

# **PART ONE: APPLICATION FORM**

## **Application for Resource Consent under Section 88 of the Resource Management Act 1991**

To: Hawke's Bay Regional Council  
Private Bag 6006  
NAPIER 4140

The **Hastings District Council**, Private Bag 9002, Hastings, hereby applies for the resource consent described below.

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**1. Name and address of the owner and occupier (other than the applicant) of any land to which this application relates are as follows:**

Please refer to the attached schedule for a complete list of the owners and known occupiers of the land to which this application relates.

**2. The location to which this application relates is:**

All those properties fronting the northern side of Omaha Road between the western end of the existing industrial zone (as defined in the Operative Hastings District Plan) and 1447 Omaha Road, Hastings.

Please refer to the attached schedule for a complete list of the properties to which this application relates.

**3. The type of consents applied for are:**

- A Discharge Permit for the discharge of stormwater to land in circumstances which may result in a contaminant entering water; and
- A Discharge Permit for the discharge of stormwater into water.

**4. Duration of consent sought:**

35 years.

**5. Description of the activity to which this application relates:**

Resource consents are sought for the discharge of stormwater from a new Hastings District Council swale and infiltration basin network.

The network is to service a proposed new 36ha Industrial Zone on the northern side of Omaha Road, Hastings. In events of up to a ten year ARI the stormwater entering the network is to be restricted to that generated from yard surfaces. In storms of a greater Annual Return Interval (ARI) stormwater from the roofs of buildings may also enter the network.

The primary points of discharge from the network will be three proposed infiltration basins.

The activity is described fully in Part 2 of this document.

**6. Any other resource consents required in relation to this proposal:**

- Discharge stormwater to land in circumstances which may result in a contaminant entering water

The discharge of roofwater from on-site systems within the proposed zone does not form part of this application. These discharges are anticipated to comply with the standards in Rule 42 of the RRMP. Separate resource consents for discharges failing to comply with the applicable standards will need to be sought and obtained by the owner/occupier concerned.

- Water Take

Hastings District Council holds a water permit for the Hastings metropolitan water supply. The maximum extraction rates allowed within that permit may not be sufficient to supply the proposed zone once it is fully developed. A separate application will be made by Hastings District Council in advance of any additional water being required.

**7. Additional information included in the application:**

The attached Assessment of Effects on the Environment contains all the information required to accompany resource consent applications as specified in the Hawke's Bay Regional Resource Management Plan.

.....  
Authorised and Signed on behalf of Hastings District Council

.....  
Date

*Address for Service:*

Hastings District Council  
Private Bag 9002  
Hastings 4156

Attention: Tracey Gray

Email: traceyg@hdc.govt.nz  
Telephone: 06 871 5000  
Fax: 06 871 5100

## Schedule of properties and land owners to which this application relates

Property	Address	Legal Description & CT	Owner	Occupier / Contact	Property contains
1	1137 Omahu Road	LOT 2 DP 23611 BLK XV HERETAUNGA SD SUBJ TO INT IN EASEMENTS OVER ASST 20801, HBP4/1391	CJ Pask PO Box 849 HASTINGS 4156		A stormwater connection/easement
2	Ormond Road	Lot 1 DP 441123, 541123	Kelston Orchards Limited C/O 1524 Pakowhai Road RD 2 Hastings 4172		A stormwater swale
3	1139 Omahu Road	LOT 2 DP15736 BLK XV HERETAUNGA SD, HBP3/7	JM Bostock Limited PO Box 2438 Stortford Lodge HASTINGS 4153		A stormwater swale / culvert
4	Omahu Road	LOT 1 DP11542 BLK XV HERETAUNGA SD, HBC1/760	N P Vesty 413 Wilson Road HASTINGS 4120		A stormwater swale, an infiltration basin and potentially an overland flow path
5	7 Raupare Road	LOT 1 DP22262 BLK XV HERETAUNGA SD, HBP1/1175	ST Sherratt & ER Sherratt 7 Raupare Road RD5 HASTINGS 4120		A stormwater swale
6	15 Raupare Road	LOT 2 DP 22262 BLK XV HERETAUNGA SD, HBP1/1176	J P Flynn & GJ Flynn PO Box 246 HASTINGS 4156	Raupare Gardens 1179 Omahu Road HASTINGS 4175	A stormwater swale
7	1189 Omahu Road	LOT 3 DP22884, LOT 2 DP342661, 175182	JA Barley & LP Curd & 2 others C/O Sainsbury Logan & Williams Attn: Stephen Greer		A stormwater swale and a stormwater connection/easement

Property	Address	Legal Description & CT	Owner	Occupier / Contact	Property contains
			PO Box 41 NAPIER 4140		
8	1215 Omaha Road	LOT 2 DP22884 BLK XV HERETAUNGA SD, HBP3/617	Rimu Hastings Limited C/O Mr K Bayley 16 Nicholl Road RD5 HASTINGS 4175	Kiwispan Hawke's Bay PO Box 2550 Hastings 4153	A stormwater swale
9	1219 Omaha Road	LOT 2 DP377104, LOT 2 DP400858, LOT 2 DP329917, 401623	Totara Holdings Limited C/O KA & KJ Bayley 16 Nicholl Road RD5 HASTINGS 4175		A stormwater swale
10	Omahu Road	LOT 2 DP8336, HB134/211	Totara Holdings Limited C/O KA & KJ Bayley 16 Nicholl Road RD5 HASTINGS 4175		A stormwater swale
11	1241 Omaha Road	LOT 3 DP27351 SUBJ TO & INT IN EASEMENTS, HBW3/1071	Totara Holdings Limited C/O KA & KJ Bayley 16 Nicholl Road RD5 HASTINGS 4175	Minibales Hawke's Bay 1241 Omaha Road HASTINGS 4175	A stormwater swale, a stormwater connection/easement, an infiltration basin and an overland flow path
12	Jarvis Road	LOT 2 DP419221, 478421	KA Bayley, KJ Bayley & 2 others 16 Nicholl Road RD5 HASTINGS 4175		A stormwater swale and potentially an overland flow path
13	18 Jarvis Road	LOT 2 DP402958, 409725	J & V Currie Family Trust & 5 others PO Box 2127		A stormwater swale

Property	Address	Legal Description & CT	Owner	Occupier / Contact	Property contains
			Stortford Lodge HASTINGS 4153		
14	1309 Omaha Road	LOT 2 DP24260 BLKS XIV XV HERETAUNGA SD, HBV2/377	Kauri Hastings Limited PO Box 2311 Stortford Lodge HASTINGS 4153		A stormwater swale and a stormwater connection/easement
15	1337 Omaha Road	PT LOT 1 DP4953 BLK X1V HERETAUNGA SD, HB142/105	EJAE Co Limited C/O Mr CBK & Mrs DM Ellingham 750 Ohiti Road RD9 HASTINGS 4179	Friends Organics 1337 Omaha Road HASTINGS 4175	A stormwater swale, a stormwater connection/easement and an infiltration basin
16	55 Twyford Road	LOT 2 DP 425145, LOT 1 DP 418851, 499262	EL, M Crasborn & 2 others C/O ELM Crasborn Omahu Road RD5 HASTINGS 4175		A stormwater swale, a stormwater connection/easement, an overland flow path and potentially an infiltration basin
17	4 Twyford Road	LOT 1 DP2767 BLK XIV HERETAUNGA SD, HB58/91	K Hansen & AN Hansen 1561 Omaha Road RD5 HASTINGS 4221		A stormwater swale
18	1 Twyford Road	LOT 3 DP416250, LOT 1 DP 2209 BLK XIV HERETAUNGA SD, HB58/149 and 462993	HG Campbell & LS Teixeira 1 Twyford Road RD5 HASTINGS 4175		A stormwater swale
19	1393 Omaha Road	LOT 2 DP416250, 532871	Orchard Trustee Company Limited C/O David Grant		A stormwater swale and stormwater connections/easements

Property	Address	Legal Description & CT	Owner	Occupier / Contact	Property contains
			Osbourne 1393 Omahu Road RD5 HASTINGS 4175		
20	1447 Omahu Road	LOT 4 DP27873 HOME BLOCK, 529729	Agrilasia Farms Limited 1460 Omahu Road HASTINGS 4120		A stormwater swale and a stormwater connection/easement
21	1199 Omahu Road	Lot 1 DP 392031, 369147	C B Norwood Distributors Limited PO Box 1265 Palmerston North Central PALMERSTON NORTH 4440		A stormwater connection/easement
22	1141 Omahu Road	Lot 1 DP 15736, HBH3/6	CMP & MD Donnelly PO Box 2318 Stortford Lodge HASTINGS 4153	J M Bostock Limited PO Box 2438 Stortford Lodge HASTINGS 4153	An overland Flow Path

Copies of the CTs are attached as ***Appendix 7***



## Map of properties upon which the proposed infrastructure is located



## PART 2 ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

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# 1 Introduction

## 1.1 Background

The Hastings District Council ('the Council') proposes to establish a new 36ha industrial zone on the northern side of Omaha Road, Hastings.

Resource consents are sought from the Hawke's Bay Regional Council ('HBRC') for the discharge of stormwater from a swale and infiltration basin network at the rear of the zone. This is a **Controlled Activity** under the Regional Resource Management Plan ('RRMP') - see Section 3 for details.

This Assessment of Effects on the Environment ('AEE') has been prepared in accordance with Section 88 and the Fourth Schedule of the Resource Management Act 1991 ('RMA') and is intended to provide a full understanding of the proposal and any actual or potential effects that the proposal may have on the environment.

## 1.2 Purpose of the Application

The primary reason that the Hastings District Council ('the Council') is seeking these consents at this stage is to gain surety over the infrastructure required and costs associated with the disposal of stormwater from the proposed zone. This information is necessary for the Council to make an informed decision on whether to proceed with the proposed development / change to its District Plan. Without a consented and affordable stormwater solution the proposed rezoning will not be viable.

In order to make this application the Council has prepared a detailed proposal for consideration by the Hawke's Bay Regional Council. Whilst this proposal reflects the option currently preferred by the Council, it in no way pre-determines future decisions regarding the proposed zone. A decision is still to be made as to whether the Council will proceed with the public notification of a Plan Change. Should that occur, the Plan Change would be open to the public for submission, a hearing would be held, and due consideration given to the provisions of the Resource Management Act. Hence, the resulting zone may well have boundaries, stages, infrastructure designs, and rules that differ from those outlined in this application. The Council recognises that this may necessitate either a variation to this discharge consent or indeed a new one.

## 1.3 Report Outline

The remainder of this report is set out as follows:

- **Section 2 – The Proposed Omaha North Industrial Zone**

This section provides a description of the proposed new industrial zone. It describes the intended District Plan provisions, the stormwater management regime proposed for the zone, and the alternatives considered.

- **Section 3 - Description of Proposal**

This section provides a description of the stormwater discharge for which resource consents are sought.

- **Section 4 – Consent Requirements**

This Section provides a review of the consent requirements for the proposed activity. Those matters over which HBRC has reserved its control as a controlled activity are highlighted.

- **Section 5 – Planning Context**

This section highlights relevant strategies, objectives and policies for consideration in the AEE.

- **Section 6 – Existing Environment**

This section provides relevant details regarding the existing environment.

- **Section 7 – Assessment of Effects**

This section provides an assessment of the potential effects of the proposed discharge on the environment (with respect to those matters over which the HBRC has reserved control) and identifies the measures proposed to avoid, remedy, or mitigate potential adverse environmental effects.

- **Section 8 - Consultation**

This section describes the consultation undertaken for the proposed zone and stormwater discharge.

- **Section 9 – Planning Considerations**

This section assesses the proposed discharge in terms of the relevant statutory matters as required in Section 104 of the RMA.

