prohibited characteristics as defined in Schedule 1B and does not meet the conditions of Schedule 1A of the Gisborne Trade Waste Bylaw 2015. The waste is not acceptable for discharge into the Council's system unless specifically approved by then as a conditional trade waste.

**Stormwater**

Runoff that has been channelled, diverted, intensified or accelerated by human modification of the land surface or runoff from the external surface of any structure as a result of precipitation and includes entrained contaminants and sediments including that generated during construction or earthworks.

**Swale**

A shallow depression on the land surface that is covered in grass or other vegetation that is natural or man-made and that serves to collect and drain overland stormwater runoff.

**Trade Waste**

Is any liquid, with or without matter in suspension or solution, that is or may be discharged only from an industrial or trade premise to the Council's sewerage system in the course of any trade or industrial process or operation, or in the course of any activity or operation of a like nature: any may include condensing or cooling waters; stormwater which cannot be practically separated, or domestic sewage.

**Treated wastewater**

Wastewater which has been subject to:

- a. Primary treatment, which means physical processes including; screening, filtering, primary sedimentation or flocculation; and
- b. Secondary treatment which means aerobic or anaerobic biological treatment processes; and
- c. Tertiary treatment processes, which means advanced treatment or disinfection of effluent following secondary treatment.

**Untreated wastewater**

Wastewater that has not passed through a wastewater treatment unit.

**Waste**

Any contaminant, whether liquid, solid, gaseous or radioactive, which is discharged, emitted or deposited in the environment and which includes all unwanted and economically unusable by-products at any given place and time, any other matter which may be discharged, accidentally or otherwise, to the environment.

Note the definition of "contaminant".

**Wastewater**

Means domestic sewage and may include trade wastes.

**Wastewater Authority**

Means the Council, including its authorised agents, responsible for the collection, treatment and disposal of trade waste and wastewater.

# PART A: COMPANY, SITE AND ENVIRONMENT

## To be completed for each Trade or Industrial Premise

Insert a brief description of your company and details of the location this should include:

- Company operations, what does your company do or produce? Include operations that take place onsite as well as off-site activities.
- Staff numbers (include detail of contractors used in the company's operations).
- Company structure key responsibilities and reporting lines where relevant.
- Site address and legal description (for all areas your company utilises for operations).
- Any relevant details of zoning under District Plan or Regional Plan rules.

**Note: If your company has or develops an Environmental Policy, insert it in this section.**

## 1. Business / company information

1.1 Site address:

1.2 Legal description:

1.3 Site layout and area:

1.4 Name of site owner(s) and contact details:

1.5 Name of business director(s)/owner(s) and contact details:

1.6 Relevant contact details:

Please provide the roles and responsibility of each staff member on site regarding stormwater management / spill management / site maintenance.

Name:  Role:

Responsibility:

Contact details:

Name:  Role:

Responsibility:

Contact details:

Name:  Role:

Responsibility:

Contact details:

Name:  Role:

Responsibility:

Contact details:

Name:  Role:

Responsibility:

Contact details:

**1.7 Do you have any resource consents, permits, HSNO certificates, and other authorisations obtained or required to run the business?**  Yes  No

- Please list all consents, permits, certificates and other authorisations associated with operating the business in the table below.
- A copy of all consents, permits, certificates and other authorisations associated with operating the business must be attached.

Consent/Permit/Certificate Number:	Type of Authorisation:
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
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## 2. Activity

Insert an outline of your site’s activities, facilities and stores.

**Include detail on the following:**

- What you do/ make/ process/ handle on the site including the methods used.
- Where the raw materials are stored on-site and what volumes.
- End-products and by-products, the volumes and where they are stored or used on site.
- The volume of the wastes produced, 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.

**2.1 Description of the activities that occur on site as part of the business:**

**2.2 Hours of operation:**

## 3. Discharges

**3.1 AIR** - Please list any air emissions that your business or activity produces:

*This includes any extractor fans, furnaces, and other stacks that expel air from your operational areas. It does not include air conditioners or venting solely for cooling and providing fresh air for staff.*

*This does not include noise or odour emissions, as this is dealt with through different legislation.*

**3.2 SOLID WASTE** - Please list any solid waste (e.g. rubbish, excess packaging, vegetable waste, compost, bark) that your business or activity produces.

