CONTROLS FOR THE BUILT ENVIRONMENT

DOCUMENT 2 OF 3

IZONE

SOUTHERN BUSINESS HUB

EXECUTIVE SUMMARY

A covenant is registered against all titles in the Izone Industrial Park which requires any purchaser/ developer of land to obtain clearances for construction of buildings, site works and fencing. Approval is required from Izone's Development Manager as obtaining a building consent from the Selwyn District Council is not deemed to cover the covenant issues.

In addition, there are various Selwyn District Council rules that cover building issues. The discharge of stormwater is governed by several global resource consents issued by Environment Canterbury (ECan). In most cases these are superseded by the rules in ECan's regional plans. If you meet the rules, resource consent is not required. All these documents should be studied and their requirements incorporated into any building/site work design for any allotment within the Industrial Park.

A summary of the main points required for building proposals is as follows.

Building/Buildings

- Size
- Position on site
- Staging if any
- Elevations
- Materials
- Colour schemes
- Height/recession planes

Fencing

- Fencing proposals and positions
- All front fences must be set back 3m from the legal road boundary

Landscaping

- Planting proposals, especially in the 3m landscaping strip. This is the 3m set back from the legal road boundary
- Rain gardens may be permitted to be constructed within the 3m landscaping set back area but swales are to be excluded from this area

Carparking/Access

- Areas to be used for parking
- Areas to be used for access
- Finish surface for all yards/access

STORMWATER DISPOSAL

Section 12's Izone Stormwater Flow Chart outlines three options for environmental consenting and associated stormwater disposal; they are:

1) Certificate of Compliance:

A certificate of compliance is confirmation that your activity is permitted and does not need a resource consent. If you meet the regional plan rules, e.g. your activity is non-hazardous and the site has not had previous hazardous activities, you can apply for a certificate of compliance by showing ECan your stormwater disposal meets the rules.

2) Resource Consent:

An application for resource consent is required should the consented requirements not be met, e.g. if quantities of hazardous substances stored or handled exceeds 200L or the proposed activity is considered hazardous. An assessment of effects on the environment must accompany a proposed stormwater solution for your activity.

3) Global Stormwater Consents:

The ECan global stormwater resource consents require a certificate signed by a suitably qualified person to be prepared confirming that the installed system has been designed in accordance with the relevant global stormwater consent requirements. These consents generally require stormwater devices for pre-treatment, treatment, and discharge to ground.

The above information is necessary so that a sign off can be obtained. It may be that not all information is available at the early stage of the design, and if this is the case then it may be necessary to seek two approvals; one at a concept stage, and the second at a more developed design stage.

IZONE

SOUTHERN BUSINESS HUB

Izone controls

The following is a summary of the Selwyn 'District Plan' rules relevant to the Izone Industrial Park and should be used as a guide only. Please note that these rules are current as of 01 January 2014. As the rules of the District Plan are subject to occasional change we do not recommend reliance on this document but rather that a full analysis of the District Plan be undertaken, including due consideration of any proposed or operative plan changes that may be of relevance.

Unless identified otherwise all activities that meet all the relevant standards of the District Plan are a permitted activity in terms of that Plan.

The Izone Industrial Park is subject to a specific zoning within the District Plan, that being the Business '2A' Zone. This specific zoning provides for business activities requiring large footprint buildings and/or sites and is subject to controls which recognise the unique characteristics of the Izone Industrial Park. The Business 2A Zone is subject to a specific Outline Development Plan (identified in Appendix 22 of the Selwyn District Plan), a copy of which is attached at Appendix 1.

There are a series of activities that are specifically controlled and thus require resource consent if they are to be established. These are listed in points 1, 2 and 3 as follows:

1. NON-COMPLYING ACTIVITIES

The following activities are non-complying activities in the Business 2A Zone:

(a) Any activity which is specified in Rules 14 to 23 of the District Plan as being a non-complying activity.

(b) Any of the activities listed below, irrespective of whether they comply with the conditions for permitted activities or discretionary activities in Rules 14 to 23 of the District Plan.

- Mining or quarrying;
- Correction facility;
- Treatment or disposal of solid or liquid waste delivered or conveyed onto the site.

2. DISCRETIONARY ACTIVITIES

The following activities are discretionary activities in the Business 2A Zone:

(a) Any activity which is specified in Rules 14 to 23 of the District Plan as being a discretionary activity.

(b) Any of the activities listed below, irrespective of whether they comply with the conditions for permitted activities in Rules 14 to 23 of the District Plan.

- Any activity that requires an offensive trade licence issued under the Health Act 1956;
- Audible bird-scaring devices;
- Forestry;
- Mineral exploration;
- Composting or disposal on to land of any organic matter (this rule does not apply to the application of compost or organic fertilisers to fertilise gardens or land);
- Visitor accommodation;
- Hospitality activities;
- Tannery, fellmongering or hide curing, wool scouring or washing;
- Scrap yards – including automotive dismantling or wrecking yard or scrap metal yard.

3. CONTROLLED ACTIVITIES

The following activities are controlled activities in the Business 2A Zone:

(a) Any activity which is specified in Rules 14 to 23 of the District Plan as being a controlled activity.

(b) Any of the activities listed below, irrespective of whether they comply with the conditions for permitted activities in Rules 14 to 23 of the District Plan.

- Meat processing;
- Cement manufacture;
- Hot mix, asphalt paving manufacture;
- Glass or fibreglass manufacture;
- Foundry processes, electroplating works, melting of metal, steel manufacture and galvanising;
- Natural gas, oil or petroleum distillation or refining;
- Manufacture of hardboard, chipboard or particle board;
- Timber treatment;
- Thermal power generation;
- Any other industry using the combustion of coal, wood or any other bio-mass for space heating or as a source of energy.

Matters over which the Council has reserved control:

(a) The conditions that apply to all permitted activities in Rules 14 to 23 of the District Plan.

(b) Any potential nuisance effects arising from dust, odour, smoke and noise.

The main standards to be aware of are the following (note there are many other controls that are of a standard nature for an industrial zone). If any of the following standards are not complied with resource consent is required.

4. NOISE

Any activity conducted on any day, except any residential activity, shall not exceed any of the following noise limits within the time-frames stated:

Business 2A Zone

(a) Applying at any point within the boundary of any site in the Rural Zone, excluding road, waterway and railway reserves:

- 7.30am – 8.00pm 60dBA L10
- 8.00pm – 7.30am 40dBA L10
- 7.30am – 8.00pm 80dBA Lmax
- 8.00pm – 7.30am 65dBA Lmax

5. LIGHT SPILL

(a) Any lighting shall not exceed:

- 10 lux spill on to any part of any adjoining property within the same Business Zone.
- 3 lux spill (horizontal or vertical) on to any part of any adjoining property in the Rural Zone which has a common boundary with the Business 2A Zone.

(b) Any lighting in the Business 2A Zone shall be designed so that:

- all outdoor lighting shall be shielded from above in such a manner that the light source is not visible from the outside of the Business 2A Zone;
- all fixed outdoor lighting shall be directed away from adjacent roads outside of the Business 2A Zone.

6. LANDSCAPING

Any principal building in the Business 2A Zone shall be a permitted activity if the following standards are met:

(a) A landscaping strip of at least 3 metres width shall be planted along every road frontage, except along the frontage of Railway Road. The landscaping shall meet the following standards:

- The landscaping shall consist of only those species listed in Appendix 21 of the District Plan. Planting for each allotment shall include:
  - a minimum of two trees from Group A for every 10 metres of road frontage. For boulevard roads the species selected shall match any Group A species in the adjacent road;
  - at least 35% of the required area shall be planted in species from Group C;
  - at least 10% of the required area shall be planted in species from Group D;
  - Group B and C species shall be used when screening tall blank walls and vehicle courts.
- All plants shall be of the following maximum spacings:
  - Group B - 1.5 metre centres;
  - Group C - 1.5 metre centres;
  - Group D - 700mm centres.
- The landscaping planted shall be maintained and if dead, diseased or damaged, shall be removed and replaced.
- No fences or structures shall be erected within the 3 metre landscaping strip. Footpaths of up to 1.5m in width and generally at right angles to the road frontage may be provided in the landscape strip.
- All new planting areas shall be mulched.