- **Section 10 - Conclusion**

This section concludes with a summary of the extent and nature of the potential effects of the proposed stormwater discharge.



approximately 75% of the proposed zone is located). These provisions take precedence over the zoning provisions of the District Plan.

The existing and proposed new District Plan provisions for the area are set out in **Appendix 2** and summarised in section 5.5.

## **2.2 Stormwater Management**

### **2.2.1 Philosophy**

The management of the stormwater generated from the proposed zone has been identified as one of the primary issues likely to impact upon the feasibility of the proposed industrial zone. There are a number of 'environmental' and 'financial' reasons for coming to this conclusion.

Detailed investigations suggested that feasible options for the disposal of stormwater were limited to those which involved either:

- discharges to land over or in close proximity to the Heretaunga Unconfined Aquifer system; and/or
- discharges into a waterway/s within the Raupare Stream catchment.

Both of these receiving environments have characteristics which make them sensitive to the receipt of additional urban stormwater. The proposal will only be consistent with the achievement of the Council's strategic environmental objectives relating to the best use of water resources and the mitigation of adverse impacts on people, land and water if these issues can be satisfactorily addressed.

The resultant need to implement comprehensive treatment and storage systems, and the elongated shape of the zone, means that stormwater infrastructure is anticipated to be one of the greatest financial costs of the development. Should significant environmental mitigation measures be required as conditions of this consent, over and above those anticipated by the Council, the financial viability of the project may be called into question. Proceeding on that basis would not be consistent with the Council's strategic objective of providing affordable, high quality and responsive Council services.

It is imperative for Council that any stormwater solution implemented is not only affordable, but also environmentally and economically sustainable in the long term. For this reason, the Council has sought to satisfy itself that:

- any potential adverse effects on the environment will be satisfactorily avoided, remedied or mitigated;
- the land will be 'fit for use' (amongst other things this necessitates an appropriate level of flood / inundation protection);
- the risk of contamination associated with industrial activities will be adequately managed, and that;
- the proposal will be cost effective, efficient and affordable throughout the life of the development.

The Council has sought throughout to take a comprehensive, balanced and risk based approach to the assessment of the issues, options and alternatives available. Particular consideration has been given to the following principles / matters:

- the principle of Low Impact Design;

- the specific characteristics of the potential stormwater receiving environments;
- climate change;
- the HBRC Stormwater Guidelines;
- the Council's LTCCP, Engineering Code of Practice and Best Practice Design Guide for Subdivision and Development, and the;
- on-site Stormwater Management Guideline (NZWERF/MfE 2004).

### **2.2.2 Design Objectives**

Having done this, the following key design objectives were identified and incorporated into the proposed methodologies:

- the minimisation of the extent (frequency and volume) of any discharge into the Raupare Stream catchment;
- the treatment, storage and disposal of stormwater as close to source as possible to reduce risks and minimise changes to the local shallow groundwater system;
- the effective management of the risks of contamination and spills and;
- the utilisation of distributed infiltration disposal basins to reduce concentration effects.

### **2.2.3 The Proposed Methodology**

There are four major components to the proposed stormwater management regime:

#### **1. *On-site systems managed by individual owners / operators***

Two separate stormwater disposal systems are to be implemented and operated within each industrial site/development:

- a 'roof water' system designed to collect, treat (filter) and discharge stormwater from roof surfaces to the ground and;
- a 'yard water' system designed to collect, attenuate (temporarily store) and treat yard stormwater before discharging it into the Council's swale.

#### **2. *A Hastings District Council Off-site System:***

A system of swales and infiltration basins is to be implemented to the rear of the zone. This is to receive treated yard water and, in events greater than the 10 year ARI, over flows from the on-site roof water systems.

#### **3. *Monitoring and Maintenance***

An annual maintenance and performance monitoring regime for on-site systems is to be implemented along with periodic monitoring and maintenance of the Council's swale and infiltration basins.

#### **4. *Regulation***

A number of regulatory mechanisms exist and/or are proposed which, in combination, will manage the risks of contamination and spills and will ensure that the outlined standards / levels of service will be met in the long term.

The proposed stormwater management regime is detailed within the **Technical Report: Omahu Rezone Stormwater Management** attached as **Appendix 1**.

## 2.2.4 The Proposed Stormwater Infrastructure

### On-site

**Figure 2** below shows the typical stormwater management system anticipated to be implemented on sites within the zone. This example was developed by the Council as a part of its assessment of the options available to avoid / mitigate stormwater effects from the proposed zone. In doing so the Council identified, as a primary objective, the need to ensure that the stormwater is treated to an appropriate standard before it leaves the site and enters the Council swale.

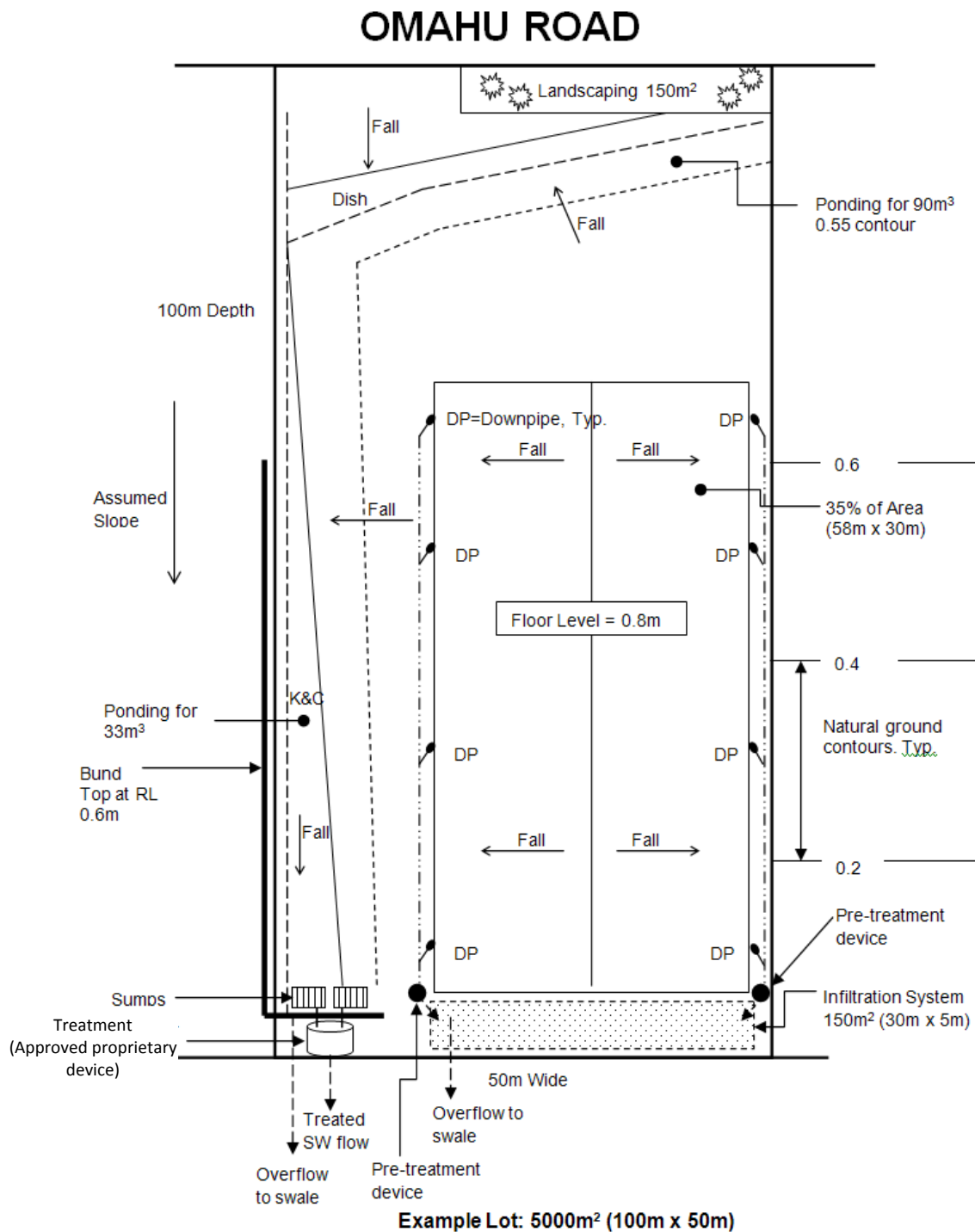


Figure 2 – A typical on-site stormwater management system

The example design provided utilises relatively conventional low cost, ‘off the shelf’ treatment systems to meet the standards proposed by the Council. The Council intends to utilise this design as a ‘model solution’ within an amendment to the existing Water Services By-law. Other (potentially more expensive) options, such as under pavement storage systems, may be utilised where there is a desire to maximise the utilisation of the site. Additional (HDC approved) containment structures and management practices would also be required to be implemented if substances utilised on the site create a higher than anticipated potential for contamination. Alternative uses and systems would require the prior approval of the Hastings District Council under the provisions of the proposed amendment to its Water Services By-law. A resource consent would also be required if the proposal was not in accordance with the District Plan and/or the RRMP.

The following are key aspects of the typical on-site stormwater management system:

- Sites will be shaped to slope down from Omaha Road towards the Council’s swale (bunding will prevent direct runoff into the swale within the design storm event);
- All roof surfaces will be constructed from inert materials;
- Stormwater from roof surfaces will be directed to appropriately designed on-site infiltration disposal systems. Excess flows from over design events will be directed straight into the Council’s swale;
- Stormwater generated from sealed yards will be collected, treated and attenuated on-site before being discharged into the Council swale at a controlled rate. Excess flows from over design events will enter the swale at the rear of the zone directly.

### Off-site

For the purpose of the off-site management of stormwater, the proposed zone has been divided into the three catchments identified in **Figure 3** below. A single infiltration basin will serve each of these three catchments. All stormwater flowing from the zone will be directed to these basins via a swale to the rear of the zone.

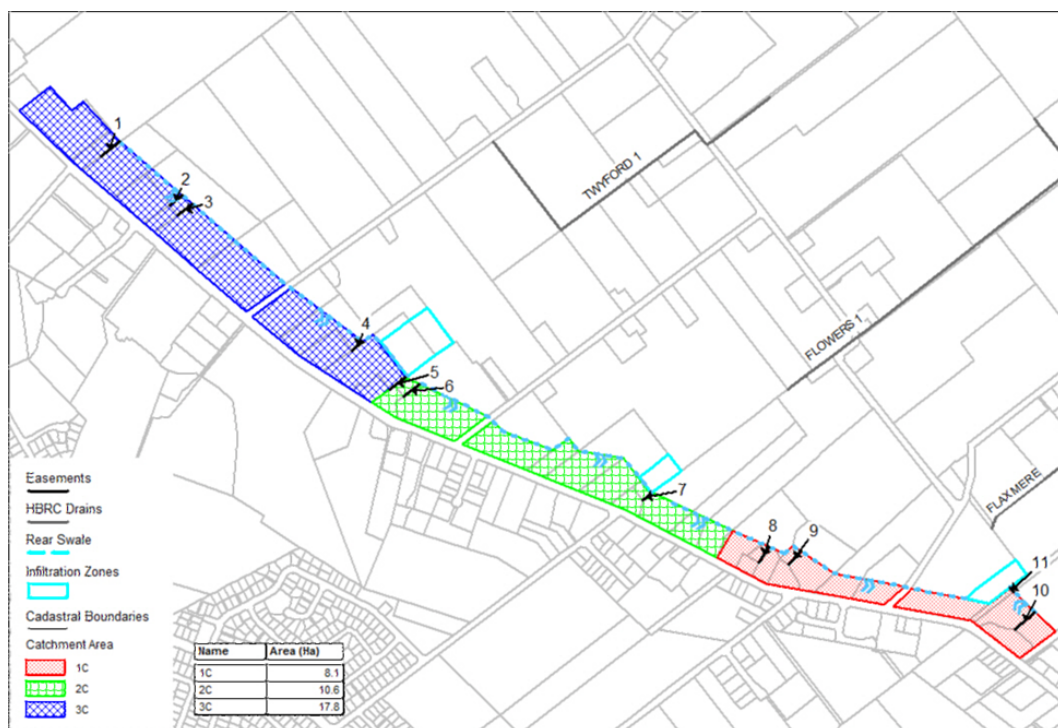


Figure 3 - Proposed Stormwater Catchments, swales and infiltration areas



The proposed swales will be located within a 6 to 7 metre corridor which the Council intends to designate and purchase. The swales are to have a maximum anticipated depth of 0.7m (0.6m plus 0.1m freeboard) and a longitudinal gradient of 1:200 to 1:600. The maximum anticipated cross section of a swale is provided in **Figure 5** below. A pipe and/or open drain link to the swale will be provided for those properties that do not immediately abut it.

