HAWKE'S BAY REGIONAL COUNCIL

Hawke's Bay Regional Council
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Our Ref: DP120072L & DP120073W

29th November 2012

Hastings District Council
Private Bag 9002
Hastings 4156

Attention: Tracey Gray

Dear Madam

RESOURCE CONSENT – DP120072L & DP120073W

Thank you for your advice concerning resource consent DP120072L and DP120073W, issued on the 28th November 2012. The Consent has now been corrected. Please discard the previous resource consent document and replace it with the attached.

Yours faithfully,

B Crawley

Barb Crawley
Senior Administration Officer Consents
RESOURCE MANAGEMENT GROUP
Phone: 06 833 8005
Email: barb@hbrc.govt.nz

HAWKE'S BAY
REGIONAL COUNCIL

RESOURCE CONSENT

Discharge Permit

In accordance with the provisions of the Resource Management Act 1991, and subject to the attached conditions, Hawke's Bay Regional Council (the Council) grants a resource consent for a controlled activity to:

Hastings District Council
Private Bag 9002
Hastings 4156

to divert stormwater from a 36 hectare industrial area (Omahu North Industrial Area) and to discharge this stormwater to land and to water via a swale and three infiltration basins.

LOCATION

Address of site:	Omahu Road, Hastings
Legal description:	Various
Map reference (NZTM)	To a swale located between about 1927146 - 5607855 and about 1924196 - 5609439 To the Flowers, Twyford and Flaxmere Drains, at about 1926324 – 5608501, 1925580 - 5608903 and 1927061 - 5608225.

LAPSING OF CONSENT

This consent shall lapse in accordance with section 125 on 31 May 2022 if it is not given effect to before that date.

CONSENT DURATION

This consent is granted for a period expiring on 31 May 2032.

Malcolm Miller
Manager Consents
RESOURCE MANAGEMENT GROUP
Under authority delegated by Hawke's Bay Regional Council
28th November 2012

Conditions

1. The consent holder shall undertake all operations in accordance with any drawings, specifications, statements of intent and other information supplied as part of the application for this resource consent, including:
   a) Report dated 12 April 2012, Assessment of Environmental Effects, dated 19 April 2012, and including 'Technical Report – Omahu Rezone Stormwater Management, prepared for Hastings District Council', MWH Ltd.

   b) Letter dated 22 May 2012, 'Additional Information (DP120072L)', from Hastings District Council.

   Where a conflict arises between any conditions of this consent and the application, the conditions of this consent will prevail.

2. All works and structures relating to this resource consent shall be designed and constructed to conform to the best engineering practices and at all times maintained to a safe and serviceable standard.

   Final Engineering Plans and 'As Built' Plans

3. The consent holder shall provide the Council (Manager Compliance) final engineering and construction plans and drawings of any of the communal stormwater system (swales, infiltration ponds and any associated structures or works) which have been prepared by a suitably qualified engineer, experienced in stormwater design, to meet all standards and design requirements of this consent at least ten working days prior of the intention to commence the works.

4. Prior to the discharge commencing, the consent holder shall provide accurate 'as built' plans of the communal stormwater system, including the location and details of key components including but not limited to the swale, infiltration ponds, any engineered discharge points or over flow points.

5. Within 1 month of the completion of any extension or alteration of the communal stormwater system (swales, infiltration ponds and any associated structures or works), the consent holder shall provide the Hawke's Bay Regional Council (Manager Compliance) with updated 'as built' plans as required by condition 4.

   Design Requirements

6. The stormwater system shall be designed, installed and maintained to ensure that the stormwater infiltration ponds provide minimum storage volumes of 1,800 m^3 (Catchment 1), 3,000 m^3 (Catchment 2) and 8,200 m^3 (Catchment 3). Discharges from the infiltration ponds, in up to a 24 hr duration 50 year ARI event, shall not exceed the pre-development (2012) flows (i.e. Catchment 1: 0.038 m^3/s, Catchment 2: 0.053 m^3/s, Catchment 3: 0.08 m^3/s).

7. The on-site stormwater systems for the sealed yard areas shall be designed, installed and maintained to:
   a) Restrict the stormwater generated from the site to 14 L/s; and
   b) Treat all stormwater generated from the sealed yard area of each site in all events up to a 10 year 2 hr duration ARI (2090 rainfall) (44.8 mm).

8. The consent holder shall ensure that the diversion and discharge activities authorised by this resource consent are designed, constructed and maintained so that the discharge does not cause erosion or scour of the beds or banks of any receiving water bodies.

9. The base of infiltration basin 1 shall be lined with a minimum of 100 mm of topsoil, and all infiltration basins and the swale shall be maintained in grass or other suitable vegetation.