7. VEHICLE ACCESS AND VEHICLE CROSSINGS

(a) Each site shall have legal access to a formed, legal road.

(b) Access shall not be provided for directly onto Railway Road from the Business 2A Zone.

(c) Each vehicle crossing shall be designed and sited to comply with the relevant requirements in Appendix 13 of the District Plan.

8. BUILDING – HEIGHT AND REFLECTIVITY

(a) Any building or structure shall have a height of not more than:

- Buildings 15 metres
- Structures 25 metres (note – no definition of structure provided in the District Plan)

(b) Any building which is greater than 15m in height but does not exceed 20m in height will require resource consent as a restricted discretionary activity, provided that the exterior building materials on all parts of the building above 15m in height do not exceed a reflectivity value of 40%.

Note: Any resource consent application for a building that complies with the conditions prescribed in (b) above and is setback at least 150m from Railway Road or Hoskyns Road shall not be notified and shall not require the written approval of affected parties.

9. BUILDING RECESSION PLANES AND SETBACKS

Any building shall comply with the relevant recession plane requirements set out in Appendix 11 of the District Plan:

(a) Recession Plane A – applies along the common boundary of the Business 2A Zone and the Rural Zone.

(b) Recession Plane B – applies along any internal boundary not adjoining any Living Zone or Rural Zone.

(c) Recession Plane B – applies to the road boundary of Railway Road where it directly adjoins the Business 2A Zone.

Note: Recession Plane B shall not apply to the internal boundaries of the Business 2A Zone.

Any building shall comply with the minimum setback distances from site boundaries as set out below:

Business 2A Zone

- Road boundaries: 10 metres
- Internal boundaries adjoining a rural zoned property: 10 metres, except that this requirement shall be 15 metres in the locations identified on the Outline Development Plan at Appendix 22 of the District Plan (also reproduced as Appendix 1 to this document).

10. DEVELOPMENT WITHIN THE BUSINESS 2A ZONE AT ROLLESTON

(a) Any outdoor storage of materials within 5m of the centreline of the existing primary shelterbelt along Railway Road shall be a controlled activity.

(b) The creation of impermeable surfaces within 5m of the centreline of the existing primary shelterbelt along Railway Road shall be a restricted discretionary activity.

11. RETAILING WITHIN THE BUSINESS 2A ZONE AT ROLLESTON

Any retail activity undertaken from an allotment in the Business 2A Zone shall only occupy up to 20% of the Gross Floor Area of building on that allotment or 2,000m², whichever is the lesser.

12. STORMWATER CONSENT REQUIREMENTS

1.0 Introduction

As outlined in the flow chart below, three options exist for developers within the Izone Industrial Park to manage stormwater: Certificate of Compliance (in compliance with ECan's regional plan rules), Resource Consent, or the existing Global Stormwater Consents covering the Izone industrial area. Figure 1 below outlines the process flow:

IZONE STORMWATER
GETTING APPROVAL TO DISCHARGE

Section 15 of the RMA states that you can not discharge water containing contaminants (all stormwater from roads and sealed yards) unless allowed by a rule in the regional plan or by a resource consent. There are two plans - the NRRP and the pLWRP. The table below is a check to see whether you meet the rules or whether a consent is required. See the Glossary before you start.

Do I comply with ECan's regional rules for stormwater discharge to land? (Tick yes or no)

ECan's proposed Land and Water Regional Plan (pLWRP) and operative Natural Resources Regional Plan (NRRP) Rules (paraphrased)				
Does my site comply with the following?	YES	NO	Comment	Reason
1) No historic contamination (No LLUR status/ historic HAIL activities)			Check whether your land is listed on ECan's LLUR database	If stormwater intercepts contaminated land, those contaminants could become mobile and pollute groundwater.
2) The proposed activity is not hazardous and will not entrain contaminants in stormwater discharge			See NRRP Schedules WQL3 and WQL9 for hazardous activities or hazardous substances that may be of concern; see NRRP Schedule WQL11 / Rule WQL38A for limits on the storage of hazardous substances. These schedules are attached in Appendix 5.	If stormwater intercepts hazardous substances, those contaminants could become mobile and pollute groundwater.
3) No erosion due to discharge; disturbed land area less than 2ha			The area of land earthworked at any time.	The greater the earthworked area, the higher the chance of silt running onto neighbouring properties and the road.
4) Roofs discharge to sealed system			A sealed system means direct piping from the roof gutters to the soakhole.	Roofs are generally 'clean' as they are free of vehicle traffic, so the runoff does not need treatment
5) Discharge not within a Community Drinking Water Supply Protection Zone			The case for most of Izone; refer to Appendix 3 map for exceptions - tick no if you are in this protection zone.	To avoid drawdown of stormwater contaminants into the town supply well.
6) Discharge via vegetated treatment system is required if the depth to groundwater is less than six metres.	✓		The depth to groundwater is greater than 6 metres across all of Izone - see Appendix 6 map. Therefore, discharge directly to soakage pit in ground is permitted providing all above rules are met.	Generally, discharge through vegetation and 200mm of designed sand/soil mix achieves the same level of treatment as discharge through 6m of any soil in Canterbury.
7) The highest groundwater level will be separated from the base of the discharge system by a minimum of 1m during the construction phase			The case for all of Izone if your discharge system is no deeper than 5m below ground (due to depth to groundwater greater than 6 metres - see Appendix 6 map).	Stormwater at Izone will soak away to the ground. Treatment occurs in the soil and gravel layers, so the greater the separation to groundwater the better the treatment.
8) Stormwater from 24-hour 2% AEP rainfall event does not enter any other property (handled entirely on-site)			24-hour 2% AEP rainfall event: storm event lasting 24-hours with a 2% probability of occurring in a year (or likely to occur once in 50 years).	Your stormwater should not cause flooding or nuisance on a neighbouring property.
9) No ponding on site for more than 48 hours				Your stormwater should not cause flooding or nuisance on your own property.

PASSES ALL RULES

PASSES ALL BUT NUMBER (2): ACTIVITY ON-SITE IS LISTED IN SCHEDULE WQL3 (HAZARDOUS) OF NRRP

FAILS AT LEAST ONE RULE

CERTIFICATE OF COMPLIANCE
Meeting all the permitted activity rules still requires you to demonstrate to ECan that your activity complies. SDC require you demonstrate ECan compliance in order to obtain engineering approval or building consent. Write to ECan and show that you meet the rules. See application form CON-120 in Appendix 7.

Will it be covered or under roof so that hazardous substances cannot become entrained in stormwater?

NO

YES

Is the site in Area A (see Appendix 3)?

NO

YES

I want to comply with and use the existing global resource consent rather than apply for resource consent

I'd prefer to apply for a resource consent so that I can have more flexible conditions than the global consent

GLOBAL STORMWATER CONSENT
There are several global consents for Izone which you may use. You must show ECan your stormwater system complies with all consent conditions in order to use it. Several specific requirements of consent include primary treatment via an oil & sediment trap if heavy traffic involved as well as vegetative treatment such as infiltration/ soakage swale or basin or raingarden in addition to discharge via soakage pit. See Appendix 4 for global consents.

RESOURCE CONSENT
You will need to apply for resource consent with ECan. See application form CON-060 in Appendix 8.

Glossary:
RMA: Resource Management Act (New Zealand)
ECan: Environment Canterbury
LLUR: Listed Land Use Register, directory of potentially contaminated sites set out by ECan
MfE: Ministry for the Environment (New Zealand)
HAIL: Hazardous Activities and Industries List, details activities the MfE considers to be hazardous in terms of human or environmental health
NRRP: ECan's Natural Resources Regional Plan 2011
pLWRP: ECan's proposed Land and Water Regional Plan 2012
SDC: Selwyn District Council
WQL3: NRRP schedule #3 detailing the hazardous activities and industries from HAIL (2008)
WQL9: NRRP schedule #9 detailing the hazardous activities and industries from HAIL (2011)
WQL38A: NRRP rule #38A detailing the storage of hazardous substances
CON-060: Consent application form #060 - resource consent for discharge of stormwater to land
CON-120: Consent application form #120 - application for certificate of compliance

Note: ECan can answer your site-specific enquiries on what authorization route to take.