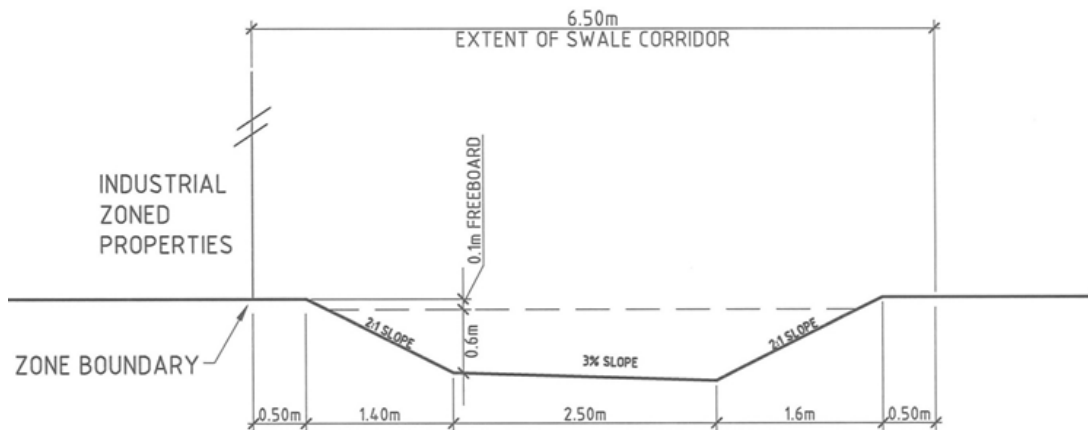


Figure 5 – Maximum swale cross section<sup>1</sup>

Three infiltration basin sites are proposed. The specific location of each infiltration basin has not been precisely defined. Rather, these are to be located in a position within the infiltration areas/zones identified on **Figure 3** above. This degree of flexibility will enable the best position to be determined once more detailed surveys of the gradient of the proposed swales have been undertaken. Discharges from the basins in over design events (> 50 year ARI) will be directed towards the HBRC network of drains.

The infiltration basins are to have the characteristics set out in **Table 1** and **Figure 6** below.

Table 1 – Infiltration Basin Characteristics

	Volume	Depth	Required Land Area
<b>Basin 1</b>	2,400m <sup>3</sup>	1m	0.365ha
<b>Basin 2</b>	4,240m <sup>3</sup>	1m	0.6ha
<b>Basin 3</b>	10,750m <sup>3</sup>	1m	1.4ha

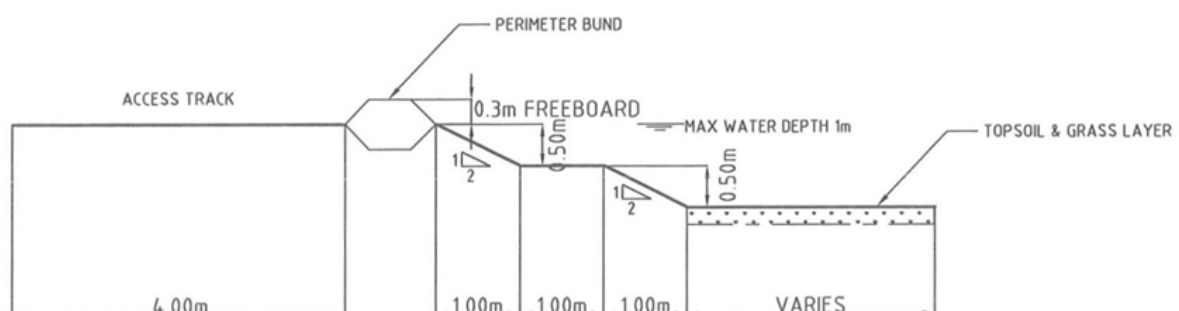


Figure 6 – Typical basin detail (cross section)

<sup>1</sup> Cross section immediately upstream of a basin – the corridor is anticipated to be narrower and potentially shallower further up the catchment.

### 2.2.5 Design Standards

In light of the design objectives set out in Section 2.2.6, the Council chose the following design standards for its off-site network:

- In events of up to the 10 year ARI: that all stormwater will be contained within the swales and disposed to ground in the infiltration basin with zero runoff to the downstream catchment;
- In events beyond a 10 year ARI and up to a 50 year ARI event: that any overflow discharge from the infiltration basins will not exceed the pre-existing greenfield flows from the catchment, and that;
- All stormwater entering the Council's swale system will be of a quality "at least as good as, if not better than, the Hastings Residential Baseline level".

The HIRDS V3 Rainfall model has been used as the basis for this design with a provision for climate change.

### 2.2.6 Level of Service to be provided

The Council's off-site stormwater network which is the subject of this application has been designed to serve the 36ha catchment of the proposed new Omaha Road North zone. No stormwater from the Omaha Road carriageway or indeed any other land is to enter this system.

The Council's network has been designed on the basis that the on-site system/s of the nature previously described will be implemented on each site and that these will be maintained in a manner that ensures their on-going performance.

The level of service provided to properties within the catchment is limited as follows:

1. Unless prior approval has been obtained, stormwater will only be accepted from 'clean'<sup>2</sup> sites
2. In events of up to a 10 year ARI:
  - no roofwater shall be accepted into the system;
  - the maximum peak flow entering the system shall not exceed 14l/s/ha  
*This equates to the estimated pre-development greenfields peak runoff rate for a 2 year ARI storm (40 minute rainfall of 20mm/hr);*
  - all stormwater water must have been treated by either :
    - Sumps and an approved proprietary stormwater treatment system (such as a 'humeceptor') or by way of
    - An alternative HDC pre-approved system capable of achieving quality standards at least as good as the Hastings residential baseline.

## 2.3 Extent of conservatism included within the proposed design

The Council believes that both the design of its proposed swale and infiltration system and the proposed requirements for the on-site systems are conservative. Major areas where conservatism has been introduced include:

- The assumption has been made that this zone will be a 100% impervious catchment.  
*Refer to Appendix C of the technical report - even when the zone is fully developed this is very unlikely to be the case.*

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<sup>2</sup> Paraphrased for simplicity, refer to Appendix 3 for more detail

- The infiltration rates utilised for the infiltration basins is 50% of the minimum rate recorded in the field tests undertaken.  
*This introduces a significant 'factor of safety' in the size of the basins.*
- Very little infiltration from within the swales has been taken into account of in sizing the proposed basins.  
*Only 10mm/hour has been taken account of whereas the lowest recorded rate in field tests for the proposed basins ranges from 30mm/hour to 2200mm/hour.*
- The 'greenfield situation' has been assessed as if it the zone were in 'raw crops' (soil class of 2).  
*A substantial proportion of the zone has been built on or is covered with impervious or highly compacted surfaces therefore the run off is higher than shown.*
- The anticipated extra volume of stormwater created as a result of anticipated climate change out to 2090 has been accounted in the physical sizing of both the on-site and off-site systems proposed for the zone.

## 2.4 Alternatives Considered

A wide range of options for the disposal of stormwater from this area were considered by the Council between 2004 and 2008. At the completion of that work, a discharge into the Upper Southland Catchment was identified as the preferred option. This was primarily to avoid the flooding and water quality concerns about the Raupare catchment previously identified in the consideration of the options for the Lyndhurst residential development. However, following detailed analysis it became apparent that there were considerable practical difficulties with the depth of trenching required to proceed with that option. A decision was made in 2008 to reconsider the issues and options available.

### 2.4.1 Stormwater Issues and Options Report

A Stormwater Issues and Options Report was then prepared by MWH on the Council's behalf. This identified and assessed the following seven options:

Southland Drain Options:

1. Direct flows to the Upper Southland Drain with detention pond
2. Direct flows to Omaha South infiltration basin
3. Direct flows from zone rear to Upper Southland with detention pond
4. Direct flows from zone rear to Omaha South infiltration basin

Raupare Catchment Options:

5. Direct to infiltration basins alongside zone
6. Detention and slow release to Raupare Catchment
7. Direct to Thompson Road infiltration basin

A summary of the assessment of these options is provided in **Appendix 4**. Options 1 and 2 were not considered technically feasible whilst Options 3 and 4 were considered so costly that their viability was compromised. All three of the Raupare Catchment Options (Options 5, 6 and 7) were considered to be simpler from a technical / network perspective. Issues and / or uncertainty were however identified with all of these options as a result of the relative sensitivity of the Heretaunga Plains Unconfined Aquifer and the Raupare Catchment (in terms of quality) and the flooding issues

within the Raupare Catchment that became apparent with the early Lyndhurst residential development stormwater proposals.

At this stage it was clear that the Raupare Options were the only ones which remained feasible.

#### **2.4.2 Infiltration vs. a discharge to the Raupare Catchment**

The Council considered those factors that would be paramount in determining which of the Raupare Options should be pursued. In doing so it undertook a detailed analysis of the on-site treatment, attenuation and discharge options available. A key component of this work was an analysis of the extent of quality treatment and quantity attenuation that could be achieved on-site by way of readily available 'off the shelf' commercial systems.

Consideration was also given to the costs of implementing these systems (both in monetary terms and in terms of the use of the land) in comparison with a communal system. Amongst other things this assessment indicated that such on-site systems could achieve levels of treatment that would be 'at least as good as residential'. As such it was considered that a discharge to the ground from a Council system remained feasible. Accordingly, more detailed consideration was given to these options - refer to Table 2 for a summary of this assessment.

The preferred option was identified as one based upon infiltration to ground at locations adjacent to the zone.