10. The swale shall be designed and installed to eliminate preferential flow paths and shall have a lateral slope of 0%. Each connection to the swale shall be designed, constructed and

maintained so that the discharge does not cause erosion or scour to the bed of the swale, and the discharge is evenly applied across the width of the swale.

11. Stormwater generated from the roof of any building will only be accepted into the stormwater network when the rainfall events exceeds the 10 year 2 hr duration ARI (2090 rainfall) (44.8 mm) is exceeded, and shall only be accepted from sites with buildings constructed using inert roofing materials such as Colourcote or Coloursteel, or using a different roof material or roof treatment (e.g. painting with non-metal based paints) that will achieve an equivalent performance standard in terms of release of metal contaminants.

12. The consent holder shall ensure that each stormwater system discharging to the communal system (swale and infiltration ponds) is designed, installed and maintained so that it will generate contaminant loads which are less than the following limits:

    a) Total suspended solids: 214 kg/ha/ annum

    b) Zinc: 597 g/ha/annum

    c) Copper: 50 g/ha/annum

    d) Total Petroleum Hydrocarbons: 419 g/ha/annum

    Advice Note: These figures represent the modelled 'Hastings Residential Baseline' annual contaminant loads. Annual contaminant generation rates can be estimated using the ARC Contaminant Load Model (May 2006 or its successor).

Hazardous Substances

13. No hazardous substances shall be disposed of to the stormwater system.

14. Only inert materials shall be stored and handled on surfaces from which stormwater drains to the stormwater system, or from which contaminants may be washed or spilled into the stormwater system or onto natural ground. Where 'Inert' materials are those that do not contain:

    a) Combustible or putrescible components

    b) Hazardous substances or materials likely to create leachate or run-off by means of biological, physical or chemical processes.

    c) Any products or materials derived from hazardous waste treatment, stabilisation or disposal processes.

    High Risk Sites

15. Prior to their connection, the consent holder shall assess each of the sites from which stormwater will be discharged, and shall determine whether these sites are "High Risk Sites". High Risk Sites shall include, but not be limited to those listed in Schedule 1 of this consent.

16. For any High Risk Site, the consent holder shall ensure that that a site specific stormwater management and treatment practice is designed for the site by a suitably qualified engineer. This design is to be reviewed and approved by the consent holder prior to installation, and installation shall only occur if the consent holder is satisfied that the design is able to meet the requirements of the conditions of this consent.

    Advice Note: The Council's *Hawke's Bay Waterway Guidelines: Industrial Stormwater Design* (HBRC Plan Number 4107) can be used to assist in identifying for specified land uses the types of contaminants likely to be generated, the risk of discharge, and appropriate treatment methods for these land uses.

17. The consent holder shall monitor the on-site stormwater systems servicing High Risk Sites to ensure that they are maintained on at least an annual basis, and more frequently where required in accordance with the manufacturer's or designer's specifications.

Monitoring

18. The consent holder shall ensure that stormwater can be sampled at each point that it is discharged to the swale, and at the point of discharge from the infiltration ponds.

19. The consent holder shall undertake sampling of stormwater within the swale twice each year, with at least two months between each sampling event. Each sampling event shall comprise of three separate samples of first flush stormwater flows (within the first hour of a discharge commencing, and preferably within the first half hour). The samples shall be taken from three separate and evenly distributed sampling locations, all of which are located within the length of the swale which is downstream of the northernmost point of discharge to the swale.

20. The consent holder shall analyse the samples taken in accordance with condition 19 for the following:

    a) Conductivity
    b) pH
    c) Total Petroleum Hydrocarbons
    d) BTEX
    e) Zinc (dissolved)
    f) Lead (dissolved)
    g) Cadmium (dissolved)
    h) Copper (dissolved)
    i) Ammoniacal – N
    j) Nitrate – N
    k) Total Nitrogen

21. In the event that the sampling undertaken in accordance with condition 19 and 20 exceeds a specified trigger level shown in Table 1 below, the consent holder shall assess and report to the Council on the following matters, within 3 months of the exceedance occurring:

    a) Investigate the cause of the exceedance, and any measures taken to reduce the level of contaminant in the stormwater discharge
    b) Undertake an assessment of the significance of the exceedance, and assess the potential effects of the exceedance on the potability of groundwater.
    c) Options for addressing the source of contaminants in order to reduce contaminant levels and the timeframe for completion of any proposed works.