**3.2.1 Where and how does your solid waste get stored on site?**

**3.2.2 How is your solid waste removed from site and where is it disposed?**

**3.3 LIQUID WASTE (trade activity) - Please list any liquid waste (e.g. water, excess vegetable/produce liquid) that your business or activity produces.**

**3.3.1 Where and how does your liquid get stored on site?**

**3.3.2 Where is liquid waste from trade activities discharged to? (tick all that apply)**

- Tradewaste   
  Domestic wastewater pipeline   
  Other  
 Stormwater pipeline / stormwater manhole  
 Natural environment

**3.3.2.1 For each discharge location ticked above, please describe what wastewater is discharged, if this is treated before it is discharged, and if so, how it is treated:**

*Please note: Where tradewaste is discharged into the stormwater system or domestic wastewater pipeline, the following information is also needed:*

- Volumes discharged into the stormwater system or domestic wastewater system
- Water quality of the discharge – parameters to be determined in consultation with the GDC
- Location of discharge into the network
- Monitoring results (if available)

**3.3.3 Where is liquid waste from domestic activity discharged to? (tick all that apply)**

- Tradewaste   
  Domestic wastewater pipeline   
  Other  
 Stormwater pipeline / stormwater manhole  
 Natural environment

**3.3.3.1 For each discharge location ticked above, please describe what wastewater is discharged, if this is treated before it is discharged, and if so, how it is treated:**

*Please note: Where tradewaste is discharged into the stormwater system or domestic wastewater pipeline, the following information is also needed:*

- Volumes discharged into the stormwater system or domestic wastewater system
- Water quality of the discharge – parameters to be determined in consultation with the GDC
- Location of discharge into the network
- Monitoring results (if available)

**3.3.4 Where is stormwater discharged to?**

- Tradewaste   
  Domestic wastewater pipeline   
  Other  
 Stormwater pipeline / stormwater manhole  
 Natural environment



**For each stormwater discharge location ticked above, please describe if the stormwater is treated before it is discharged, and if so, how it is treated.**

*Please note: Where stormwater is discharged into the tradewaste wastewater system or the domestic waste system, the following information is also needed:*

- *Volumes discharged into the tradewaste wastewater system or the domestic wastewater system*
- *Water quality of the discharge – parameters to be determined in consultation with the GDC*
- *Location of discharge into the network*
- *Monitoring results (if available)*

## 4. Hazardous substances

Most industrial or trade activities have hazardous substances. This should not be an issue of concern. Most households also store and use hazardous substances. Storing or using such substances is not a problem provided risks are managed appropriately. Gisborne District Council staff can assist with this aspect of the plan.

Hazardous substance means, unless expressly provided otherwise by regulations, any substance.

*Examples: Fuel (petrol, diesel, oil), disinfection chemicals, detergents and/or wash bay water, fertiliser, batteries, hydraulic fluids*

- a. with 1 or more of the following intrinsic properties:
  - i. explosiveness;
  - ii. flammability;
  - iii. a capacity to oxidise;
  - iv. corrosiveness;
  - v. toxicity (including chronic toxicity);
  - vi. ecotoxicity, with or without bioaccumulation; or
- b. which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any 1 or more of the properties specified in paragraph (a) of this definition
- c. Include environmentally damaging substances

### 4.1 Does your business store or handle hazardous substances?

Yes  No

*Please note: If any hazardous substance has entered the stormwater network, wastewater network, groundwater or watercourse, notify the Gisborne District Council immediately.*

### 4.2 Please list all hazardous substances below:

For each hazardous substances listed, please provide information on how these substances are stored and handled, including the procedures for spills.

### 4.3 Material Safety Data Sheets (MSDS)

Material Safety Data Sheets (MSDS) are required for all hazardous substances. Please attach these to this management plan.

## 5. Emergency spill response management

**If your site contains hazardous materials, then you are required to have an emergency spill response plan. Please provide this in a similar format to the examples provided below.**

*Please note: You are also required to have an assigned person(s) to manage emergency spills. Please ensure you have provide their all hours contact details in the contacts section of the management plan.*

## 6. Photo catalogue

**Please provide a comprehensive photo catalogue of your activities and infrastructure\*.**

This should include photos relevant to stormwater, wastewater and tradewaste wastewater systems, including:

- Hazardous substances storage and handling areas
- Treatment systems (e.g. swale drains, vegetated filter strips, oil separators, sediment ponds etc.)
- Emergency response systems (e.g. shut-off valves, bunds, emergency spill kits etc.)
- Catchment areas (e.g. contaminated vs. uncontaminated catchment areas)
- Receiving Environments (e.g. streams, rivers, groundwater, wetlands etc.)

*\*This should be included in an appendix.*

### 6.1 Record Keeping

Records of maintenance, inspections, monitoring, and incidents are required to be kept on file, to be included in an Annual Report.