Table 2: Summary of the Assessment of the Issues and Options for Stormwater Disposal within the Raupare Catchment

Issue	Option		
	Infiltration to ground in & adjacent to the zone	Infiltration to ground away from the zone	Detention and a discharge to the Raupare
Flooding	Impacts upon flood levels and frequencies within the Raupare Stream catchment is an important consideration as there are known flood capacity issues within this catchment. However, the extent of such impacts is primarily determined by the storage volume provided in the system rather than by the disposal option chosen. All three options can avoid any flood related effects if sufficient storage volumes were provided within the system.		
	In this option the required storage is to be provided in locations adjacent to the proposed zone.	Pipes and/or channels would be required from the zone to the proposed basins. If pipes or sealed channels used, additional storage might also be required due to the speed at which the water would reach the basin. Substantial areas of additional land are hence likely to be required under this option. As some of this is quite removed from the proposed zone, the land owners are unlikely to obtain any benefit from the proposed zone. Additional costs are hence likely to be incurred. This would also be an inefficient use of productive land a scarce resource	This option is likely to necessitate both localised and downstream storage in a number of different locations. Many of the affected properties will be separated from, and will therefore receive little benefit from, the proposed zone. Both physical works (structures) and legal restrictions are likely to be placed on the use of a number of people's properties.
Contam - ination	Both the Heretaunga Plains Unconfined aquifer system and the waterways downstream in the Raupare catchment are widely utilised, highly valued water resources sensitive to the impacts of contamination by inappropriate discharges. Whilst more localised in nature, the same is also true of those confined aquifers in the vicinity of the proposed zone. Equal care and attention is therefore likely to be needed to avoid, remedy or mitigate the potential for contamination irrespective of the option chosen here.		
Ground - water Impacts	This option reduces the potential groundwater impacts to the greatest extent possible (whilst enabling the development of the zone) as a similar volume of water is anticipated to be infiltrated to ground within / or in close proximity to the proposed zone as currently is.	These options would result in all of the water falling on yard surfaces being collected and channelled away from the proposed zone. This creates the potential for some reduction in groundwater levels. The extent of such impact will, at least to some extent, be lessened by the disposal of that water falling on roof surfaces being discharged to the ground on-site.	
Infrastructure costs	Likely to be the least	Difficult to determine.	Difficult to determine. Likely to be the greatest
	Land will be the largest cost. Swales, basins culverts & short piped sections constructed.	Additional land is likely to be required for the basins. Pipes or sealed channels are likely to be more expensive to construct than swales.	Infrastructure requirements are difficult to determine without detailed investigations. The infrastructure required in close proximity to the zone is likely to be similar to that for the other options. However, additional works are anticipated to be needed in order to provide downstream storage.

	Option		
	Infiltration to ground in & adjacent to the zone	Infiltration to ground away from the zone	Detention and a discharge to the Raupare
Certainty, consenting risks & costs	<p>Subject to the identification of a solution capable of ensuring that the quality of the stormwater being discharged is 'no worse than residential' Council is confident that the proposal would be a controlled activity for which a consent must be granted.</p>	<p>Subject to the identification of a solution capable of ensuring that the quality of the stormwater being discharged is 'no worse than residential' Council is confident that the proposal would be a controlled activity for which a consent must be granted.</p> <p>The increased number of land-owners from which land must be obtained and their separation from the zone raises the potential for greater difficulties in obtaining land from them.</p>	<p>The Council is conscious of the flood limitations within the Raupare Catchment, the public opposition that discharges into this catchment may raise, and the extent of technical information which may be required to address these concerns, and the potential for submissions / appeals.</p> <p>The increased number of land-owners from which land must be obtained and their separation from the zone raises the potential for greater difficulties in obtaining land from them.</p>

## 3 Description of Proposal

### 3.1 Description of the Activity for which Consent is Sought

Resource consents are sought for the discharge of stormwater from a new Hastings District Council stormwater network. The network is to service a proposed new 36ha industrial zone on the northern side of Omahu Road, Hastings. The stormwater entering the Council's system is to be restricted to that generated from the yards of sites within the zone. In storms exceeding the ten year ARI design event stormwater from the roofs of buildings may also enter this network.

All stormwater entering the system in the ten year ARI design event will be retained within the system and discharged by infiltration to the ground. The primary points of discharge from the network will be three proposed infiltration basins. However, infiltration will also occur within the proposed swales.

In certain long duration storm events of greater than a 10 year ARI stormwater may also be discharged from the system into the nearby HBRC drains (Flaxmere, Flowers 1 and Twyford 1).

## 4 Consent Requirements

### 4.1 Regional Resource Management Plan

#### 4.1.1 The discharge of Stormwater

##### ***The Rules:***

The discharge of stormwater to land and/or water is controlled by Rules 42, 43 and 52 of the Regional Resource Management Plan.

The discharge of stormwater from open or piped systems is a Permitted Activity under Rule 42 provided that the system does not drain any industrial or trade premises that cover greater than 2ha and/or at which hazardous substances are stored. Discharges of stormwater failing to comply with Rule 42 are provided for as a Controlled Activity by Rule 43 provided the following Conditions / Standards / Terms are met:

- a. *All reasonable measures are taken to ensure that the discharge is unlikely to give rise to all or any of the following effects in any receiving environment after reasonable mixing:*
  - i. *The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials.*
  - ii. *Any conspicuous change in the colour or visual clarity.*
  - iii. *Any emission of objectionable odour.*
  - iv. *The rendering of fresh water unsuitable for consumption by farm animals.*
  - v. *Any significant adverse effects on aquatic life.*

HBRC has reserved control/discretion over the following matters:

- a. *Location of the point of discharge including its catchment area.*
- b. *Volume, rate, timing, and duration of the discharge, in relation to a specified design rainfall event.*
- c. *Effects of the activity on downstream flooding.*
- d. *Contingency measures in the event of pipe capacity exceedence.*
- e. *Actual or likely adverse effects on fisheries, wildlife or amenity values.*
- f. *Actual or likely adverse effects on the potability of any ground water.*



- g. Duration of consent.*
- h. A compliance monitoring programme.*
- i. A bond.*
- j. Administrative charges.*

Any discharge of stormwater failing to comply with the above Conditions / Standards / Terms is defined as a discretionary activity under rule 52.

#### ***The Status of the Proposed Discharge***

The status of the discharges described in Section 3.1 is as follows:

- The discharge of the stormwater collected from within the proposed industrial zone to land within the Council's infiltration basins and/or swales is a **Controlled Activity** under Rule 43.
- The discharge of stormwater collected from within the proposed industrial zone into water within the Twyford 1, Flowers 1 and the Flaxmere Drains is a **Controlled Activity** under Rule 43.

#### **4.1.2 Water Takes**

##### ***The status of the water take for the water supply for the proposed zone***

Advice has been sought from the Council's Water Supply Manager regarding the Council's ability to provide water to the proposed new industrial zone within the limits of its existing Water Permit.

Bearing in mind the Council's outstanding requirement to provide water for:

- the underdeveloped area of the existing Omaha Industrial area,
- the remainder of the residential development anticipated to occur at Lyndhurst;
- the Irongate Industrial Area; and
- the achievement of the Council's desired Levels of Service within portions of the existing network where this is not currently occurring

the Water Supply Manager advises that Council does not have sufficient capacity to cater for the peak extraction rates resulting from the proposed zone. The identified development/growth and proposed Level of Service improvements will however occur progressively over time. Sufficient capacity remains within the limits of the Council's Water Permit in the immediate future.

As the Council's water permit is due to lapse, it has already commenced the preparation of an application for a replacement water permit for the Hastings metropolitan water supply. That application will seek a water take sufficient to cater for the growth anticipated and areas of urban expansion identified within the Hastings Urban Development Strategy and the Heretaunga Plains Urban Development Strategy. This includes the proposed Omaha Road North Industrial Zone. On this basis, no water permit has been sought as a part of this application.

The necessary water take is anticipated to be a **Discretionary Activity** under Rule 55 of the RRMP.

#### **4.2 Hastings District Plan**

The subject land is zoned Plains in the Hastings District Plan. However, the Council will not take up any discharge consent granted as a result of this application unless it has successfully obtained both a plan change re-zoning the subject catchment industrial and a designation over all the land upon which stormwater infrastructure is proposed. As such, no resource consent would be required under the Hastings District Plan in relation to the activities for this discharge consent has been sought.

## 5 Planning Context

These sections are generally intended to provide the context for the deliberation on the environmental effects documented in Section 6 of this report.

### 5.1 The Resource Management Act ('The RMA')

#### ***Part II of the Resource Management Act***

Part II of the Resource Management Act establishes the critical framework of the Act. The singular purpose of the Act is defined by Section 5: to promote the sustainable management of natural and physical resources. Sustainable management is further defined by Subsection 2 of Section 5, stating:

- (2) *In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—*
- (a) *Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
  - (b) *Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
  - (c) *Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

Thus in applying Section 5 an overall judgment of whether the project promotes the sustainable management of natural and physical resources is required.

Sections 6, 7, and 8 of the Act identify the matters considered to be of such importance to decision making under the Act, that further consideration must be given to them. Section 6 identifies matters of national importance that must be recognized and provided for. Of relevance to this application are:

- (a) *The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*
- (e) *The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.*

Section 7 specifies other matters to which particular regard shall be had. Those matters relevant to this project include:

- (a) *Kaitiakitanga:*
- (aa) *The ethic of stewardship:*
- (b) *The efficient use and development of natural and physical resources:*
- (c) *The maintenance and enhancement of amenity values:*
- (d) *Intrinsic values of ecosystems:*
- (f) *Maintenance and enhancement of the quality of the environment:*
- (g) *Any finite characteristics of natural and physical resources:*
- (i) *the effects of climate change:*

Section 8 requires that *"In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and*

*physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi)”.*

### **Sections 104 of the RMA**

Section 104 of the RMA lists the matters that a consent authority must have regard to in the consideration of an application for resource consent:

- (1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to—*
  - (a) any actual and potential effects on the environment of allowing the activity; and*
  - (b) any relevant provisions of—*
    - (i) a national environmental standard:*
    - (ii) other regulations:*
    - (iii) a national policy statement:*
    - (iv) a New Zealand coastal policy statement:*
    - (v) a regional policy statement or proposed regional policy statement:*
    - (vi) a plan or proposed plan; and*
  - (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.*
- (2) When forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect. ... ..*

## **5.2 The Regional Policy Statement** (part of the Hawke's Bay Regional Resource Management Plan)

The Regional Policy Statement ('RPS') identifies a number of significant resource management issues for the region. Those most pertinent to this proposal are:

- The risk of contamination of groundwater arising from*
  - (a) horticultural, agricultural and industrial land use practices*
  - (b) discharges of contaminants, including the cumulative effects of domestic sewage discharges from unsewered communities*
  - (c) spills particularly in the Heretaunga Plains and Ruataniwha Plains aquifer systems, and coastal aquifers.*
- The susceptibility of the region to flooding, droughts, earthquakes, volcanic ash falls, and tsunamis, and the potential impact of these on people's safety, property, and economic livelihood.*

The RPS identifies a number of objectives and policies to address these issues. Those of particular relevance to the proposed discharge are:

*OBJ 21 No degradation of existing groundwater quality in the Heretaunga Plains and Ruataniwha Plains aquifer systems.*

*OBJ 22 The maintenance or enhancement of groundwater quality in unconfined or semi-confined productive aquifers in order that it is suitable for human consumption and irrigation without treatment, or after treatment where this is necessary because of the natural water quality.*

*POL 15 To use non-regulatory methods, as set out in Chapter 4, in support of regulatory methods for avoiding adverse effects on groundwater quality, including:*

- (a) *Liaison with territorial authorities - future development - Advocating that any future urban residential or urban industrial development in areas of high groundwater contamination vulnerability (particularly within the Heretaunga Plains unconfined aquifer system as shown in Schedule Va) should include reticulated water, sewerage and stormwater systems.*

*POL 17 To manage the effects of activities that may affect the quality of groundwater in accordance with the following approach:*

- (a) *To ensure that all activities, particularly discharges of contaminants onto or into land, comply with the environmental guidelines for groundwater quality, and the associated implementation approach, set out in Policies 75 and 76.*
- (b) *To encourage discharges of contaminants onto or into land where these are likely to have less adverse effect than discharges into water.*

*... ..*

- (d) *To prevent or minimise spills or other breaches of resource consent conditions causing contamination of groundwater, particularly in those areas of high contamination vulnerability for the Heretaunga Plains aquifer system as shown in the DRASTIC map in Schedule V, by requiring the preparation and implementation of site management plans and spill contingency measures for relevant activities.*
- (e) *To disallow any discharge activity which presents a significant risk of groundwater contamination in those areas of high contamination vulnerability for the Heretaunga Plains aquifer system as shown in the DRASTIC map in Schedule V.*

*OBJ 32 The ongoing operation, maintenance and development of physical infrastructure that supports the economic, social and/or cultural wellbeing of the region's people and communities and provides for their health and safety*

### **5.3 The National Environmental Standard for Sources of Human Drinking Water**

Regulations 7 and 8 of the National Standard set out circumstances in which Regional Councils must not grant discharge permits. Regulation 12 sets out other circumstances in which a condition must be imposed on any resource consent granted requiring the consent holder to advise potentially affected drinking water provided of events such as spills.