Table 1: Stormwater Quality Trigger Levels

Contaminant	Trigger level (mg/L)
BTEX (see footnote)	1.8
Total Petroleum Hydrocarbons	15
Lead	0.01
Cadmium	0.004
Copper	2
Nitrate-N	11.6
Zinc	1.5

BTEX = Benzene, Toluene, Ethyl Benzene and Xylene

22. The results of the analysis undertaken for conditions 19 and 20 shall be forwarded to the Council (Manager Compliance) within 7 days of being received by the consent holder.

23. The laboratory carrying out analyses required under this consent shall be accredited for those analyses by International Accreditation New Zealand or an equivalent authority.

24. Sampling shall be carried out by a person suitably qualified and experienced in that field.

25. The consent holder shall undertake an annual audit of the sites connected to the system to ensure that there has been no changes in site use which would change the site to a 'high risk' site, as defined by condition 15.

Spills

26. An emergency shut-off valve shall be installed at the stormwater pipe outlets between each on-site treatment device and the swale to allow the site to be isolated from the swale in the event of a spill.

27. Each site from which stormwater is discharged into the stormwater network and on which hazardous substances are used, handled or stored shall have a spill management plan and shall have a spill kit available for use on the site. The spill management plan and spill kits shall be appropriate for the nature of activities and chemicals used and/or held on site.

28. For all spills of contaminants and hazardous substances that escape into the communal stormwater system (swales, infiltration ponds and any associated structures or works), the consent holder shall:

    a) Immediately take all practicable steps to contain and then remove the contamination from the environment, and;

    b) Immediately notify the Council of the escape, and;

    c) Report to the Council, in writing and within 7 days, describing the manner and cause of the escape and steps taken to control it and prevent its reoccurrence.

    Advice note: The Hastings District Council Spill Management Protocol includes the above procedures.

29. If an event occurs that may have an adverse effect on the quality of the drinking water at the Twyford School, or water quality in other down-gradient wells, the consent holder shall notify, as soon as reasonably practicable, and within 6 hours of learning of the occurrence of the event, the operators of the Twyford School drinking water supply and the Regional Council.

Reporting

30. An **Annual Compliance and Monitoring Report** shall be submitted to the Council's Manager: Compliance by 28 February each year, to cover the preceding 12 month period. The matters for reporting shall include, but not be limited to, the following:

    a) Stormwater water quality sampling and monitoring results including:
        i. An analysis of the monitoring results in terms of compliance with relevant conditions and trigger levels and in comparison with previously collected data;
        ii. Copies of original laboratory analytical reports for all analyses undertaken shall be made available to the Council (Manager Compliance) on request.
        iii. Identification of the sampling location (coordinates in NZTM format), and a plan showing the sample location in relation to any discharge points.

    b) Confirmation of the maintenance activities undertaken on the communal stormwater system (swales, infiltration ponds and any associated structures or works) during the report period.

    c) Confirmation of the total number of connections to the system.

    d) Confirmation of any changes in land use occurring on sites discharging to the system over the reporting period, where this change has resulted in these sites becoming 'High Risk'.

    e) A record of the sites which commenced discharging to the network within the report period, which provides confirmation of:

        i. A map of their location.

        ii. A description of the activity.

        iii. The date of connection.

        iv. Whether the site is classified as a High Risk Site, and where it is classified as a High Risk Site:

            a. A list of any hazardous substances stored or used on these sites; and

            b. Details of, and a file reference for, the on-site stormwater treatment and management practices approved in accordance with condition 16; and

            c. Details of, and a file reference for, the spill management plan prepared under condition 27.

    f) A summary of any new communal stormwater works or developments completed within the stormwater catchment area during the report period.

    g) A record of any known non-compliance with conditions of this consent, the Water Services Bylaw or District Plan provisions occurring during the report period within the subject stormwater catchment and the actions taken to remedy this non-compliance.

h) A summary record of any spills occurring within the stormwater catchment area and occurring during the report period, and any actions taken in response to these events.

i) A register of complaints relating the authorised discharge made during the report period, and a record of how complaints were addressed.

31. Prior to the commencement of discharge from Catchment 3, as defined by the plan attached as Appendix 1, the consent holder shall provide to the Council (Manager Compliance) a report that includes:

a) An assessment of stormwater testing results taken in accordance with conditions 19 and 20, an assessment of any trends in contaminant concentrations of the stormwater, and a comparison of these results with the trigger levels specified by condition 21.

b) A re-analysis of likely contaminant loads using the ARC Contaminant Load Model (May 2006 or its successor) based on the developed land uses within the Catchments 1 and 2, and a comparison between these estimates and the contaminant load limits listed in condition 12.

Land Ownership / Access

32. The consent holder shall not commence the discharge until such time as a new industrial zone has been established, and the land on which the system swale and infiltration ponds are to be constructed has been designated or purchased by the consent holder.