Figure 1: Izone Stormwater Options

2.0 Certificate of Compliance

ECan has regional plan rules for permitted activities; if you comply with these rules you qualify for a Certificate of Compliance as a permitted activity under the operative Natural Resources Regional Plan (NRRP) and the proposed Land and Water Regional Plan (pLWRP). The stormwater discharge must not be from or onto potentially contaminated land (either from historic use or due to proposed activity), and no contamination shall become entrained in the stormwater discharge. All hazardous substances must be stored in small quantities (below 200L) under cover and fully contained and hazardous activities should not be occurring or have previously occurred on the site. A list of hazardous activities can be found in Schedule WQL9 of the NRRP and a more detailed explanation of the limits to hazardous substances stored can be found in Schedule WQL11 and Rule WQL38A of the NRRP (Appendix 5).

Further requirements to qualify for a Certificate of Compliance include discharging outside a Community Drinking Water Supply Protection Zone (shown in Appendix 3), minimum treatment rainfall events and other treatment design requirements. The application process for a Certificate of Compliance requires that you show ECan that your stormwater disposal solution is fully compliant with the NRRP and pLWRP rules.

2.0.1 Stormwater Disposal System

The depth to groundwater is greater than 6m within the Izone area. Therefore, under the ECan rules, discharge directly to a soakage pit in the ground is permitted providing full compliance with the rest of rules.

Stage	Requirement	Land Use	System
1	Discharge to Ground	All surfaces, after discharge through trapped outlet sumps, if no LLUR[2] and hazardous substances less than 200L are fully contained and under cover and proposed activity is non-hazardous (note: roofs straight to ground).	Soakage Pit or soakage chamber

If the above constraints are not met, the discharge would either have to:

(a) meet the requirements of the global consent conditions in Appendix 4, or

(b) apply for resource consent as a discretionary or non-complying activity, complete with assessment of environmental effects.

[1] ECan GIS Canterbury Maps Online queried 18 November 2013.

[2] LLUR: Listed Land Use Register database containing records of HAIL activities historically existent on site. HAIL: Hazardous Activities and Industries List, set out by the Ministry for the Environment (MfE), which details activities the MfE considers to be hazardous in terms of human or environmental health.

2.0.2 Management of Hazardous Materials

To qualify for certificate of compliance, all substances used in the industry or activity on-site must be non-hazardous and fully contained and covered to avoid any possibility of becoming entrained in the stormwater discharge. If the activity is hazardous, the HAIL status lists the activity on the LLUR and the activity becomes non-compliant, thus requiring resource consent. The definition of hazardous substances is included in the NRRP, and is as follows:

Hazardous substance means a substance which, when present in concentrations in water, sediment or air:

(a) has one 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
- (vii) 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 one or more of the properties specified in clauses (i) to (vi) of this definition; and

(b) exceeds the minimum degree of hazard specified in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

(Source: p 4-334 Definitions of Terms: Chapter 4 Natural Resources Regional Plan, June 2011, Environment Canterbury)

3.0 Resource Consent

An application for resource consent is required should the permitted activity rules and/ or the globally consented requirements not be met. For example, if the quantities of hazardous substances stored or handled exceeds 200L or proposed activity is considered hazardous.

It can also be applied for as a tailored solution to each site, depending upon the proposed site activities and nature of stormwater discharge. Hazardous substances would need containment and mitigation measures such as spill and storage management plans to ensure stormwater does not become entrained with contaminants.

An assessment of effects on the environment (AEE) must be submitted to ECan along with a proposed stormwater solution for your activity. The AEE identifies the actual or potential adverse effects of the stormwater discharge on the environment and proposes mitigation measures to reduce the effects. Consulting professionals may be able to assist.

3.0.1 Stormwater Disposal System

Stage	Requirement	Land Use	System
1	Pre-treatment	For the parts of the site where runoff contains contaminants not found in 'stormwater' i.e. spilled or deliberately released hazardous substances and wash down of such spillage or releases	Oil/sediment trap(s) or other engineered solution
2	Discharge to ground	All surfaces, after discharge through pre-treatment device (note: roofs straight to ground).	Soakage Pit or soakage chamber

4.0 Global Stormwater Consents

A set of global stormwater consents have been granted by ECan for the Izone Industrial Park. Three different consents cover the discharge from private lots in different areas of the park, and a plan showing which consent covers which area is shown in Appendix 3. Other consents cover the discharge from the public road network.

These consents are similar but have slightly different conditions and as such, there is no requirement for any lot owner to obtain resource consent to discharge stormwater provided that they can meet the conditions of the relevant consent. The approach set out within the relevant consent is to provide flexibility in the type of system that needs to be provided while still achieving the water quality and flood protection standards established within the consent conditions. The consents are included in Appendix 4.

This information provides an overview of those conditions, however it is up to each lot owner(s) to familiarise and take any advice necessary to ensure that they understand and conform to the requirements of the relevant consent.

4.0.1 The Consented Stormwater System (Global Consents)

4.0.1.1 Discharge Location

In all cases the discharge of stormwater is to the ground (i.e. soakage systems).

4.0.1.2 System Type

The conditions of the consents are written to provide a range of options for the developer/ engineering consultant to consider which best meets the needs of the site.

The extent of treatment required differs between type and land use within the site, and will require up to three stages of management as set out in the table below.

[3] Stormwater is defined by ECan as: rain-sourced or routine wash down sourced runoff, which may contain contaminants typical of urban or site construction stormwater such as suspended sediments, organic matter, nutrients, heavy metals, hydrocarbons micro-organisms and traces of hazardous substances that are entrained as the runoff or wash down water that flows over land or hard surfaces. It excludes discharges to water or onto and into land of runoff from spilled or deliberately released hazardous substances and wash down of such spillage or releases.

Stage	Requirement	Land Use	System options
1	Pre-treatment	For the parts of the site where there will be heavy vehicles and handling of materials (where runoff contains contaminants not found in 'stormwater' i.e. spilled or deliberately released hazardous substances and wash down of such spillage or releases)	Oil/sediment trap(s)
2	Stormwater Treatment	All hardstand areas (not roofs)	Either Soakage swale/infiltration basin, Raingarden, or Swale (or combination)
3	Discharge to ground	All surfaces, after any pre-treatment and treatment required (note: roofs straight to ground).	Soakage pit or soakage chamber

4.0.1.3 Design Standard

The consents set out the design standards that are to be used in the design, sizing and detailing of each of these elements as well as establishing the maximum catchment size and other key elements. Reference is made to specific design manuals for each element.

4.0.1.4 Background Information

The consent applications can be sourced from the ECan website. These include sample calculations, sample design drawings and associated information.

4.0.2 Explanation of Terminology

Term	Explanation
Swale	Shallow grass channel
Soakage Swale/Infiltration Basin	Grassed dry pond lined with engineered medium and designed in accordance with Christchurch City Council's waterways, wetlands and drainage guide (February 2003)
Oil/Sediment Trap	The consent application generally refers to a Humesceptor, which is marketed by Humes Industries, although equivalent products may be used.
Raingardens	Landscape area designed in accordance with Auckland Regional Council's TP10 "Stormwater Treatment Devices' July 2003

4.0.3 Management of Hazardous Materials

The consents state that the storage and use of hazardous substances shall not occur anywhere outside a building (see section 2.0.2 for NRRP definition of hazardous substances).

The consent documentation also sets out the required actions in case of a spill of a hazardous substance.

4.0.4 Maintenance

The consents set out the maintenance requirements and require inspections to be made every six months and records to be kept of those inspections and maintenance activities.