### **5.4 The Hawke's Bay Regional Resource Management Plan**

The Hawke's Bay Regional Resource Management Plan ('the RRMP') identifies a number of objectives and policies. Those of particular relevance to the proposed discharge are:

#### **Groundwater Quality**

*OBJ 42 No degradation of existing groundwater quality in aquifers in the Heretaunga Plains and Ruataniwha Plains aquifer systems.*

*OBJ 43 The maintenance or enhancement of groundwater quality in unconfined or semi-confined productive aquifers in order that it is suitable for human consumption and irrigation without treatment, or after treatment where this is necessary because of the natural water quality.*

*POL 75 To manage the effects of activities affecting the quality of groundwater in accordance with the environmental guidelines set out in Table 10.*

Table 10. Environmental Guidelines – Groundwater Quality

Issue	Guideline
<p>CONFINED, PRODUCTIVE AQUIFERS IN THE HERETAUNGA PLAINS AND RUATANIWHA PLAINS AQUIFER SYSTEMS (as shown in Schedule IV)</p>	
1. No degradation	There should be no degradation of existing water quality.
<p>OTHER PRODUCTIVE AQUIFERS</p>	
1. Human consumption	<p>The quality of groundwater should meet the “Drinking Water Quality Standards for New Zealand” (Ministry of Health, 1995) without treatment, or after treatment where this is necessary because of the natural water quality.</p> <p>The quality of groundwater should meet the guidelines for irrigation water contained in the “Australian Water Quality Guidelines for Fresh and Marine Waters” (Australian and New Zealand Environment and Conservation Council, 1998) without treatment, or after filtration where this is necessary because of the natural water quality.</p>
2. Irrigation	

## 5.5 Hastings District Plan

The Hastings District Plan (‘the District Plan’) manages the effects of the use, development and protection of the natural and physical resources of the Hastings District.

### ***The Heretaunga Plains Unconfined Aquifer Resource Management Unit***

The District Plan recognises the importance of the Heretaunga Plains Unconfined Aquifer to the sustainable management of the Heretaunga Plains through the inclusion of the following objective:

*AQO1 To ensure that the life supporting capacity of the Heretaunga Plains Unconfined Aquifer Water Resource is not compromised by the effects of land use activities occurring above it.*

The Heretaunga Plains Unconfined Aquifer Resource Management Unit was established to support the achievement of this objective. The policies, rules and performance standards for this area are attached in **Appendix 2**. The extent of the Resource Management Unit, in relation to the proposed new zone, is shown on **Figure 7** below.

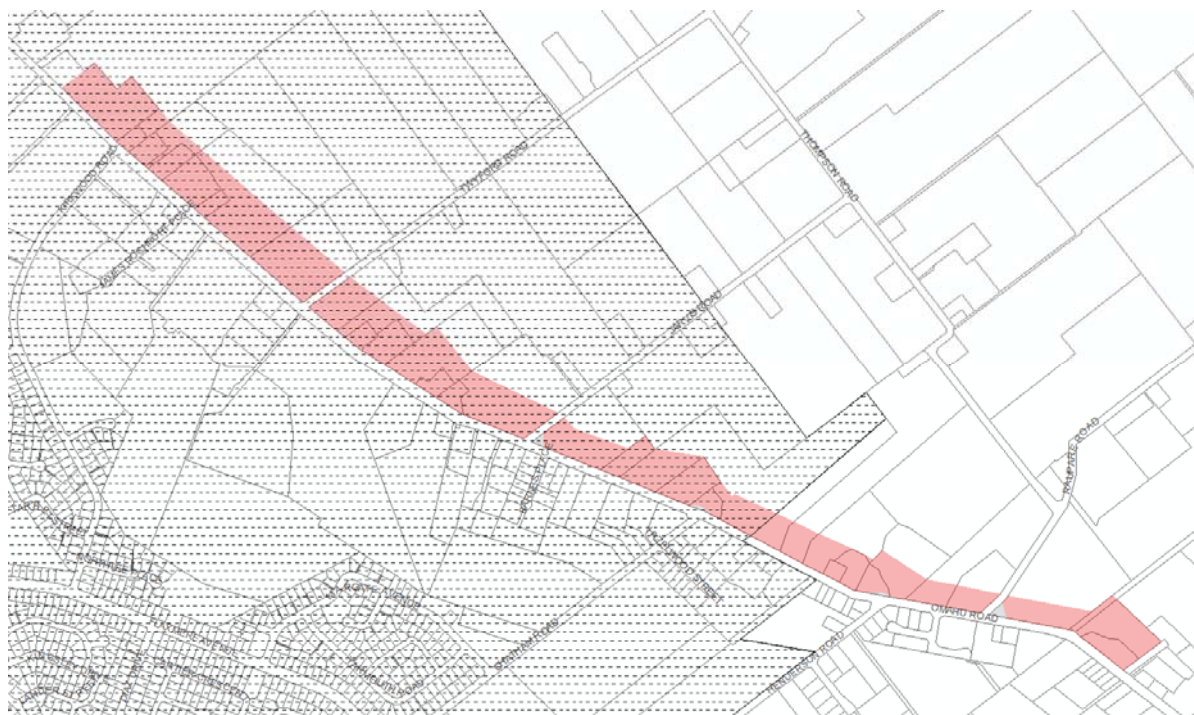


Figure 7 Heretaunga Plains Unconfined Aquifer

### 5.5.1 Hazardous Substances

The District Plan recognises the environmental issues associated with the storage and use of hazardous substances and identifies the following objectives and policies:

*HSO1 To avoid, remedy or mitigate adverse environmental effects and risks of hazardous facilities to people, ecosystems or the built environment.*

*HSO2 To enable activities to utilise hazardous substances where necessary for their operations.*

The policies, rules and performance standards for hazardous substances are attached in **Appendix 2**.

### 5.5.2 Industrial Zones

With the exception of the new provisions for the proposed Irongate Industrial area, the majority of the Industrial Section of the District Plan was prepared in advance of the investigations undertaken for the preparation of the Council's 2003 Industrial Strategy. Some of the general observations made regarding the nature of industry in the district are hence considered somewhat dated.

The objectives and policies and that are most pertinent to this application are:

*IZO2 To ensure that adverse effects of industrial use, development or subdivision are avoided, remedied or mitigated.*

*IZO5 To enable the efficient and effective use of the District's resources by providing for the development of new industries.*

*IZP7 Protect the vital water resource contained in the unconfined aquifer from contamination risks from industrial uses and development.*

## 5.6 The Council's Strategic Direction

### 5.6.1 The 2003 Industrial Strategy

The 2003 Industrial Strategy, and the subsequent Council decisions and directions on its implementation formalised in the 2009 LTCCP resolution, can be summarised as follows:

***Industrial development to be progressed within ten years:***

	<i>The 2003 Strategy</i>	<i>Subsequent Direction</i>
<i>Omahu Road</i>	<i>39ha</i>	<i>Stage 1 – 13ha</i>
<i>Irongate</i>	<i>11ha</i>	<i>Stage 1 – Up to 68ha</i>
<i>Tomoana / Whakatu</i>	<i>38ha</i>	<i>Nil</i>
<i>Total</i>	<i>88</i>	<i>81</i>

*Irongate stage 1 is to be advanced in priority to Omahu Road stage 1.*

***Industrial development to be progressed beyond the ten year period:***

	<i>The 2003 Strategy</i>	<i>Subsequent Direction</i>
<i>Omahu Road</i>	<i>Nil</i>	<i>Stage 2 - 16ha</i>
<i>Irongate</i>	<i>26ha</i>	<i>Stage 2 - Up to 42ha</i>
<i>Tomoana / Whakatu</i>	<i>60ha</i>	<i>25ha</i>
<i>Total</i>	<i>86ha</i>	<i>83ha</i>

### 5.6.2 2009 – 2019 LTCCP – 10 year Plan

The LTCCP sets the Council's 10 year strategic direction. The following strategic objectives are of particular relevance to this project:

### Environmental Wellbeing

- Sustainable management of natural and physical resources through integrated land use management
- Healthy drinking water
- Best use of water resources
- Mitigation of adverse impacts on people, land and water

### Social and Cultural Wellbeing

- Provide affordable, high quality Council services and facilities

### Economic Wellbeing

- Responsive Council Services

The completion of the industrial zone implementation described within the Council's Industrial Strategy (which is discussed in Section 5.6.2 below) is identified as an immediate action – to be undertaken in years 1 to 3 of the planning period (2009/10 – 2011/12). In support of this, the following funding was allocated to the establishment of the infrastructure necessary to achieve this. NB: The amount allocated for the "Omahu Industrial Development" is for Stage 1 of the proposed Omahu Road North zone. Stage 2 is anticipated to occur outside the 2009 to 2019 period.

### Key Projects next ten years...

(Note: Not all Council projects are detailed below - these figures exclude inflation)

	09/10 \$'000	10/11 \$'000	11/12 \$'000	12/13 \$'000	13/14 \$'000	14/15 \$'000	15/16 \$'000	16/17 \$'000	17/18 \$'000	18/19 \$'000	TOTAL
<b>Industrial Developments</b>											
Irongate Industrial Development		4,716	4,266					500			9,482
Omahu Industrial Development		150	150	7,162	1,650						9,112
Whakatu Industrial Development			100	2,053						800	2,953
		4,866	4,516	9,216	1,650			500		800	21,548

The proposed Long Term Plan 2012-22 includes a similar growth strategy.

### 5.6.3 Heretaunga Plains Urban Development Strategy

In August 2010 the Hastings District Council, Hawke's Bay Regional Council and Napier City Council adopted the Heretaunga Plains Urban Development Strategy ('HPUDS'). This strategy is intended to provide the strategic direction for the future urban development of the Plains area surrounding Napier and Hastings from 2015 until 2045. It promotes a compact settlement pattern as the preferred development scenario. The settlement pattern / provision of land proposed for industrial activities within HPUDS reflect the current industrial strategies for Napier and Hastings. The table below indicates the industrial areas, their capacity, timing and potential activities.

#### Business Land Staging 2010-2045

Location	Capacity (ha)	Timing	Potential Activities
Napier Business Park – north of Prebensen Drive and west of the Hawke's Bay Expressway	30	2009 - 2019	Technology
Napier – Redevelopment of existing sites and Awatoto area	36	2009-2029	Service Industry
Irongate Stage 1 <sup>1</sup>	36	2010 -	Dry Industry
Omahu Road Stage 1 <sup>1</sup>	13	2015 -	Service Industry
Irongate Stage 2	42	After Irongate 1	Dry Industry
Omahu Road Stage 2	16	After Omahu 1	Service Industry
Tomoana / Whakatu	60	After Whakatu full	Wet Industry
<b>Total<sup>2</sup></b>	<b>184 ha</b>		

<sup>1</sup> Zoned and available prior to 2015 Strategy commencement period



## 6 Description of the Existing Environment

### 6.1 General Location

The proposed new zone is located on the north-western fringe of the Hastings urban area. The development area is bounded to the south by Omaha Road and to the east by the existing Omaha industrial area. The land to the north is rural - see Figure 8 below.