REVIEW OF CONSENT CONDITIONS BY THE COUNCIL

The Council may review conditions of this consent pursuant to sections 128, 129, 130, 131 and 132 of the Resource Management Act 1991 (the RMA). The actual and reasonable costs of any review undertaken will be charged to the consent holder, in accordance with s 36(1) of the RMA.

Times of service of notice of any review: During the month of May of any year.

Purposes of review:

To deal with any adverse effect on the environment that may arise from the exercise of this consent, which it is appropriate to deal with at that time or which became evident after the date of issue.

To require the adoption of the best practicable option to remove or reduce any effects on the environment.

To modify any monitoring programme or conditions of this consent, to amend the monitoring programme to better allow for more representative stormwater quality monitoring to be undertaken, and to better ensure that this monitoring is practicably able to be undertaken.

To require additional monitoring as the stormwater catchment area is developed to better address an actual or potential adverse environmental effect.

To set stormwater quality parameters for on-site stormwater treatment devices should this be required to ensure adverse effects on the environment are avoided.

To modify the requirements of consent conditions in response to the ongoing development of stormwater catchment areas, and to include additional matters if these are considered necessary to better address an actual or potential adverse environmental effect.

To implement any relevant new regional or national guidelines on

stormwater management practices.

Times of service of notice of a review after receipt of the assessment required by condition 31 and prior to commencement of discharge to Catchment 3 of the development:

During the months of May or November of any year.

Purposes of review: To modify the consent requirements, such as by including stormwater quality limits, or requiring additional monitoring, after consideration of the report required to proceed Catchment 3 of the development in order to better address any potential adverse effects of the discharge.

REASONS FOR DECISION

The reasons for the decision are set out in the s42A report prepared in assessment of the application for this resource consent.

ADVICE NOTES

a) The emergency shut-off valves required by condition 26 should be automated, or if it is manually operated a sign should be located adjacent to the shut-off valve that provides clear and precise instructions on the use of the shut-off valve should a spill occur on the site.

b) This consent does not authorise any access or occupation arrangements over and/or on land not owned by the consent holder as a result of the works.

c) The discharge of roof water to land on each lot may require a separate resource consent to be obtained by the site owners, where these discharges will not meet the permitted activity rule of the RRMP.

MONITORING NOTE

Routine monitoring

Routine monitoring inspections will be undertaken by Council officers at a frequency of no more than once every year to check compliance with the conditions of the consent. The costs of **any** routine monitoring will be charged to the consent holder in accordance with the Council's Annual Plan of the time.

Non-routine monitoring

"Non routine" monitoring will be undertaken if there is cause to consider (e.g. following a complaint from the public, or routine monitoring) that the consent holder is in breach of the conditions of this consent. The cost of non-routine monitoring will be charged to the consent holder in the event that non-compliance with conditions is determined, or if the consent holder is deemed not to be fulfilling the obligations specified in section 17(1) of the RMA shown below.

Section 17(1) of the RMA 1991 states:

> *Every person has a duty to avoid, remedy, or mitigate any adverse effect on the environment arising from an activity carried on by or on behalf of the person, whether or not the activity is carried on in accordance with*
>
> *a) any of* sections 10, 10A, 10B, *and* 20A*; or*
>
> *b) a national environmental standard, a rule, a resource consent, or a designation.*

Consent Impact Monitoring

In accordance with section 36 of the RMA (which includes the requirement to consult with the consent holder) the Council may levy additional charges for the cost of monitoring the

environmental effects of this consent, either in isolation or in combination with other nearby consents. Any such charge would generally be set through the Council's Annual Plan process.