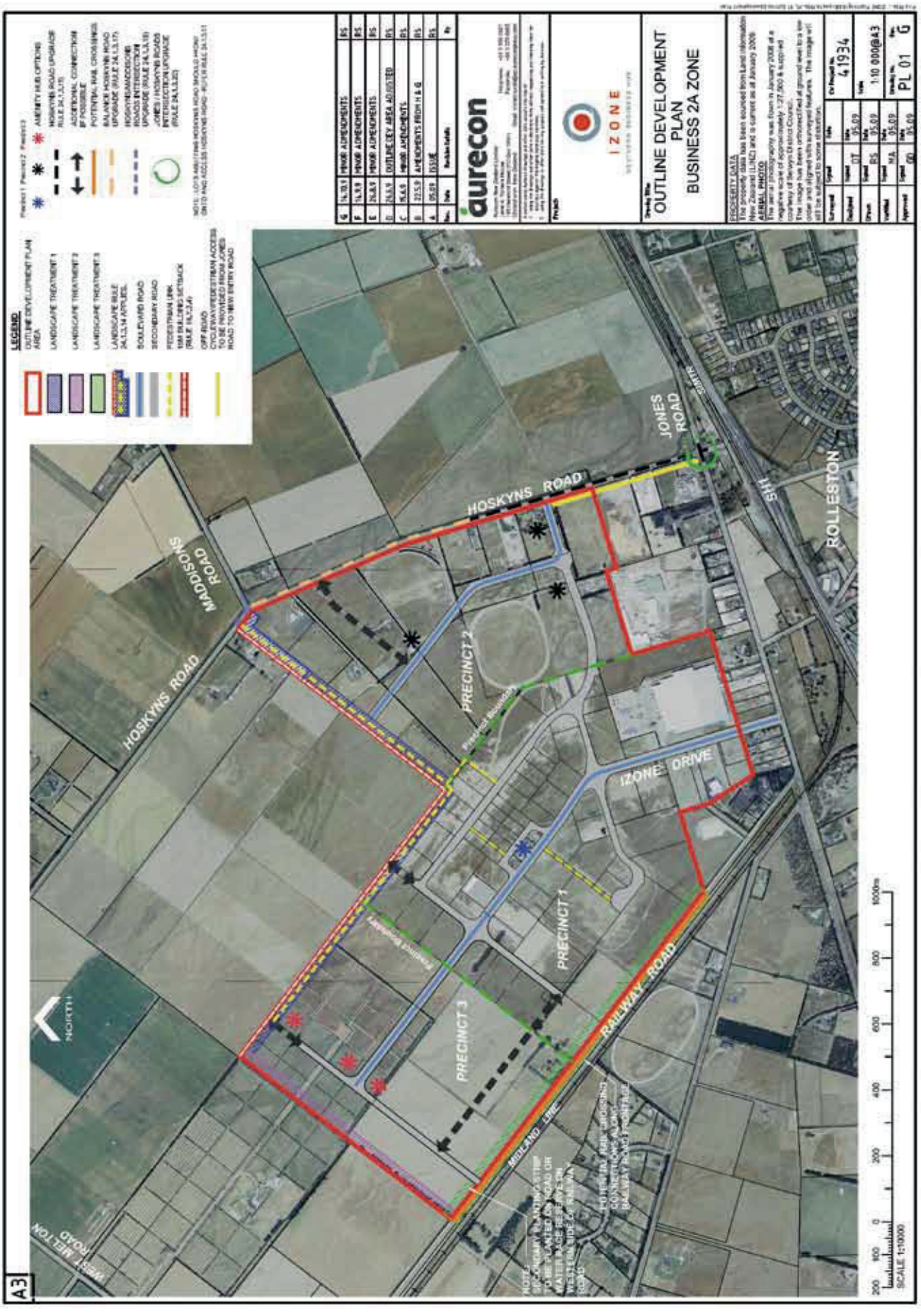
4.0.5 On-Going Monitoring

The consents require that the soil from any soakage swale, swale or raingarden are tested every five years, and rehabilitated if the level of any of the contaminants exceeds stated thresholds.

4.0.6 Certification

The consents require that a certificate be signed by a suitably qualified person confirming that the installed system has been designed in accordance with the relevant consent and submitted to ECan. This shall also be submitted to Izone.

APPENDIX 1:
OUTLINE DEVELOPMENT PLAN, BUSINESS 2A ZONE



APPENDIX 2:
PLANTING REQUIREMENTS FOR IZONE

Group A: Higher canopy trees with an ultimate height of 6.0 to 10.0 metres.

Scientific Name	**Common Name**
Cordyline australis	Cabbage Tree/Ti kouka
Hoheria angustifolia	Narrow Leaved Lacebark/Houhere
Hoheria sextylosa	Long Leaved Lacebark/Houhere
Liriodendron tulipferra*	Tulip Tree*
Plagianthus regius	Ribbonwood/Manatu
Platanus orientalis*	Oriental Plane*
Podocarpus totara	Totara
Quercus robur*	English Oak*
Tilia x europaea*	Common Lime*

*Note: These species only to be used in public areas

Group B: Medium canopy trees with an ultimate height of 4.0 to 6.0 metres.

Scientific Name	**Common Name**
Dodonaea viscosa	Akeake
Kunzea ericoides	Kanuka
Pittosporum eugenioides	Lemonwood/Tarata
Pittosporum tenuifolium	Kohuhu
Pseudopanax arboreus	Fivefingers/Puakao
Pseudopanax crassifolium	Lancewood/Horoeka
Pseudopanax ferox	Fierce Lancewood
Sophora microphylla	Kowhai

Group C: Shrub canopy of 1.0m to 4.0m in height

Scientific Name	Common Name
Carmichaelia australis	New Zealand Broom
Cassinia leptophylla	Tauhinu
Coprosma crassifolia	Mikimiki
Coprosma lucida	Shining Karamu
Coprosma propinqua	Mingimingi
Coprosma robusta	Karamu
Coprosma rugosa	Mikimiki
Coprosma virescens	Mikimiki
Corokia cotoneaster^	Korokio^
Cortaderia richardii	Toetoe
Griselinia littoralis^	Broadleaf^
Hebe salicifolia	Koromiko
Hebe stricta	Koromiko
Hebe strictissima	Koromiko
Leptospermum scoparium	Tea Tree/Manuka
Lophomyrtus obcordata	Rohutu
Muehlenbeckia astonii	Pohuehue
Olearia odorata	Scented Shrub Daisy
Olearia paniculata^	Golden Akeake^
Phormium tenax	Flax/Harakeke