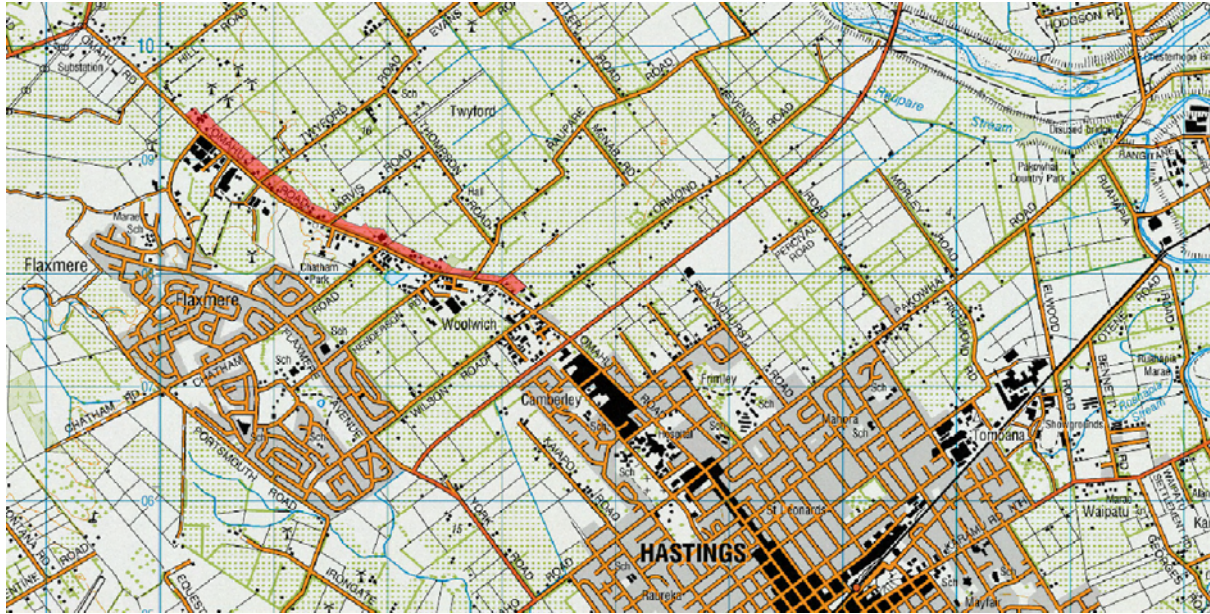


Figure 8 – Location Map

### 6.2 Existing Drainage Catchment

The proposed industrial zone and stormwater network is located within the Raupare – Twyford Catchment. The catchment covers some 2066ha, bounded in broad terms by Omaha Road to the west, the Ngaruroro Catchment to the south and east (to the confluence of the Clive River and Karamu Streams), and Pakowhai Road to the south. Downstream of the development area the urban area of the catchment (approximately 100ha) is drained by a reticulated system into either the Lyndhurst or Mahora open drains. The remainder of the catchment is predominantly rural with the main land use being horticultural production.

The rural catchment is drained by a network of open drains which generally drain in a north easterly direction and discharge into the Raupare Stream, which in turn flows southeast to join what becomes the Clive River at its confluence with the Karamu Stream. Both these water courses ultimately discharge into the Ngaruroro River, which has an outfall to the Pacific Ocean north-east of Clive.

Whilst the development area is located within this catchment, much of the stormwater from this area currently infiltrates into the coarse gravels lying under Omaha Road which comprise the old Ngaruroro River bed.

## **6.3 Development Area**

### **6.3.1 Natural Features and Landscape**

The proposed development area lies on the southern edge of an area with a characteristic 'plains landscape' dominant within the Heretaunga Plains. The level of modification and intensity of land-use within this area is such that there are very few 'natural' features remaining.

## **6.4 Land Use**

The land uses within the proposed new zone are best described as mixed. Though predominantly pastoral and horticultural, approximately 6.3 hectares of the area has been intensely developed for as industrial / trade premises (Another 5.7ha site has also been approved for industrial use). In addition to this there are 16 dwellings and associated accessory buildings and also a variety of rural accessory buildings within the proposed catchment.

## **6.5 The Receiving Environment**

A literature review of the key documents pertaining to the Heretaunga Plains Unconfined / Confined Aquifers was provided by the Council as a part of its application for the renewal of the discharge permit for the existing Omaha Road Industrial area on the southern side of Omaha Road. This provides a useful overview of the ground water receiving environment into which this discharge is proposed. This is attached to this assessment as **Appendix 5**.

From an examination of this literature, it can be concluded:

- That the Omaha Industrial Zone is underlain by around 30m of post-glacial predominantly fine sediment with intermittent gravel beds. Within this sediment are the fine beds that act as a confining layer to the first confined aquifer.
- From the geological evidence available the shallow gravels are underlain by two buried land surfaces comprising fine sediment, the Pakipaki and Ngatarawa formations. These sediments can be expected to limit the vertical penetration of contaminants toward the aquiclude and the first confined aquifer, particularly those that readily adhere to fine particles.
- That the original hydro-geological grounds for permitting the expansion of Hastings westwards onto the perched groundwater part of the unconfined aquifer are still valid and the risk of contamination of the groundwater system, particularly the confined aquifer system, are low.

## 7 Assessment of Environmental Effects

The following assessment of environmental effects relates to the discharge for which consent is sought and is limited to the matters which the HBRC has reserved control over under Rule 43 of the Regional Resource Management Plan.

### 7.1 Conditions / Standards / Terms

The condition for Rule 43 requires that:

- “a. All reasonable measures are taken to ensure that the discharge is unlikely to give rise to all or any of the following effects in any receiving environment after reasonable mixing:*
- i. The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials.*
  - ii. Any conspicuous change in the colour or visual clarity.*
  - iii. Any emission of objectionable odour.*
  - iv. The rendering of fresh water unsuitable for consumption by farm animals.*
  - v. Any significant adverse effects on aquatic life”.*

As described in detail in Section 2.2.2 of this report, the Council has identified the effective management of the risks of contamination and spills as one of its key design objectives for the proposed zone. Two primary regulatory tools are to be utilised to ensure the achievement of this - the District Plan and the Water Services By-law. Combined these provisions are considered more than sufficient to ensure that all reasonable measures will be undertaken to prevent any of the above effects from occurring.

The District Plan includes three District Wide Activity standards relating to the storage and use of Hazardous substances. These standards, listed on the next page, apply to every activity undertaken within Hastings District. They apply in conjunction with the comprehensive hazardous facility screening procedure set out in standard 13.8.8.1 (refer to **Appendix 2** for the details of this procedure). A restricted discretionary or discretionary activity resource consent is required to be obtained before any activity presenting a defined risk to the environment or the community can be established.

Any activity undertaken within the Heretaunga Plains Unconfined Aquifer RMU (Refer to figure 7) must also comply with the rules and standards for that area<sup>3</sup>. Rule 12.1.7.3 defines the storage, handling or use of arsenic as a prohibited activity. All other activities must either comply with the two standards or seek a restricted discretionary resource consent

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<sup>3</sup> Activities undertaken within the HPUA RMU must comply with **both** the DWA Hazardous Substances standards and the HPUA RMU standards. The RMU standards however, have precedence in terms of status.

## District Plan Standards - Hazard Mitigation

### **Hazardous Substances District Wide Activity Standards**

#### **13.8.8.2 SPILL CONTAINMENT**

Any activity storing or using a hazardous substance shall ensure that the activity is designed, constructed and managed to prevent:

- (a) The entry, discharge or unintentional release of the hazardous substance into the public sewerage system or public stormwater system.
- (b) The contamination of any land and/or water (including groundwater and potable water supplies) in the event of a spill or other unintentional release of hazardous substances

#### *Outcome*

*Hazardous substances will be contained within an area which is safe for their use.*

#### **13.8.8.3 CONTAMINATION OF STORMWATER**

Any activity storing or using a hazardous substance shall ensure that the activity is designed, constructed and managed to prevent any stormwater originating on or collected on the site from contaminating:

- (a) Any land and/or water (including groundwater and potable water supplies) by acting as a transport medium for hazardous substances unless permitted by a Regional Plan or a discharge consent.
- (b) The stormwater drainage system or the public sewerage system unless permitted by the network utility operator responsible for that system.

#### *Outcome*

*Hazardous substances will not be allowed to escape into the stormwater system and sewer system*

#### **13.8.8.4 WASHDOWN AREAS**

Any activity using vehicles, equipment or containers that are or may have become contaminated with hazardous substances and are required to be washed down shall ensure that:

- (a) Any area used is designed, constructed and managed so that process effluent from the washdown area is not discharged into the stormwater drainage system or the sewerage system unless permitted by the network utility operator responsible for that system.
- (b) Any area used shall be designed, constructed and managed to limit discharge into or onto land/or water (including groundwater and potable water supplies) unless such discharge is permitted by the relevant Regional Plan or a discharge consent.

#### *Outcome*

*Washdown areas shall be designed to contain hazardous substances from entering public stormwater and sewerage systems and water supplies.*

NB: Suitable means of compliance may include: sloped pavements, interceptor drains, contaminant and diversion valves, oil-water separators, sumps and similar systems

### **Heretaunga Plains Unconfined Aquifer RMU Standards**

#### **12.1.8.1 ORGANIC MATTER, CHEMICAL, FERTILISER AND FUEL HANDLING AND/OR STORAGE**

All organic matter, chemicals, fertilisers and fuels (including fuel operated machinery and vehicles) shall be stored and/or handled on areas which have impervious surfaces and where facilities are provided to prevent contaminants from being washed or spilled into natural ground or entering any piped stormwater systems or stormwater ground soakage

#### *Outcome*

*The quality of the ground water in the Unconfined Aquifer will be protected from the accidental spillage of chemicals, fuels and fertilisers on to the land.*

#### **12.1.8.2 STORMWATER DISPOSAL**

Stormwater disposal shall be to a suitable soakage mechanism or a reticulated system approved by Council. Discharge of stormwater to public roads or road reserve requires the prior consent of Council.

#### *Outcome*

*The water in the unconfined aquifer will be protected from contaminants that may be carried in stormwater.*

The Council is also able to impose controls within its Water Services By-laws which are intended to ensure that water entering its network is of a specified standard. The proposed Amendment (described in **Appendix 3**) splits developments into two specific types – those which are the nature expected to be typical within the zone and those which are ‘high risk’. Typical development would consist of an industrial / trade activity which: are undertaken predominantly indoors; do not involve the use or storage of hazardous substances; have outdoor parking and manoeuvring; and only includes the outdoor storage of ‘inert materials’. A Building Code type regime is proposed for typical sites. A standard solution has been provided – which if implemented will enable the development to establish without further consideration. Alternative solutions may also be utilised these must however be assessed by the Council on an individual basis to ensure that they capable of achieving at least the same standard of treatment and attenuation as the standards solution.

A specific application will need to be made to the Council (under the By-law) for any high risk activity. No such permission is likely to be given unless the Council has satisfied itself that it will be able to comply with the conditions of its resource consent; and the applicant has already all necessary resource consents.

The proposed amendment includes a requirement for annual monitoring and maintenance of the on-site systems.

## **7.2 Matters over which control has been reserved**

### **7.2.1 Location of the point of the diversion and discharge including its catchment area**

The catchment of the proposed system is the proposed new 36ha industrial zone. The boundaries of this area have been chosen for a number of reasons including, but not limited to: the nature of the soils, the location and extent of existing industrial activities within the area, and the ability to service the land. Given the stage at which this proposal is at in the planning process it is quite possible that the boundary may be amended over time through the rezoning process. For the purposes of the management of stormwater the zone has been further split into three sub-catchments each of which is served by a single infiltration basin. The proposed catchment areas and infiltration areas for the discharge to ground are shown on **Figure 4**.