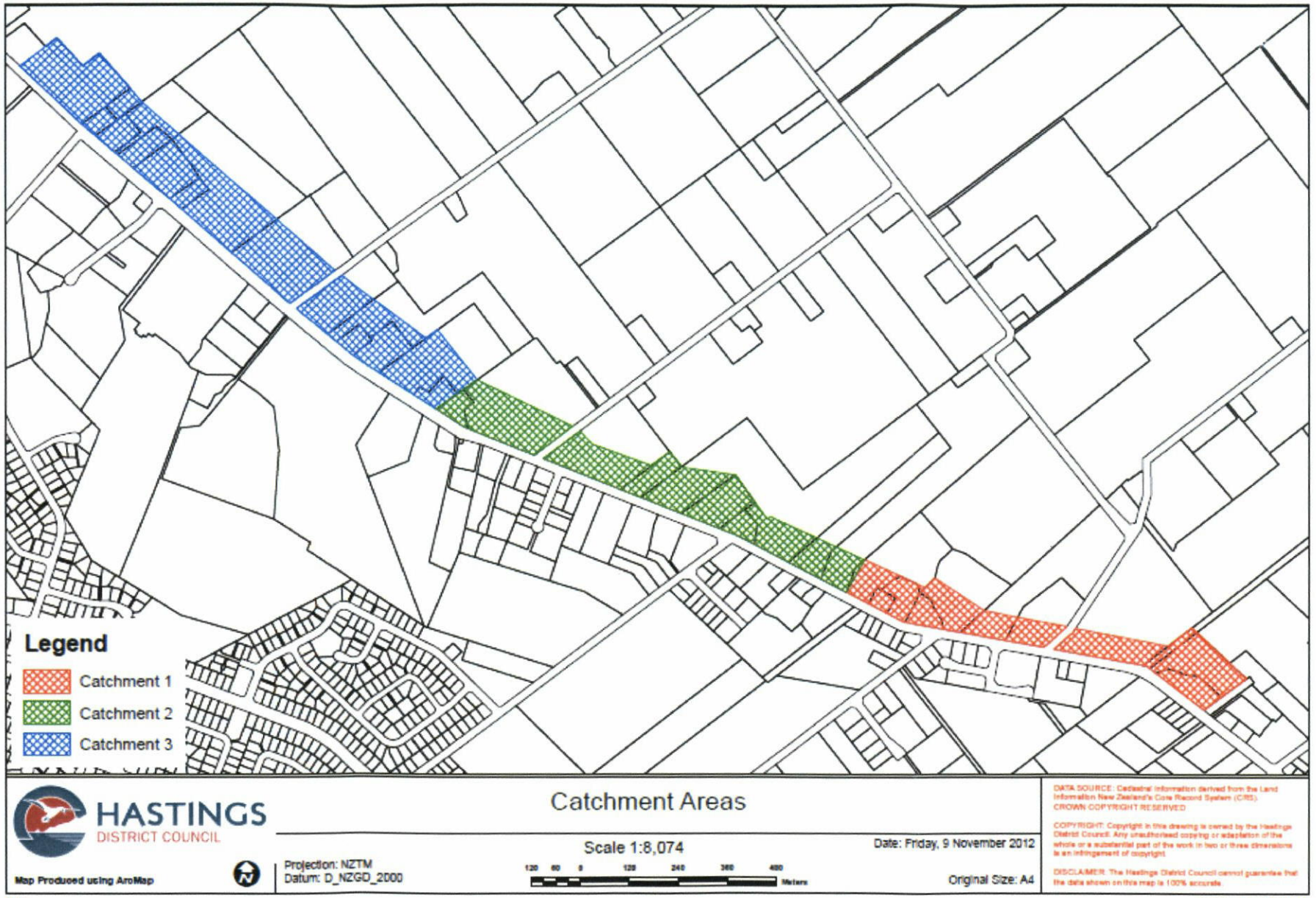
DEBT RECOVERY

It is agreed by the consent holder that it is a term of the granting of this resource consent that all costs incurred by the Council for, and incidental to, the collection of any debt relating to this resource consent, whether as an individual or as a member of a group, and charged under s36 of the Resource Management Act, shall be borne by the consent holder as a debt due to the Council, and for that purpose the Council reserves the right to produce this document in support of any claim for recovery.

CONSENT HISTORY

Consent No. (Version)	Date	Event	Relevant Rule Number	Plan
DP120072L & DP120073W	/2012	Consent initially granted	43	Regional Resource Management Plan

Appendix 1 - Proposed Stormwater System Catchment Areas


Legend
Catchment 1
Catchment 2
Catchment 3
HASTINGS
DISTRICT COUNCIL
Catchment Areas
Scale 1:8,074
Date: Friday, 9 November 2012
Map Produced using ArcMap
Projection: NZTM
Datum: D_NZGD_2000
120 60 0 120 240 360 480
Meters
Original Size: A4
DATA SOURCE: Cadastral information derived from the Land Information New Zealand's Core Record System (CRS).
CROWN COPYRIGHT RESERVED
COPYRIGHT: Copyright in this drawing is owned by the Hastings District Council. Any unauthorised copying or adaptation of the whole or a substantial part of the work in two or three dimensions is an infringement of copyright.
DISCLAIMER: The Hastings District Council cannot guarantee that the data shown on this map is 100% accurate.

Schedule 1: High Risk Activities as Defined in the Hawkes Bay Waterway Guidelines - Industrial Stormwater Design – April 2009

3 Industries, Contaminants and Treatment Practices

The following table 3-1 provides a detailed listing of industries, the contaminants that they generate, the likelihood that those contaminants will be released into the environment and the types of stormwater practices that can be used to reduce the level of a given contaminant from being discharged.