^ Note: plant species suitable for hedging

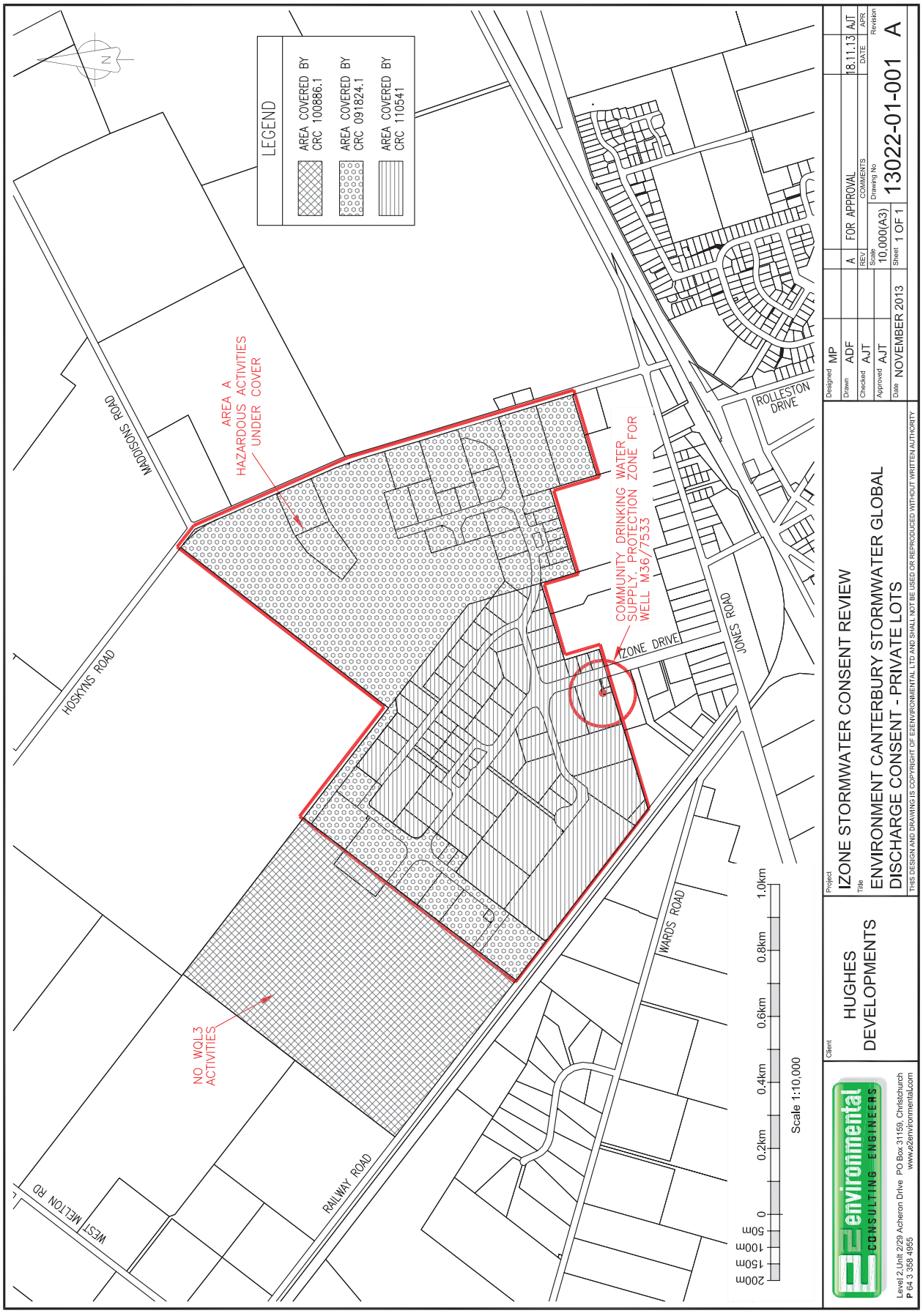
Group D: Ground covers

Scientific Name	Common Name
Anemanthele lessoniana	Orizopsis/Windgrass
Astelia fragrans	Bush Flax (green form)/Kakaha
Carex flagellifera	Tussock/Sedge
Carex secta	Tussock/Sedge
Chionochloa conspicua	Tussock/Hunangamoho
Coprosma acerosa	Sand Coprosma
Dianella nigra	Turututu
Dietes grandiflora*	Wild Iris*
Juncus gregiflorus	Rush
Libertia ixioides	New Zealand Iris/Mikoikoi
Melicytus alpinus	Porcupine Shrub
Phormium cookianum	Whaariki
Poa cita	Silver Tussock
Trachelospermum jasminoides*	Star Jasmine*

*Note: These species only to be used in public areas

APPENDIX 3:
PLAN - ECAN STORMWATER GLOBAL DISCHARGE CONSENT - PRIVATE LOTS

with Area A and Community Drinking Water Supply Protection Zone



Client: HUGHES DEVELOPMENTS

Project: IZONE STORMWATER CONSENT REVIEW

Title: ENVIRONMENT CANTERBURY STORMWATER GLOBAL DISCHARGE CONSENT - PRIVATE LOTS

Designed	MP		
Drawn	ADF	A	FOR APPROVAL
Checked	AJT	REV	COMMENTS
Approved	AJT	Scale	10,000(A3)
Date	NOVEMBER 2013	Sheet	1 OF 1

18.11.13 AJT
DATE APR
Revision

Drawing No 13022-01-001 A

e2environmental CONSULTING ENGINEERS
Level 2 Unit 2/29 Acheron Drive PO Box 31159, Christchurch
P 64 3 388 4955 www.e2environmental.com

APPENDIX 4:
ENVIRONMENT CANTERBURY STORMWATER GLOBAL DISCHARGE CONSENTS - PRIVATE LOTS

Puruant to section 104 of the Resource Management Act 1991
(The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO: Selwyn District Council

A DISCHARGE PERMIT: To discharge contaminants into land

DATE DECISION: 17 February 2010

EXPIRY DATE: 19 November 2044

LOCATION: Railway Road, Rolleston

SUBJECT TO THE FOLLOWING CONDITIONS:

LIMITS

1) The discharge shall be only stormwater generated from:
   (a) Roofs and hardstand areas on individual lots; and
   (b) Exposed areas during construction of individual lots;
   Within the industrial park located at Railway Road, Rolleston, at map reference NZMS M36: 5850-3650, labelled as "Applicant's site" and shown as the shaded area on Plan CRC100819.1G, which forms part of this consent.

2) The discharge of roof stormwater shall not arise from galvanised building materials.

3) The discharge shall not arise form a site where any of the activities or industries listed in Schedule WQL3 or WQL3A of Chapter 4 of the Proposed Natural Resources Regional Plan which form part of this consent, are conducted or operated.

CONSTRUCTION PHASE

4) At least 10 working days prior to the commencement of construction, the consent holder shall inform the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, in writing, of the start date of works.

5) The consent holder shall ensure that all personnel working on the sire are made aware of, and have access to, the contents of this consent document.

6) During construction, the consent holder shall use best practicable option to minimise exposed surfaces and discharges of sediment-laden stormwater.

7) (a) The consent holder shall take all practicable measures to avoid spills of fuel or any other hazardous substances within the site during construction.
(b) In the event of a spill of fuel or any other contaminant on hardstand areas, the consent holder shall clean up the spill as soon as practicable and take measures to prevent a reoccurrence.
(c) The consent holder shall inform the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within 24 hours of a spill event, and shall provide the following information:
(i) The date, time, location and estimated volume of the spill;
(ii) The cause of the spill;
(iii) The type of hazardous substance(s) spilled;
(iv) Emergency procedure undertaken;
(v) Details of the steps taken to control and remediate the effects of the spill on the receiving environment;
(vi) An assessment of any potential effects of the spill; and
(vii) Measures to be undertaken to prevent a reoccurrence.

STORMWATER SYSTEM

8) Stormwater from roofs shall be discharged within the same lot via soakage pits or rapid soakage chambers or any of the options specified in Condition (9).

9) Stormwater from hardstand areas within private lots shall be discharged within the site via any of the following primary stormwater systems, except stormwater from loading and unloading areas which shall be only discharged via Option R:
(a) Option N – Soakage swale
(b) Option O – Hydrodynamic separator
(c) Option P – Raingarden
(d) Option Q – Swale
(e) Option R – Oil and sediment trap

10) When the capacity of any primary stormwater system is exceeded, stormwater shall be discharged via the following corresponding secondary system:
(a) Option N – Soakage pit or rapid soakage chamber
(b) Option O – Soakage swale, soakage basin or raingarden, and then a soakage pit or rapid soakage chamber
(c) Option P – Soakage pit or rapid soakage chamber
(d) Option Q – Soakage pit, rapid soakage chamber, infiltration trench or soakage basin
(e) Option R – Soakage swale or raingarden and then a soakage pit, rapid soakage chamber, infiltration trench or soakage basin.

11) Each soakage swale and soakage basin shall be designed and constructed:
(a) To contain and treat all stormwater generated form the first 25 millimetres of rain from any rain event;
(b) With a infiltration rate through the base of between 20 and 50 millimetres per hour, as measured using the flooded basin test; and
(c) In accordance with the Christchurch City Council Waterways, Wetlands, and Drainage Manual, February 2003.

12) Each swale swale shall be designed and constructed:
(a) To have a hydraulic residence time of at least nine minutes at a rainfall intensity of at least 10 millimetres per hour;
(b) So that all stormwater is treated by a minimum length of 30 metres; and
(c) In accordance with the Auckland Regional Council, technical Publications Number 10, May 2003.

13) Each raingarden shall be designed and constructed;
(a) To contain and treat all stormwater generated from the first 25 millimetres of rain form any rain event; and
(b) In accordance with the Auckland Regional Council, technical publications Number 10, May 2003.

14) Each hydrodynamic separator shall be designed and constructed:
    (a) To treat 18 litres per second before bypassing; and
    (b) Remove at least 75 percent of total suspended solids.

15) Each oil and sediment trap shall be designed and constructed:
    (a) To have a discharge quality of 15 milligrams per litre of hydrocarbons or less;
    (b) With a shut off valve at the outlet;
    (c) With a hydrocarbon storage capacity of at least 2500 litres; and
    (d) In accordance with the Auckland Regional Council, technical publications Number 10, May 2003.