The Annual Report and updated waste management plan must be submitted by 30 April each year. This can be requested by Gisborne District Council at any time.

### 6.2 Describe how and where you keep monitoring and inspection records, and annual reports (including document control):

### 6.3 Describe the processes you have in place for maintaining a complaints register:

### 6.4 Annual Reporting

An annual Report must be submitted to Gisborne District Council by 30th April each year.

**Completed by:**

**Position Held:**

**Signature:**

**Date**

# PART B: STORMWATER MANAGEMENT

A stormwater management plan is required to make sure rainwater and pollution do not mix, and harmful solids and liquids are not transported into sensitive receiving environments where they pose a risk to people or natural areas.

## 1. Stormwater hazards and risks associated with your business

The purpose of the risk management is to identify and analyse risks associated with your activities / processes, so that action can be taken to reduce and minimise the consequences if that risk is realised. Risks need to be identified, monitored and controlled.

Include environmental risks to ecosystems (plant and animal life, pollution getting into aquatic habitats) and people (such as contamination of recreational waters, shellfish areas, etc.).

Discharges shall not contain substances that are toxic to the aquatic ecosystems over the 95% species protection trigger values (identified in the ANZECC Guidelines for Fresh Water and Marine Water Quality, 2000)

### 1.1 Describe the receiving environment (the natural environment where the stormwater ends up):

Create your stormwater management plan with the receiving environment in mind – for example:

- Detergents and nutrients need to be managed for discharges to freshwater and salt water
- Small streams and creeks are particularly vulnerable to heavy metal accumulations (e.g. copper and zinc)
- Groundwater risks are affected by nutrients and pathogens (bacteria, such as E.coli), because they cause significant health issues
- Hydrocarbons (oils, grease, fuel) and other automotive fluids pose a significant risk to aquatic life

In Gisborne this will generally be small streams, creeks and estuaries. In rare instances it will be the open ocean. The GDC Tairāwhiti maps can be used to work this out.

### 1.2 Describe hazards and risks specifically related to stormwater:

Risk description:	Who manages the risk?	Likelihood: Low (L), Medium (M), High (H)
Consequences:		Mitigation:
Consequences:		Mitigation:
Consequences:		Mitigation:
Consequences:		Mitigation:
Consequences:		Mitigation:

Please Note: The above risks must be reviewed annually and included in the annual report

## 2. Stormwater treatment

### 2.1 Treatment of contaminated areas

A programme must be in place to over time treat all stormwater emanating from contaminated ('dirty') areas. Council recommends the best practice guidelines within the Stormwater Management Devices: Design Guidelines Manual (also known as TP10). Stormwater treatment devices which are designed and constructed accordingly to these guidelines will meet the requirements of the Freshwater Plan, and treated areas are considered 'clean'.

*Please note: The site map must show untreated 'dirty' areas, which is then also reflected in the land cover table. A program must be in place to address all untreated 'dirty' areas, and this must be reflected in the process / activity improvements section.*

### 2.2 What procedures and measures do you have in place to prevent solid waste entering the stormwater system or natural environment?

*This includes larger solid waste (e.g. litter) as well as finer solid waste (e.g. sweepings, shavings, and other visible solids deposited on surfaces).*

## 3. Site maps

### 3.1 A clear understanding of a number of concepts is important in producing a site map, as described below.

#### What is a 'dirty' area?

Areas where pollutants are deposited or generated, either directly or indirectly, and the areas are open to mixing with rainwater. The following guidance is provided:

#### Contaminated areas:

Vehicle movement areas:

- Uncovered parking areas, access ways or other hard surfaces catering for more than 50 vehicle movements per day
- Loading zones where hazardous materials are loaded
- Areas at risk of tracking of contaminants by vehicles (pollution attached to the surface of tyres and transported onto other areas)

Other areas:

- Unpainted or uncoated metal roofs, or metal roof areas in need of maintenance (high risk roofs e.g. old zinc roofs and copper roofs)
- Areas where automotive lubricants, oils, and other liquids are handled
- Areas where hazardous materials have the potential to become entrained in rainwater

#### Uncontaminated areas:

- Vehicle movement areas not included above (i.e. less than 50 movements per day)
- Other roofs
- Other impervious areas

Where contaminated and uncontaminated runoff mixes, the combined runoff is considered contaminated.

Where a contaminated area is treated through an adequately sized TP10 (Auckland Council) stormwater treatment device, the area is considered uncontaminated.