Table 3-1
Industrial Activities, their Description, Contaminants of Concern, Likelihood of Release and Treatment Processes

Industrial Activity	Description of Trade	Contaminants of Concern	Likelihood of Release	Treatment Processes
Wood or paper product storage, manufacturing or fabrication	Treated timber storage	Cu, Cr, As, TSS	High	Settling, sand/peat filter
Wood or paper product storage, manufacturing or fabrication	Timber treatment	Cu, Cr, As, Sn, TSS, Oil and Grease, pesticides	High	Sand/peat filter
Transport and related activities	Boat or ship construction, repair or maintenance	Cu, Zn, TSS, Oil and Grease	High	Settling, oil/water separator, sand/peat/carbon filter
Research or defence	Naval and air force defence activities	Metals, pesticides, oil and grease	High	Settling, , oil/water separator, sand/peat/carbon filter
Recycling, recovery, reuse or disposal	Metals (crushing, grinding, sorting or storage)	Oil and grease, TSS, Zn, Cu, Pb, Cd, Cr	High	Oil/water separator, sand/peat/carbon filter
Recycling, recovery, reuse or disposal	Automotive dismantling	Oil and grease, TSS, particulate metals, Zn, Cu, Pb, Cd, Cr	High	Coarse settling, oil/water separator, sand/peat/carbon filter
Metal processing, metallurgical works or metal finishing	Processing of metals (smelting, casting)	Metals (Al, Pb, Zn, Cu, Fe), TSS, pH	High	Sand/peat/carbon filter
Metal processing, metallurgical works or metal finishing	Metal plating, anodising or polishing	Metals (Zn, Cu, Cr, Ni, Ag), pH, Cyanide	High	Peat filter
Transport and related activities	Marinas	TSS, Zn, Cu	Medium	Peat filter
Sewage treatment and handling	Sewage treatment plants	TSS, BOD, NO_3+NO_2, NH_3, Pathogens	High	Settling, wetlands, disinfection
Sewage treatment and handling	Sewage solids storage	TSS, BOD, NO_3+NO_2, NH_3, Pathogens	Low	Settling, wetlands, disinfection
Rubber industries	Synthetic rubber manufacturing	Zn, TSS, organics	Medium	Wetlands
Recycling, recovery, reuse or disposal	Tyres	Zn, TSS	High	Sand/peat/carbon filter
Recycling, recovery, reuse or disposal	Chemical containers cleaning, reconditioning or recycling	Metals, COD, NO_3+ NO_2	Medium	GPT screen, coarse settling, oil/water separator, oxidation sand/peat/carbon filter
Recycling, recovery, reuse or disposal	Waste transfer stations	GPs, TSS, COD, Metals, Oil & Grease, residual organic compounds	Medium	GPT screen, coarse settling, oil/water separator, oxidation, sand/peat/carbon filter
Recycling, recovery, reuse or disposal	Hazardous materials storage or treatment	TSS, COD, Metals, Oil and Grease, organics	Medium	Sand/peat/carbon filter

Recycling, recovery, reuse or disposal	Non-metal recycling (composting, glass, paper or paper board	TSS, COD, NO_3+ NO_2, pathogens	High	Wetlands + oxidation
Recycling, recovery, reuse or disposal	Crushing, grinding or separation works (other than sand, gravel, rock or mineral - e.g. slag, road base, demolition material)	TSS, pH, Zn	High	Sand/peat filter, wetlands
Recycling, recovery, reuse or disposal	Landfills	Metals, TSS, BOD, No_3+NO_2, NH_3, organics	Low	Coarse settling, oil/water separator, oxidation, sand/peat/carbon filter
Recycling, recovery, reuse or disposal	Chemicals	Fe, Al, pH, No_3+NO_2, metals, organics	Low	Sand/peat/carbon filter
Recycling, recovery, reuse or disposal	Batteries	Pb, pH	Low	Sand/peat filter, carbonate filter
Product storage or handling centres	Bulk chemicals	AL, Fe, Zn, No_3+NO_2	Medium	Sand/peat/carbon filter
Petroleum or coal product manufacturing	Coal products	TSS, AL, Fe, pH	Medium	Settling, wetlands
Non-metallic mineral product manufacturing	Cement, lime, plaster and concrete products	TSS, Fe, pH, Oil and Grease	High	Settling, wetlands
Non-metallic mineral product manufacturing	Concrete batching plants (ready mixed concrete)	TSS (lime), pH	High	Settling, wetlands
Motor vehicle services facilities	Mechanical servicing of motor vehicles	Oil and grease, metals	High	Sand/peat/carbon filter
Motor vehicle services facilities	Service stations	Oil and grease, PAH, BTEX, TSS	High	Oil/water separator, sand filter, oxidation
Metal processing, metallurgical works or metal finishing	Refinement of ores	TSS, metals	Medium	Settlement, wetland
Metal processing, metallurgical works or metal finishing	Metal blasting or coating (excluding spray painting)	Zn, other metals, TSS	High	Sand/peat filter
Electronics	Circuit board manufacturing (excluding assembly only)	Metals (Zn, Cu, Cr, Ni), pH, organics	Medium	Sand/peat filter
Commercial livestock processing centres	Tanneries and Fellmongeries	BOD, oil and grease, sulfides, Cr, N	High	Oil/water separator, oxidation, peat filter
Chemical and associated product manufacturing	Fungicides, herbicides, pesticides, timber preservatives and related products	COD, pH, As, Cu, Cr, Pesticides	Medium	Sand/peat/carbon filter