16) The primary and secondary stormwater systems, as described in Conditions (9) and (10) , shall have sufficient combined capacity to contain and dispose of all stormwater generated from a two percent Annual Exceedence Probability (2%AEP) rain event of any duration.

17) The stormwater systems shall be designed in accordance with Plans CRC100819A,B,C,D,E and F, which form part of this consent.

18) At least one month prior to the construction of the stormwater system(s) the consent holder shall submit to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, design plans of the stormwater system(s) to be installed.

19) Within ten working days of the installation of the stormwater system(s), a certificate signed by a Certified Professional Engineer (CPEng) with Stormwater system construction experience shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, to certify that the stormwater system(s) complies with Conditions (8) and (18) of this consent. This CPEng shall also sign a statement confirming that they are competent to certify the engineering work.

INSPECTIONS AND MAINTENANCE

20) (a) The stormwater systems shall be inspected at least once every six months.
    (b) Any visible hydrocarbons and debris or litter shall be removed within five working days of the inspection.
    (c) Any accumulated sediment in the swales, soakage swales, soakage basin and raingardens shall be removed within five working days of the inspection
    (d) Any accumulated sediment in sumps shall be removed when the sediment occupies more than one quarter of the depth below the invert of the outlet pipe.
    (e) Any scour or erosion in the stormwater system shall be repaired within ten working days of the inspection.

21) The swales, soakage swales, soakage basins and raingardens shall be;
    (a) Maintained so that vegetation and grass is in a healthy and uniform state and does not contain weed vegetation;
    (b) Replanted where erosion or die-off has resulted in bare or patchy soil cover; and
    (c) Mowed to ensure grass is at a length between 50 and 150 millimetres.

22) The hydrodynamic separators and oil sediment traps shall be;
    (a) Cleaned at least annually or when filled to a depth of at least 200 millimetres with sediment, whichever is the most frequent;
    (b) Cleaned out immediately following any spills; and
    (c) Maintained in accordance with the manufacturers' instructions.

MONITORING

23) Representative soil samples shall be taken form each soakage basin, soakage swale, swale and raingarden:
   (a) At leat once every five years;
   (b) From a depth of between zero and 50 millimetres below the ground surface at the point of lowest elevation;
   (c) By a person who has at least has a tertiary science or engineering qualification that required the equivalent of at least one year of full time study and has at least two years environmental investigation professional work experience post-qualification; and
   (d) In general accordance with Ministry for the Environment (2004) 'Contaminated Land Management guidelines – Site Investigation and Analysis of Soils'.

24) Soil samples shall be analysed:
   (a) For the following contaminants:
   Copper
   Zinc
   Benzo(a)pyrene
   TPH C_7-C_9
   TPH C_{10}-C_{14}
   TPH C_{15}-C_{36}

(b) In milligrams per litre (mg/L) using the United States Environmental Protection Agency method 1312, Synthetic Precipitation Leading Procedure (SPLP), using reagent water, by a laboratory accredited by Telarc for the appropriate methods, and compared afainst the Leachate Trigger Concentrations, as listed in Conditions (26).

25) The analysis undertaken in accordance with Conditions (24) shall be carried out with detection limits of a maximum of 10 percent of the rigger levels set out in Condition (26), with the exception of Total Petroleum Hdrocarbons detection limits, which shall be as follows:

METHOD DETECTION LIMIT

Total Petroleum Hydrocarbons	SPLP (mg/l)
C_7-C_9	0.10
C_{10}-C_{14}	0.20
C_{15}-C_{36}	0.40

26) The results of analyses undertaken in accordance with Conditions (24) and (25) shall be compared against the following trigger concentrations:

Leachate Trigger Concentration	(Milligrams per litre)
Copper	40 (1)
Zinc	30 (2)
Benzo(a)pyrene	00.14 (1)
TPH C_7-C_9	360 (3)
TPH C_{10}-C_{14}	7 (3)
TPH C_{15}-C_{36}	14 (3)

1 – 20xMAV Drinking Water Standards 2008 – health significance
2 – 20xMAV Drinking Water Standards 2008 – aesthetic
3- Refer to CRC00961 decision Amalgamated Holdings Ltd

27) If any of the trigger concentrations listed in Condition (26) are exceeded, the soils shall be considered and:
   (a) Additional sampling to determine the lateral and vertical extent of contamination, with respect only to the contaminant(s) that exceeded a trigger concentration, shall be carried out in accordance with Conditions (23) to (26);
   (b) All contaminated soils identified in accordance with Condition (27)(a) shall be removed; and
   (c) The soakage basin(s), soakage swale(s), swale(s) and raingarden(s) shall be reconstructed in accordance with Conditions (11) to (13), (16) and (17).

DISPOSAL OF MATERIAL

28) Any material removed in accordance with Conditions (20), (22) and (27) shall be disposed of at a facility authorised to receive such material.

RECORDING AND REPORTING

29) Records of the inspection and maintenance of the stormwater system shall be kept. The records shall include but not be limited to information that demonstrates compliance with Conditions (20) to (28) of this consent. Copies of these records shall be provided to the Canterbury Regional Council on request.

30) The results of the analyses undertaken in accordance with conditions (23) to (27) shall be provided to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within ten working days of receipt of the results by the consent holder.

ADMINISTRATION

31) The lapsing date for the purpose of section 125 of the Resource Management Act 1991 shall be 31 December 2014.

32) The Canterbury Regional Council may, once per year, on any of the last five working days of January or July, serve notice of its intention to review the conditions of this consent for the purposes of:
    (a) Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or
    (b) Requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment; or
    (c) Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent; or
    (d) Complying with the requirements of a relevant rule in an operative regional plan; or
    (e) Reviewing the trigger levels specified for contaminants.

Pursuant to section 104 of the Resource Management Act 1991

(The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO: Selwyn District Council

A DISCHARGE PERMIT: To discharge contaminants into land

DATE DECISION: 07 April 2009

EXPIRY DATE: 28 June 2041

LOCATION: Hoskyns Road, ROLLESTON

SUBJECT TO THE FOLLOWING CONDITIONS:

LIMITS

1) The discharge shall be only stormwater generated from:
   (a) Private lots; and
   (b) Construction
   Within the proposed 70.75 hectare industrial park located at Izone Industrial Park, Rolleston, at map reference NZMS M36: 5985-3619, labelled as "Applicant's site" and shown as the shaded area on Plan CRC091220.1A, which forms part of this consent.

STORMWATER SYSTEM - CONSTRUCTION

2) At least 10 working days prior to the commencement of construction, the consent holder shall inform the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, in writing, of the start date of works.

3) The consent holder shall ensure that all personnel working on the sire are made aware of, and have access to, the contents of this consent document.

4) During construction, the consent holder shall use best practicable option to minimise exposed surfaces and discharges of sediment-laden stormwater.

5) During construction, stormwater shall be discharged into sediment retention ponds that are sized and constructed in accordance with the Environment Canterbury 2007 "Erosion and Sediment Control Guidelines for the Canterbury Region" Report No CRC06/23.

6) Stormwater in excess of the capacity of the sediment retention ponds shall be conveyed onto grassed areas within the site.

7) No earthworks shall occur until the sediment retention ponds have been constructed. For the purposes of this consent, earthworks means the disturbance of land surfaces by blading, contouring, ripping, moving, removing, placing or replacing soil and earth, or by excavation, or buy cutting or filling operations.

8) The sediment retention ponds and any erosion and sediment control devices shall be inspected and cleaned weekly during construction, and immediately following construction.

9) The consent holder shall ensure that stormwater from no more than 10 hectares of disturbed land is conveyed to any one sediment retention pond.

STORMWATER SYSTEM – PRIVATE LOTS

10) Stormwater from roofs within private lots shall be discharged within the site via soakage pits or rapid soakage chambers or any of the options specified in Condition (11).