A number of factors influenced the Council’s decision to utilise a stormwater system based on discharges to ground (and into the aquifer system in the immediate vicinity of the zone). These have been discussed in detail in section 2.3 of this report. The choice of a swale system and three basin design at the rear of the zone reflects the gradient of the land and the catchments of the HBRC drains. The shallow gradients within this area are of note - particularly transversely along the zone. Survey investigations will be required at the time of the detailed design to determine the final detailed design of the system. For surety ‘infiltration areas’ have been identified for the required infiltration basins rather than specific locations. This is intended to enable slight adjustments to the location of the basins if this is found to be necessary to achieve the required grades.

The utilisation of three infiltration basins enables the ‘spilling’ of the water into the nearby Flaxmere, Flowers 1 and Twyford 1 HBRC Drains in those long duration events that will exceed the capacity of the basins. These three discharges are anticipated to more closely resemble the current Greenfield situation than a single point discharge would. The proposed discharge points into the HBRC Drains are shown on **Figure 9**.

### **7.2.2 The volume, rate, timing, and duration of the discharge, in relation to a specified design rainfall event.**

Detailed modelling has been undertaken of the extent of stormwater likely to be generated from the proposed zone in a range of rainfall events. As is detailed within the attached Technical Assessment, these were of durations of between 1 hour and 3 days for return periods of 1 in 10 years, 1 in 20 years and 1 in 50 years. This range was chosen in order to determine the behaviour of different parts of the system (in particular the on-site systems, the swales and the basins) in both short duration high intensity events and those events of a longer duration. The anticipated peak flows and maximum volume of these discharges are provided in **Appendix B of the Technical Report**.

Conscious of the HBRC stormwater guidelines and the Building Code requirements the Council chose the 1 in 10 year event as its primary 'design event' for this system. This is a larger storm event than the 1 in 5 year event that the Council's Engineering Code of Practice defines as the level of service for its piped stormwater network.

Specific consideration was also given to the limited flood capacity in the Raupare Catchment downstream of the proposed zone. In light of this, the Council chose to restrict any overflows from the proposed infiltration basins into this catchment to the pre-existing greenfield flows in storms up to the 50 year ARI.

The following four methods are to be utilised to ensure that this is the case.

#### *On-site Roofwater Disposal*

All roof water is to be disposed of to ground on-site by way of an independent / separate system with sufficient capacity to cater for 10 year ARI events (additional storage will have to be provided on-site if the infiltration system alone is unable to meet this standard)<sup>4</sup>. As a result the volume of stormwater leaving each industrial site will be reduced (by a volume proportional to the size of the building/s) from that which would have otherwise been the case. Not only does this assist the Council in the control/avoidance of overland flows from the site, but it has the benefit of retaining flows of stormwater from individual sites into the sub-surface aquifers which are understood to feed springs within Hastings.

#### *The provision of on-site yard water attenuation & flow control*

All water from sealed yards (other than approved discharges into the HDC Sewer) will be discharged via a controlled point/s capable of restricting the flow to 14l/s/ha in events up to the 10 year ARI. As this flow equates to the estimated pre-development greenfield peak runoff rate for a 2 year ARI storm (40 minute rainfall of 20mm/hr) a requirement for on-site attenuation (temporary storage) is created. The flow restriction however reduces the rate at which flows will enter the Council's system and hence the required size of the Council's system; and reduces the necessary capacity of the on-site treatment system.

#### *The sizing of the proposed swales*

The proposed swales have been designed to cater for the modelled maximum peak flow in a 10 year ARI storm with a 100mm freeboard. All necessary culverts under the intervening roads will likewise be designed and constructed to cater for these events.

#### *The sizing of the proposed infiltration basins*

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<sup>4</sup> This discharge does not form part of this application

The proposed infiltration basins have been designed to ensure that any overflow discharge from them in up to a 50 year ARI event will be no more than that generated in the greenfield situation.

The required basin size was determined by:

- calculating the basin size required to contain all modelled events without any overflow occurring;
- reducing these sizes to allow for both a greenfield overflow and the anticipated infiltration;
- ensuring that reduced volume is sufficient to contain all the modelled 10 year ARI events without any overflow occurring.

For example: The maximum modelled volume of stormwater required to be stored from Area 1 is 2,600m<sup>3</sup> this occurs in a 6 hr duration 1 in 50 year event. The calculated greenfield flow and infiltration rates for basin 1 are 0.08l/s and 0.225mm/hr respectively. Taking these into account a basin volume of 2,400m<sup>3</sup> was calculated. As this volume is greater than the volume required for a zero overflow in a ten year event, it is proposed to proceed with a basin of this size.

The Greenfield flow for a 24hr event with 50 yr ARI was chosen as this is beyond the critical duration for the receiving Raupare catchment.

TABLE 4 – Infiltration Basin Volumes

	Volume required for zero overflow in all modelled events	Design Infiltration Rate	Greenfield Flows	Greenfield Volume Reduction	Proposed Basin Size	Volume required for zero overflow in a 10 year ARI Event
<b>Area 1</b>	2,600m <sup>3</sup> (1 in 50 year, 6 hr event)	0.225mm/hr	0.08l/s	200m <sup>3</sup>	2,400m <sup>3</sup>	1800m <sup>3</sup> (2 hr event)
<b>Area 2</b>	5,000m <sup>3</sup> (1 in 50 year, 6 hr event)	0.12mm/hr	0.053l/s	760m <sup>3</sup>	4,240m <sup>3</sup>	3000m <sup>3</sup> (6 hr event)
<b>Area 3</b>	12,200m <sup>3</sup> (1 in 50 year, 24 hr event)	0.03mm/hr	0.008l/s	1750m <sup>3</sup>	10,450m <sup>3</sup>	8200m <sup>3</sup> (24 hr event)

### 7.2.3 The effects of the activity on downstream flooding.

#### Events up to 10 year ARI:

All water entering the Council's system from 10 year ARI events is to be contained within the system and discharged by infiltration within the basins and swales. No overflow is to occur from the network in these events.

As the Greenfield flows will no longer enter the HBRC drains, this is anticipated to have a beneficial effect on the flood capacity within the catchment downstream on the development.

#### Events beyond the 10 year ARI:

The capacity of all the on-site stormwater systems is anticipated to be exceeded in some events of greater than 10 year ARI. Once this occurs all stormwater from the sites will flow directly into the Council's swale. The modelling undertaken anticipates that the peak flows from all 50 year ARI are able to be accommodated the 100mm freeboard within the proposed swales. This water will hence make its way to the proposed infiltration basins. In longer duration events the basins will become full and overtop. The design of the proposed basins is to be such that: the flows will be directed

towards the nearest HBRC drain; and the maximum peak flow of this discharge in events up to the 50 year ARI will not exceed the pre-existing greenfield one from the catchment.

Given the above, any flooding or inundation effect of the proposed discharge on the catchment is anticipated to be neutral, if not positive in comparison to the existing greenfield situation. This is because:

- the occurrence of any such discharge will be delayed as a result of the storage provided on both the individual sites and within the basins;
- the duration over which overland flows will occur will be shorter than they are presently as the discharge will cease soon after the rain ceases falling;
- the total volume of water discharged in the event will be less than the pre-existing greenfield discharge from the catchment;
- in all but very large events the impact will be more localised. Instead of occurring as sheet across the entire length of the zone flows will be directed through engineer routes to the nearest HBRC drain.

Once these flows have reached the HBRC drainage system the discharge is not anticipated to be able to be differentiated from the pre-existing Greenfield flows – except perhaps that the receipt of this water may be delayed and the total volumes slightly reduced.

#### **7.2.4 Contingency measures in the event of pipe capacity exceedence.**

No piped reticulated network is proposed as a part of this proposal. The infiltration basins are designed to provide for the stormwater run-off diverted from the industrial properties via Council swales.

Culverts will be required under the existing roads. The private connections from properties within the zone to the swale are also likely to be piped. The proposed zone is however at the top of the catchment - a location in which the catchment can readily defined and in which inundation from other sources is unlikely. Pipe exceedence within design event storms is hence also unlikely.

#### **7.2.5 Actual or likely adverse effects on fisheries, wildlife or amenity values.**

Discharges into the Raupare catchment will be infrequent and will only occur at times when the catchment as a whole is at or nearing its capacity and when all 'first flush' water from the proposed development area have been removed by the on-site treatment systems. Given the extent to which the catchment has been modified, no such adverse effects are anticipated.

#### **7.2.6 Actual or likely adverse effects on the potability of any ground water.**

As is discussed in detail in section 2.2.2, it is proposed to amend the Council's water services By-law to require a system capable of treating yard water to a standard that is 'at least as good as residential' to be installed on each site. These systems will be required to manage all flows of stormwater from off yards areas in all 10 year ARI events. While stormwater from over design events may by-pass this treatment system - all 'first flush' water, with all the associated contaminants, will have already passed through the treatment system.

Stormwater from roof surfaces will not reach the Council's system in 10 year ARI events. In over-design events the additional roofwater will flow directly into the Council's swale. As all roof surfaces



will be required to be constructed of inert materials, this water is not anticipated to contain contaminants.

An annual monitoring program of the on-site stormwater systems, audited by the Council, is also proposed to be implemented in association with the amended By-law. As such it is anticipated that this standard will continue to be maintained over the life of the Council's consent.

Once the water enters the Council system some additional treatment will occur as the water traverses the swale and as it infiltrates through the basin (or swale).

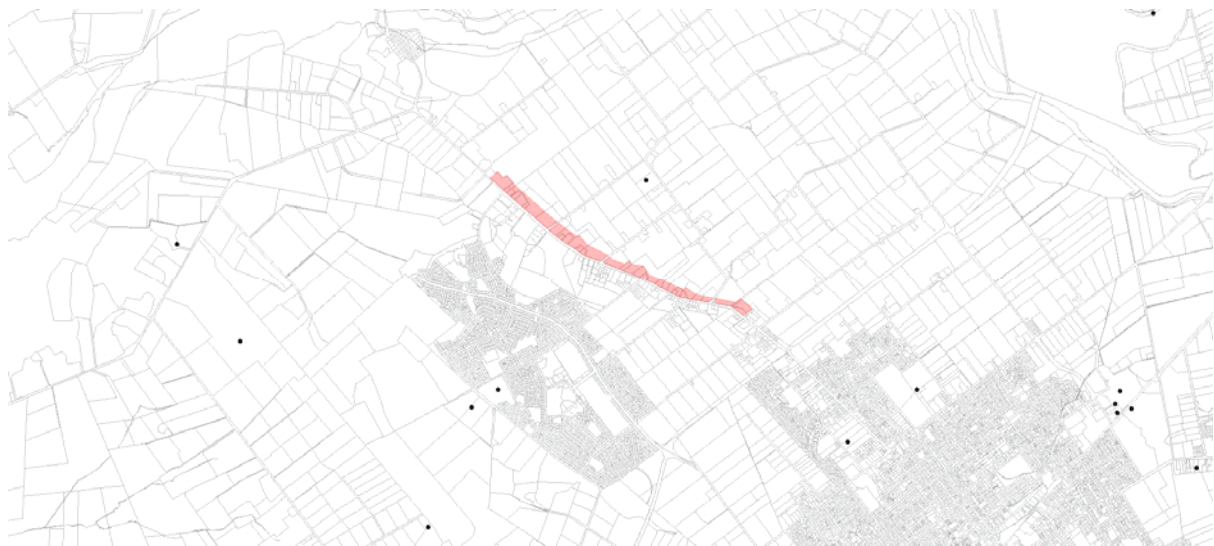
For the above mentioned reasons, the water entering the Council's system is anticipated to be of sufficient quality to avoid the potential for adverse effects on ground water quality.