Chemical and associated product manufacturing	Batteries	Pb, pH	Medium	Sand/peat filter, carbonate filter
Chemical and associated product manufacturing	Paint, pigment, inks and dyes	Al, Zn, Fe, COD, organics	Medium	Sand/peat/carbon filter
Chemical and associated product manufacturing	Acids, alkalis or heavy metals	PH, TSS, metals	Medium	Sand/peat/carbon filter, carbonate filter
Transport and related activities	Railway workshops or refuelling depots	Oil and grease, TSS, COD, Zn	Medium	Settlement, sand/peat filter
Transport and related activities	Road freight transport depot (bulk chemical)	Oil and grease, TSS, COD, Zn, organics	Medium	Sand/peat/carbon filter, oxidation
Transport and related activities	Truck refuelling facilities (non-service station)	TPH, PAH	Medium	Sand/peat filter
Transport and related activities	Shipping container reconditioning	Oil and grease, TSS, COD	Medium	Oil/water separator, Settlement
Rubber industries	Tyre manufacturing or retreading	Zn, TSS, organics	Medium	Sand/peat filter
Recycling, recovery, reuse or disposal	Oil, petroleum hydrocarbon wastes	Oil and grease, PAH, BTEX	Medium	Oil/water separator, sand/carbon filter
Recycling, recovery, reuse or disposal	Sewage solids treatment or storage facilities	TSS, BOD, No_3+NO_2, Pathogen	Medium	Retention, oxidation
Product storage or handling centres	Bulk hydrocarbons (non-service stations)	Oil and grease, PAH, BTEX	Medium	oil/water separator, sand/peat/carbon filter
Power	Gas, coal or liquid power generation	Oil and grease, Zn, TSS	Medium	oil/water separator, wetlands
Power	Electrical substations	Oil and grease	medium	Sand filter
Petroleum or coal product manufacturing	Bitumen/asphalt premix or hot mix	TSS, Zn, TPH	Medium	oil/water separator, Sand/carbon filter
Animal feedstuffs	Pet food manufacture	BOD	Medium	Sand/peat filter, swales
Agriculture support industries	Inorganic fertiliser manufacture, storage or handling	COD, TSS, Pb, Fe, Zn, P	Medium	Sand/peal filter, high plant surface area and soil organics
Wood or paper product storage, manufacturing or fabrication	Log storage yards (outside of forested areas)	TSS, COD, NO_3+NO_2	High	Wetlands
Chemical and associated product manufacturing	Synthetic resins	TPH, pH, Zn	Low	Sand/peat filter
Chemical and associated product manufacturing	Solvents	TPH	Low	Sand filter
Chemical and associated product manufacturing	Explosives and pyrotechnics	Metals (Pb, Zn), VOC's	Low	Sand/peat/carbon filter