11) Stormwater from hardstand areas within private lots shall be discharged within the site via any of the following primary stormwater systems, except stormwater from loading and unloading areas which must be discharged via Option R:
    - Option N – Soakage swale
    - Option P – Raingarden
    - Option Q – Swale
    - Option R – Oil and sediment trap

    When the capacity of any primary stormwater system is exceeded, stormwater shall be discharged via the following corresponding secondary system:
    - Option N – Soakage pit or soakage chamber
    - Option P – Soakage pit or soakage chamber
    - Option Q – Soakage pit, soakage chamber, infiltration trench or soakage basin
    - Option R – The primary and then secondary stormwater systems specified for Options N,P or Q

12) The soakage swales and raingardens shall contain and treat the first 25 millimetres of rain from any rain event;

13) The swales shall:
    (a) Have a hydraulic residence time of at least nine minutes at a rainfall intensity of at least 10 millimetres per hour; and
    (b) A minimum length of 30 metres.

14) The primary and secondary stormwater systems shall have sufficient combined capacity to contain and dispose of stormwater from any two percent annual exceedance probability storm.

15) The stormwater systems shall be designed in accordance with the listed design manual, have the relevant key elements, and be constructed in accordance with the reference drawings, as detailed in Table CRC091824T, which forms part of this consent.

16) At least one month prior to the construction of the stormwater system(s) the consent holder shall submit to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, design plans of the stormwater system(s) to be installed.

17) A certificate signed by the person responsible for designing the stormwater system or a suitably qualified person shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, to certify that the stormwater system(s) is constructed and installed in accordance with Conditions (10) to (16) of this consent and design plans.

INSPECTIONS AND MAINTENANCE

18) (a) The stormwater systems shall be inspected at least once every six months.
(b) Any visible hydrocarbons and debris or litter shall be removed within five working days of the inspection.
(c) Any accumulated sediment in the swales, soakage swales, soakage basin and rain gardens shall be removed within five working days of the inspection
(d) Any accumulated sediment in sumps shall be removed when the sediment occupies more than one quarter of the depth below the invert of the outlet pipe.
(e) Any scour or erosion in the stormwater system shall be repaired within ten working days of the inspection.

19) The swales, soakage swales and rain gardens shall be;
(a) Maintained so that vegetation and grass is in a healthy and uniform state
(b) Replanted where erosion or die-off has resulted in bare or patchy soil cover; and
(c) Mowed to ensure grass is at a length of 50 millimetres.

20) The oil/sediment traps shall be cleaned at least annually or when filled to a depth of at lest 200 millimetres with sediment.

21) The consent holder shall keep records of the inspection and maintenance of the stormwater system. The records shall include but not be limited to information that demonstrates compliance with Conditions (19) to (21) of this consent. Copies of these records shall be provided to the Canterbury Regional Council on request.

MONITORING

22) A sample of the sand or soil shall be collected form each soakage swale, swale, and rain garden:
(a) At leat once every five years;
(b) From a depth of between zero and 50 millimetres below the ground surface at the point of lowest elevation; and
(c) By a suitably qualified or experienced person.

23) Sand and soil samples shall be analysed:
(a) For the following contaminants:
Total Chromium
Total Nickel
Total Cadmium
Total Copper
Total Zinc
Benzo(a)pyrene
Total petroleum hydrocarbons (C_7-C_9)
Total petroleum hydrocarbons (C_{10}-C_{14})
Total petroleum hydrocarbons (C_{15}-C_{36})
(b) In milligrams per kilogram dry weight soil;
(c) By a laboratory accredited for that method of analysis by International Accreditation New Zealand or equivalent authority.

24) Should any contaminants analysed in accordance with Condition (24) exceed the trigger levels, in milligrams per kilogram dry weight soil, set out below:

Total Chromium	600
Total Nickel	35
Total Cadmium	3
Total Copper	130
Total Zinc	200
Benzo(a)pyrene	1.64
Total petroleum hydrocarbons (C_7-C_9)	1.600
Total petroleum hydrocarbons (C_{10}-C_{14})	3.200

(a) Further testing shall be undertaken to determine the extent of the contamination;
(b) Contaminated soil shall be removed and replaced with uncontaminated soil and the affected area shall be revegetated;
(c) The consent holder shall undertake an assessment to determine the risk to the environment from the exceedances and provide, within two months of receipt fo the sampling results, a report detailing recommended proposed actions, if any, and timeframes for completion of such actions to be undertaken, to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager

25) The results of the analyses undertaken in accordance with Conditions (24) and (25) shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within ten working days of receipt of the results by the consent holder.

26) Any materials removed in accordance with Conditions (19), (21) and (25) shall be disposed of at a facility authorised to receive such material.

SITE MANAGEMENT

27) The storage and use of hazardous substances or activities listed in Schedule 1 (schedule WQL3 of the PNRRP) of this consent shall not be undertaken on private lots within the site unless they take place undercover and in a manner such that stormwater cannot become entrained with any hazardous substances.

28) The concentration of total petroleum hydrocarbons shall no exceed 15 milligrams per litre in the discharge from any oil/sediment trap.

29) a) The consent holder shall take all practicable measures to avoid spills of fuel or any other contaminants during construction and within private lots.
(b) In the event of a spill of fuel or any other contaminant the consent holder shall clean up the spill as soon as practicable and take measures to prevent a reoccurrence.
(c) The consent holder shall inform the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within 24 hours of a spill event, and shall provide the following information:
(i) the date, time, location and estimated volume of the spill;
(ii) the cause of the spill;
(iii) the type of hazardous substance(s) spilled;
(iv) clean up procedure undertaken;
(v) details of the steps taken to control and remediate the effects of the spill on the receiving environment;
(vi) an assessment of any potential effects of the spill; and
(vii) Measures to be undertaken to prevent a reoccurrence.

ADMINISTRATION

30) The lapsing date for the purpose of section 125 shall be 31 March 2014.

31) The Canterbury Regional Council may, on any of the last five working days of April or October each year, serve notice of its intention to review the conditions of this consent for the purposes of:
    (a) Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or
    (b) Requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment; or
    (c) Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent; or
    (d) Complying with the requirements of a relevant rule in an operative regional plan; or
    (e) Reviewing the trigger levels specified for contaminants.

Pursuant to section 104 of the Resource Management Act 1991

(The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO: Selwyn District Council

A DISCHARGE PERMIT: To discharge contaminants into land

DATE DECISION: 24 June 2011

EXPIRY DATE: 24 June 2046

LOCATION: Hoskyns Road, ROLLESTON

SUBJECT TO THE FOLLOWING CONDITIONS:

LIMITS

1) The discharge shall be only stormwater generated from:
   (a) Private lots; and excluding those listed in Table CRC110541A, which forms part of this consent; and
   (b) Construction;
   Within stages two to four of Izone Industrial Park, Rolleston, at map reference NZMS M36: 5926-3577, labelled as "Applicant's site" and shown as the shaded area on Plan CRC110541/CRC110923A, which forms part of this consent.

STORMWATER SYSTEM - CONSTRUCTION

2) Not less than 10 working days prior to the commencement of construction, the consent holder shall inform the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, in writing, of the start date of works.

3) The consent holder shall ensure that all personnel working on the sire are made aware of, and have access to, the contents of this consent document.

4) During construction, the consent holder shall use best practicable option to minimise exposed surfaces and discharges of sediment-laden stormwater.

5) During construction, stormwater shall be discharged into sediment retention ponds that are sized and constructed in accordance with the Environment Canterbury 2007 "Erosion and Sediment Control Guidelines for the Canterbury Region" Report No CRC06/23.

6) Stormwater in excess of the capacity of the sediment retention ponds shall be conveyed onto grassed areas within the site.

7) No earthworks shall occur until the sediment retention ponds have been constructed. For the purposes of this consent, earthworks means the disturbance of land surfaces by blading, contouring, ripping, moving, removing, placing or replacing soil and earth, or by excavation, or buy cutting or filling operations.

8) The sediment retention ponds and any erosion and sediment control devices shall be inspected and cleaned weekly during construction, and immediately following construction.

9) The consent holder shall ensure that stormwater from no more than 10 hectares of disturbed land is conveyed to any one sediment retention pond.

STORMWATER SYSTEM – PRIVATE LOTS

10) Stormwater from roofs within private lots shall be discharged within the site via soakage pits or rapid soakage chambers or any of the options specified in Condition (11).