## What is an 'impervious area'?

You are required to demarcate contaminated and uncontaminated impervious areas on your site that receive rainwater. This needs to be provided in a table and as part of the site map. Pervious areas should not be polluted or have polluting activities carried out on them – if there are such areas on your site, these require to be remediated and upgraded to be impervious.

- When is an area pervious or impervious?
- Hard (impervious) surfaces are defined as surfaces which prevent or significantly retard the soakage of water into the ground.

### Includes:

- roofs
- paved areas including driveways and sealed or compacted metal parking areas
- patios
- tennis or netball courts
- sealed and compacted metal roads / parking areas
- engineered layers such as compacted clay

### Excludes:

- Grass and bush areas
- Gardens and other landscaped areas
- Permeable paving and green roofs

## 3.2 Please provide site maps of your property / business including the below.

### Site Map Checklist

- Legal boundary (off title plans)
- Land uses / cover on the site
- Impervious areas
- Pervious areas
- Hazardous storage and / or handling areas
- Uncovered or unbunded storage and/or handling/loading areas
- Covered or banded storage and/or handling/loading areas
- Site drainage (incl. flow directions, discharge locations, and whether this discharges to storm water or wastewater)
- Any private and / or public potable water, wastewater, trade waste or stormwater pipes
- Catch-pits / sumps / gully traps
- Pipelines
- Overland flow paths
- Infiltration basins
- Clean and dirty areas
- Treatment / management devices
- Any areas that flow into a stormwater treatment device, on-site tradewaste wastewater treatment systems and/or oil/water separators (please specify each device)
- Any spill containment areas / devices (incl. bunds, tanks, etc.)?
- Details of sensitive receiving environments (if applicable)
- Monitoring locations (if applicable)



## 6. Process / activity improvements

It is best practice to keep improving how we do things. Operators are required to review their stormwater, wastewater, and trade waste-related processes and activities annually to keep up to date with industry changes and to find better ways to manage and reduce environmental risks.

Types of improvements include:

- Training & education
- Upgrades
- Planned renewals
- Adopting new/better technologies
- Separating clean and dirty areas
- Integrating devices that treat contaminants
- Changing work behaviours
- Monitoring stormwater areas
- Increasing the frequency of maintenance of relevant infrastructure

The above should be included in Annual Reports.

### 6.1 When are processes / activities reviewed?

### 6.2 Who reviews the processes / activities?

### 6.3 Records of planned improvements are required to be kept. The below information is required.

Where should there be an improvement?

What will be done?

Milestone(s) and relevant completion date(s)

How will you measure success?

Who is responsible for implementation?

## PART C: DRAINAGE PLANS

If you don't know where your drains go and what's going into them, then, unknown to you, your site could be causing water pollution - a serious state of affairs for your local environment and your company's environmental liability. You should develop a site drainage plan which identifies all sewer and storm water pipes on your site.

### Your Drainage Plan

If you don't already have a drainage plan for your site, ask your city or district council if they have one. If you rent your site, ask your landlord for a copy of the drainage plan or ask them to obtain the plan on your behalf from the city or district council. If the council does not hold a copy, you will need to get a new one drawn up that shows all the things in these checklists relevant to your site. If your site is old or has complex drainage you may require some assistance; look in the Yellow Pages under drainage contractors, drainlayers or engineers - consulting.

#### Your drainage plan should show:

- Site boundaries
- All activity areas with labels showing their use (include all indoor and outdoor areas and buildings)
- Storm water pipes and their inlets, down pipes, storm water drains and manholes
- Any open drains
- Any low point where runoff might pool
- Neighbouring sites and what happens there, especially if these are sensitive activities like a kindergarten, hospital, rest home, wetlands
- Water bodies and their direction of flow
- Your sites soak pit, if you are not connected to a reticulated storm water system
- Unsealed areas (open ground) or where unpiped runoff leaves your site
- Stormwater treatment systems
- Oil or grease interceptors
  - Flow control or shut-off devices on sumps
  - Swales
  - Ponds
  - Filters
- Clearly identify the sewer and storm water systems (color coding is useful).

### Document Control Statement

To ensure this Stormwater Management Plan (SMP) is kept up-to-date and that the most recent version is used by staff and contractors, its distribution and revision will be controlled. Person responsible (job title) will:

- manage the master copy and any other paper or electronic copies of the SMP
- keep a summary of updates, versions and dates and distribution lists
- ensure SMP updates are distributed to all relevant staff as controlled copies
- ensure any uncontrolled copies are marked as uncontrolled copies
- ensure any out-of-date copies are discarded when updates are distributed