Wood or paper product storage, manufacturing or fabrication	Particle board or other wood panel manufacturing	TSS, COD, NO_3+NO_2, oil and grease	Medium	GPT, Settling, sand filter
Wood or paper product storage, manufacturing or fabrication	Pulp, paper or paper board manufacturing	TSS, COD, NO_3+NO_2, oil and grease, Zn	Medium	Wetlands, oil/water separator
Wood or paper product storage, manufacturing or fabrication	Plywood or veneer manufacturing	TSS, COD, NO_3+NO_2, organics	Medium	Wetlands
Transport and related activities	Shipping, loading/unloading	Oil and grease, TSS, COD	Medium	Oil/water separator, sand/peat filter
Transport and related activities	heliports	Oil and grease, TSS, COD		Oil/water separator, sand/peat filter
Transport and related activities	Toad freight transport depot (non-chemical) with mechanical servicing	Oil and grease, TSS, metals	High	Oil/water separator, sand/peat filter
Petroleum or coal product manufacturing	Petroleum refining	Oil and grease, PAH, BTEX	Medium	Oil/water separator, sand/carbon filter
Petroleum or coal product manufacturing	Petroleum hydrocarbon, oil or grease manufacturing	Oil and grease, PAH, BTEX	Low	Oil/water separator, sand/carbon filter
Non-metallic mineral product manufacturing	Glass	Oil and grease, BOD, TSS	Medium	Oil/water separator, sand/peat filter
Metal product manufacturing	Sheet and structural metal products	Fe, Al, Zn	Medium	Sand/peat filter
Machinery or equipment manufacturing	Other machinery or equipment	Oil and grease, Fe, Al, Zn	Medium	Sand/peat filter
Machinery or equipment manufacturing	Industrial machinery or equipment	Oil and grease, Fe, Al, Zn	Medium	Sand/peat filter
Food or beverage manufacturing or handling	Vineyards or wine manufacturing	BOD, TSS, oil and grease, N	Medium	Oil/water separator, high plant activity and surface area
Food or beverage manufacturing or handling	Processed dairy foods manufacturing	BOD, TSS, oil and grease, N	Medium	Oil/water separator, high plant activity and surface area
Food or beverage manufacturing or handling	Oil or fat product manufacturing or handling	BOD, TSS, oil and grease, N	Medium	Oil/water separator, high plant activity and surface area
Food or beverage manufacturing or handling	Meat and meat product manufacture (including fish)	BOD, TSS, oil and grease, N	Medium	Oil/water separator, high plant activity and surface area
Food or beverage manufacturing or handling	Processed dairy foods handling	BOD, TSS, oil and grease, N	Medium	Oil/water separator, high plant activity and surface area
Food or beverage manufacturing or handling	Other foodstuffs handling	BOD, TSS, oil and grease, N	Medium	Oil/water separator, high plant activity and surface area

Food or beverage manufacturing or handling	Meat product handling (including fish)	BOD, TSS, oil and grease, N	Medium	Oil/water separator, high plant activity and surface area
Food or beverage manufacturing or handling	Beverages or malt product handling	BOD, TSS, oil and grease, N	Medium	Oil/water separator, high plant activity and surface area
Food or beverage manufacturing or handling	Bakery product handing	BOD, TSS, oil and grease	Medium	Oil/water separator, high plant activity and surface area
Commercial livestock processing industries	Slaughter	BOD, oil and grease, N	Medium	Oil/water separator, high plant activity and surface area
Commercial livestock processing industries	Manufacture, store or handle products derived from animal slaughter (gelatin, fertiliser or meat products	BOD, oil and grease, N	Medium	Oil/water separator, high plant activity and surface area
Commercial livestock processing industries	Scouring or carbonising greasy wool or fleeses	BOD, oil and grease, N	Medium	Oil/water separator, oxidation
Commercial livestock processing industries	Rendering or fat extraction	BOD, oil and grease	Medium	Oil/water separator, oxidation
Chemical and associated product manufacturing	Other chemical products (plastic manufacturing	pH, TSS, Zn, N	Low	Sand/peat filter
Chemical and associated product manufacturing	Polishes, adhesives or sealants	BTEX, pH, Zn	Low	Sand/peat/carbon filter
Chemical and associated product manufacturing	Medicinal, pharmaceutical or veterinary products	COD, As, Cd, Cr, Phenol	Low	Sand/peat/carbon filter
Chemical and associated product manufacturing	Industrial gas	N, pH, TSS	Low	Sand filter
Animal feedstuffs	Stock food manufacture storage or handling	BOD, TSS	Medium	Swale/high plant surface area and soil organics
Transport and related activities	Bus depots	Cu, Zn, TSS, TPH, PAH	Low	Sand/peat/carbon filter
Transport and related activities	Commercial airports	Oil and grease, TSS,COD	Low	Settling, oil/water separator, sand/peat/carbon filter
Machinery or equipment manufacturing	Motor vehicles or parts	Oil and grease, Fe, Al, Zn	Low	Sand filter
Food or beverage manufacturing or handling	Other foodstuffs manufacturing	BOD, TSS, oil and grease, N	Low	Oil/water separator, high plant activity and surface area
Food or beverage manufacturing or handling	Flour mill or cereal foods	BOD, TSS, oil and grease, N	Low	Oil/water separator, high plant activity and surface area
Chemical and associated product manufacturing	Cosmetics, toiletry, soap and other detergents	Zn, N	Low	oil/water separator, oxidation, peat filter

BTEX is an acronym standing for benzene, Toluene, ethylbenzene, xylenes that are volatile organic compounds (VOCs) found in petroleum products
Carbon filters are effective at removing sediment and VOCs