11) Stormwater from hardstand areas within private lots shall be discharged within the site via any of the following primary stormwater systems, except stormwater from loading and unloading areas which must be discharged via Option R:
    - Option N – Soakage swale
    - Option P – Raingarden
    - Option Q – Swale
    - Option R – Oil and sediment trap

    When the capacity of any primary stormwater system is exceeded, stormwater shall be discharged via the following corresponding secondary system:
    - Option N – Soakage pit or soakage chamber
    - Option P – Soakage pit or soakage chamber
    - Option Q – Soakage pit, soakage chamber, infiltration trench or soakage basin basin
    - Option R – The primary and then secondary stormwater systems specified for Options N,P or Q

12) The soakage swales and raingardens shall contain and treat the first 25 millimetres of rain from any rain event;

13) The swales shall:
    (a) Have a hydraulic residence time of at least nine minutes at a rainfall intensity of at least 10 millimetres per hour; and
    (b) A minimum length of 30 metres.

14) The primary and secondary stormwater systems shall have sufficient combined capacity to contain and dispose of stormwater from any two percent annual exceedance probability storm.

15) The stormwater systems shall be designed in accordance with the listed design manual, have the relevant key elements, and be constructed in accordance with the reference drawings, as detailed in Table CRC110541T, which forms part of this consent.

16) At least one month prior to the construction of the stormwater system(s) the consent holder shall submit to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, design plans of the stormwater system(s) to be installed.

17) A certificate signed by the person responsible for designing the stormwater system or a suitably qualified person shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, to certify that the stormwater system(s) is constructed and installed in accordance with Conditions (10) to (16) of this consent and design plans.

INSPECTIONS AND MAINTENANCE

18) (a) The stormwater systems shall be inspected at least once every six months.
(b) Any visible hydrocarbons and debris or litter shall be removed within five working days of the inspection.
(c) Any accumulated sediment in the swales, soakage swales, soakage basin and rain gardens shall be removed within five working days of the inspection
(d) Any accumulated sediment in sumps shall be removed when the sediment occupies more than one quarter of the depth below the invert of the outlet pipe.
(e) Any scour or erosion in the stormwater system shall be repaired within ten working days of the inspection.

19) The swales, soakage swales and rain gardens shall be;
(a) Maintained so that vegetation and grass is in a healthy and uniform state
(b) Replanted where erosion or die-off has resulted in bare or patchy soil cover; and
(c) Mowed to ensure grass is at a length of 50 millimetres.

20) The oil/sediment traps shall be cleaned at least annually or when filled to a depth of at least 200 millimetres with sediment.

21) The consent holder shall keep records of the inspection and maintenance of the stormwater system. The records shall include but not be limited to information that demonstrates compliance with Conditions (18) to (20) of this consent. Copies of these records shall be provided to the Canterbury Regional Council on request.

MONITORING

22) Representative soil samples shall be taken from each soakage swale, swale, and rain garden:
(a) At least once every five years;
(b) From a depth of between zero and 50 millimetres below the ground surface at the point of lowest elevation; and
(c) By a person who has at least a tertiary science or engineering qualification that required the equivalent of at least one year of full time study and has at least two years environmental investigation professional work experience post-qualification; and
(d) In general accordance with Ministry for the Environment (2004) 'Contaminated Land Management guidelines – Site Investigation and Analysis of Soils'.

23) Sand and soil samples shall be analysed:
(a) For the following contaminants:
Chromium
Nickel
Cadmium
Copper
Lead
Zinc
Benzo(a)pyrene (equivalent concentration)
Total petroleum hydrocarbons (C_7-C_9)
Total petroleum hydrocarbons (C_{10}-C_{14})
Total petroleum hydrocarbons (C_{15}-C_{36})
(b) In milligrams per litre (mg/L) using the United States Environmental Protection Agency method 1312, Synthetic Precipitation Leading Procedure (SPLP), using reagent water, by a laboratory accredited by Telarc for the appropriate methods, and compared afainst the Leachate Trigger Concentrations, as listed in Condition (25).

24) The analyses undertaken in accordance with Conditions (23) shall be carried out with detection limits of a maximum of 10 percent of the trigger levels set out in Condition (25), with the exception of Total Petroleum Hydrocarbons detection limits, which shall be as follows:
Method detection limit

Total Petroleum Hydrocarbons	SPLP (mg/l)
C_7-C_9	0.10
C_{10}-C_{14}	0.20
C_{15}-C_{36}	0.40

25) The results of analyses undertaken in accordance with Conditions (23) shall be;
(a) compared against the following trigger concentrations:

	Leachate Trigger Concentration (milligrams per litre)
Chromium	1 (1)
Nickel	1.6 (1)
Cadmium	0.08 (1)
Copper	40 (1)
Lead	0.2 (1)
Zinc	30 (2)
Benzo(a)pyrene (equivalent concentration)	0.014 (1)
Total petroleum hydrocarbons (C_7-C_9)	360 (3)
Total petroleum hydrocarbons (C_{10}-C_{14})	7 (3)
Total petroleum hydrocarbons (C_{15}-C_{36})	14 (3)

(1) – 20 x MAV (Maximum Acceptable Value) for determined of health significance
(2) – 20 x GV (Guideline Value) for aesthetic determined
(3) – 20 x Adopted guideline value sourced form Ministry for the Environment Oil Industry Guidelines 1999 (Table 5.2)

(b) Provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager

26) If any of the trigger concentrations listed in Condition (25) are exceeded, the soils shall be considered to be contaminated and within 60 working days of the receipt of the results of analyses undertaken in accordance with Condition (23) by the applicant;
(a) Additional sampling to determine the lateral and vertical extent of contamination, with respect only to the contaminant(s) that exceeded a trigger concentration, shall be carried out in accordance with Conditions (22) to (25);
(b) All contaminated soils identified in accordance with Condition (26) shall be removed; and
(c) The soakage bswale(s), swale(s), swale(s) and /or raingarden(s) shall be reconstructed in accordance with Conditions (11) to (15).

27) Any soils imported on site to backfill any excavation as a result of Condition (26) shall not be sourced from;
(a) A site where activities included in the ministry for the Environment's Hazardous Industries and Activities list have been, or are being, undertaken; or
(b) Any site on the Canterbury Regional Council's Listed Land Use Register, unless the soil has been analysed for the appropriate contaminates and has been shown to be not contaminated, defined as at or below background concentrations and industrial use guideline values.

SITE MANAGEMENT

28) The storage and use of hazardous substances or activities listed in Schedule 1 which forms part of this consent shall not be undertaken on private lots within the site unless they take place undercover and in a manner such that stormwater cannot become entrained with any hazardous substances.

29) The concentration of total petroleum hydrocarbons shall no exceed 15 milligrams per litre in the discharge from any oil/sediment trap.

30) a) The consent holder shall take all practicable measures to avoid spills of fuel or any other contaminants during construction and within private lots.
(b) In the event of a spill of fuel or any other contaminant the consent holder shall clean up the spill as soon as practicable and take measures to prevent a reoccurrence.
(c) The consent holder shall inform the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within 24 hours of a spill event, and shall provide the following information:
(i) the date, time, location and estimated volume of the spill;
(ii) the cause of the spill;
(iii) the type of hazardous substance(s) spilled;
(iv) clean up procedure undertaken;
(v) details of the steps taken to control and remediate the effects of the spill on the receiving environment;
(vi) an assessment of any potential effects of the spill; and
(vii) measures to be undertaken to prevent a reoccurrence.

31) Any material removed in accordance with Conditions (8), (19), (26) and (30) shall be disposed of at a facility authorised to receive such material. Written confirmation of disposal shall be kept.

REPORTING

32) The results of all soil analyses shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement, within ten working days of receipt of the results by the consent holder.

ADMINISTRATION

33) The lapsing date for the purpose of section 125 of the resource Management Act 1991 shall be 30 June 2016.

34) The Canterbury Regional Council may, on any of the last five working days of April or October each year, serve notice of its intention to review the conditions of this consent for the purposes of:
(a) Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or
(b) Requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment; or
(c) Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent; or
(d) Complying with the requirements of a relevant rule in an operative regional plan; or
(e) Reviewing the trigger levels specified for contaminants.

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If you are unsure about any of the details contained in this document or would like to discuss any of the points covered within please phone **03 379 2609**

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