Consent is not sought for any discharge resulting from an accidental or negligent spill on any site located within the proposed zone. The potential for these to occur, and the resultant potential for adverse effects, is recognised. A number of mechanisms to avoid, remedy or mitigate these have been implemented within the zone proposal. These have been discussed in detail in Section 7.1. Combined, these are considered the best practical option to avoid the likelihood that contamination from any such spill would reach a receiving environment.

### ***Impact of Stormwater Discharge on Registered Drinking Water Supplies***

The Resource Management National Environment Standards for Sources of Human Drinking Water sets in place a stringent new framework for discharge permits and the need to specifically address discharge activities that may significantly adversely affect a registered drinking water supply.

The registered drinking water supplies in the vicinity of the stormwater discharges at in the Omaha Road industrial rezone are shown in the following map:



**Figure 7-1 : Registered drinking water supplies**

Overall it is considered that the stormwater discharge activities would not adversely affect the Hastings registered drinking water supply. As with other discharge permits currently consented by the Regional Council, the stormwater inputs from the Omaha Road industrial rezone will be no more than minor.

- The nearest supply “downstream” to the three infiltration discharge points is Twyford School.

- Regional Council data identifies this supply as being drawn from the unconfined aquifer.
- There is no well log available for the well so there is some uncertainty on the source aquifer.
- The well log database identifies other wells in the immediate vicinity as drawing water from the confined aquifer.
- The inferred flow path for the discharges is along the Makirikiri channel not toward the Twyford School Well.
- The inferred flow path for water in the first confined aquifer is north of the Twyford School well however this is based on assumptions of uniform aquifer properties and extent.
- The risk of contamination of the shallow unconfined aquifer along the bed of the Makirikiri channel by the Council stormwater discharges to land at the infiltration basins is low.
- The risk of contamination of the confined aquifer system by the Council stormwater discharges to land at the infiltration basins is extremely low.

Based on the above knowledge of the Heretaunga Plains unconfined aquifer systems, the discharge of stormwater and its potential adverse effects from the Council stormwater systems at the location of the infiltration basins poses no significant risk to registered potable water supplies.

#### **7.2.7 Duration of consent.**

A duration of 35 years is sought for this consent. Given the compliance and monitoring programme proposed, no adverse effects are anticipated as a result of this.

#### **7.2.8 A compliance monitoring programme.**

Refer to **Appendix 3** for a copy of the compliance monitoring programme to be included with the proposed amendment to the Water Services By-law.

#### **7.2.9 A bond.**

No bond is proposed or considered necessary to avoid, remedy or mitigate adverse effects.

#### **7.2.10 Administrative charges.**

The Council will pay all those administrative fees liable under the conditions of the consent issued and in accordance with the HBRC Schedule of Fees.

## 8 Consultation

### 8.1 Introduction

The Council has undertaken extensive consultation over a number of years regarding the proposed industrial rezoning and more recently the disposal of stormwater from the proposed zone. This consultation has occurred on a number of levels. The Council undertook initial broad level consultation in 2003 as a part of its industrial site selection assessment and in its preparation a strategy for the provision of that land. In 2007 the Council prepared a draft structure plan for the Omahu zone and undertook extensive public consultation on this. More recently the Council circulated a summary of the proposed plan change and provided an opportunity for consultation with any parties seeking this. Ongoing consultation has occurred throughout with HBRC, Network Utilities as well as with other interested parties.

Hapu and whanau representatives from throughout the district were invited to a hui in April 2003 regarding the Council's industrial site selection assessment. Twelve representatives attended the hui. The issues that arose with relevance to the Omahu area were:

- A suggestion that a cultural audit be undertaken of the potential industrial zones;
- That social and cultural factors should be taken into account as well as environmental ones;
- That conflicts between residential and industrial uses should be avoided;
- The value of the Heretaunga Plains soils;
- Concerns over wastewater disposal; and
- Queries regarding district plan rules and the long term demand for industrial land.

An offer was made to all the above parties in June 2007 to either hold a hui on the proposed zone or to meet the individual marae/organisations. These offers were not taken up. The Hastings District Council Maori Joint Committee was also consulted in July 2007 regarding both the Irongate and Omahu Road draft Structure Plans/zones. No issues or concerns were raised with respect to Omahu.

In 2010 advice was sought from Hastings District Council's Strategic Advisor - Culture and Heritage regarding the need for additional consultation with Iwi on the proposed discharge consent. Subsequent to that a hui was arranged. Invitations were sent to all marae and Maori groups in the area. Only one person attended. No significant concerns were raised. No further consultation was specifically undertaken with Iwi. However, all the above groups were provided with updates on the project and offers of additional consultation, as a part of our wider public consultation.

A full summary of the consultation undertaken is summarised in **Appendix 6**.

## 9 Planning Considerations

### 9.1 Deliberations under Section 104 of the Act

Section 104 sets out the matters which a Consent Authority must, subject to Part II, have regard to. Section 104(1)(a) requires consideration of any actual or potential effects on the environment resulting from the activity and these have been discussed in section 7 of this report. Section 5 of this report identifies the relevant planning considerations that a Consent Authority must have regard to in consideration of an application for resource consent. The remainder of this section addresses the remaining provisions of Section 104(1).

#### 9.1.1 RMA – Part II

The following table provides a summary of particular consideration of Part II matters of the RMA.

##### Summary of Assessment of Part II Matters

Matter for consideration	Comment
Promotion of the sustainable management of natural and physical resources (s 5)	The development of Omaha North for urban expansion has been identified through the 2003 Hastings Industrial Strategy as an appropriate growth area for the district. This was reinforced through HPUDS 2010 and the proposed amendment to the RPS. The development of the proposed stormwater network as proposed has been designed in order to ensure that the potential adverse effects resulting from the change from rural to industrial land use is sustainable in terms of natural and physical impacts.
The preservation of the natural character of rivers and their margins and the protection of them from inappropriate subdivision, use and development (s 6(1)(a))	The assessment of effects concludes that there will be negligible effects on the quality and flows of the Raupare Stream and consequentially on the Ngaruroro River. Given the infrequency of discharges to this catchment, and the extent to which it has been modified, it is concluded that the proposed discharge will not impact upon the natural character of these rivers.
The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.	Concerns regarding stormwater discharges to waterways are acknowledged. The impacts of the proposed stormwater discharge on the receiving environments are however for the above reasons anticipated to be minor.
Kaitiakitanga	Acknowledgement of the guardianship by the tangata whenua of the area has been made through the consultation process.
The ethic of stewardship	Acknowledgement of the ethic of stewardship held by groups in the community and local landowners has been provided for through the consultation process.
The efficient use and development of natural and physical resources	The assessment of effects concludes that there will only be negligible effects on the receiving environment. The proposed stormwater disposal system has taken into account the principles of low impact design, the risks associated with industrial processes and the HBRC stormwater guidelines and are considered to be an efficient use of resources (For example the use of land for the zone and stormwater swales and basins).

The maintenance and enhancement of amenity values	The project has taken particular account of the importance of the maintenance of the quality of water within the receiving environment and no more than minor effects are anticipated. The need to mitigate impacts resulting from inundation and flooding (a physical characteristic that is considered to contribute to people's appreciation of their environment) has also been recognized. Negligible adverse effects are anticipated. Indeed improvements over the existing situation have been achieved in many instances.
Intrinsic values of ecosystems	
Maintenance and enhancement of the quality of the environment	
Any finite characteristics of natural and physical resources:	

### 9.1.2 Regional Policy Statement

Section 5.2 identifies policies of the RPS relevant to this project. The following table summarises how these matters have been considered and addressed with respect to this project.

#### Summary of Assessment of RPS Matters

Matter for consideration	Comment or Cross reference to section of this report
Objectives 21 and 22	Section 7.2.6
Policy 15	Reticulated water sewer and stormwater systems are proposed for the proposed Omaha Road North industrial area.
Policy 17	Section 2.2
Objective 32	This application seeks consent for the discharge from a proposed new reticulated stormwater system intended to service a development area identified by the Council in its 2003 industrial strategy. The development of this area was adopted as a part of HPIDS 2010.

### 9.1.3 Regional Resource Management Plan

Section 5.4 identifies policies of the RPS relevant to this project. The following table summarises how these matters have been considered and addressed with respect to this project.

#### Summary of Assessment of RRMP Matters

Matter for consideration	Comment or Cross reference to section of this report
Objective 43	Section 2.2
Objective 43 & Policy 75	Section 7.2.6, Section 3.5 of the Technical Assessment

### 9.1.4 Hastings District Plan

Section 5.5 identifies objectives and policies of the District Plan relevant to this project. The following table summarises how these matters have been considered and addressed with respect to this project.

#### Summary of Assessment of District Plan Matters

Matter for consideration	Comment or Cross reference to section of this report
AQ01, HS01 & O2, IZO2, IZP7	Section 2.2, Section 7.2.6, and Section 3.5 of the Technical Assessment
IZO5	This application seeks consent for the discharge from a proposed new reticulated stormwater system intended to service a development area identified by the Council in its 2003 industrial strategy. The development of this area was adopted as a part of HPUDS 2010.

### 9.1.5 Matters of Restricted Discretion / Reserved Control

A Consent Authority is required to identify those matters over which it has reserved its control for applications for controlled activity consents. Those matters are in this case:

- a. *Location of the point of discharge including its catchment area.*
- b. *Volume, rate, timing, and duration of the discharge, in relation to a specified design rainfall event.*
- c. *Effects of the activity on downstream flooding.*
- d. *Contingency measures in the event of pipe capacity exceedence.*
- e. *Actual or likely adverse effects on fisheries, wildlife or amenity values.*
- f. *Actual or likely adverse effects on the potability of any ground water.*
- g. *Duration of consent.*
- h. *A compliance monitoring programme.*

A detailed assessment of these has been provided in section 7.2 of this report.

## 10 Conclusion

The urbanisation of the Omaha Road Strip will result in increased stormwater run-off from the area as well as a change in the nature of this stormwater (i.e. from a rural to an urban discharge).

A model was developed to predict the likely volume and flow of discharge from the area, to assess the potential effects and propose mitigation works. With these measures in place the volume of stormwater entering the Raupare Stream Catchment, a catchment known to have existing flood capacity issues will be reduced. In the design storm event for the (10 year ARI) the discharge has been reduced to nil as the stormwater is to be discharged to ground. Discharges into this catchment will occur in larger events. However, for events of up to a 50 year ARI this will only occur in long duration events. These discharges will not exceed the current 'greenfield' discharge.

Overflow discharges in events of greater than a 50 year ARI overflow discharges into the downstream catchment will occur. These will only commence when the capacity of the basin has been exceeded and will cease soon after the rainfall does. Such discharges are unlikely to be detected as the downstream catchment which will already be waterlogged. The effects of the proposed discharge on the Raupare Stream catchment are anticipated to be minor, or indeed positive in the most frequent events.

Traditional forms of urbanisation; in which stormwater is collected and conveyed to a single, sometimes distant discharge point, remove water from the catchment which would otherwise have entered the immediate aquifer system. The stormwater solution for the proposed zone differs from this 'traditional model' in that all stormwater generated within this development is to be discharged to ground within or in the immediate vicinity of the development site. This will ensure any impact upon the surrounding aquifer systems will be reduced as far as is reasonably possible. Any effects on the aquifer system downstream of this development are hence considered to be minor.

The quality of the stormwater discharged from the Omaha Road Strip is predicted to change, with an increase in urban contaminants such as vehicular / tire contaminants and a corresponding decrease in rural contaminants including silts and agrichemicals. However, on balance it is concluded that the scale of this change is minor and water quality, both in the receiving aquifer system and the Raupare catchment, will not be adversely affected.

## 11 Appendices



**Appendix 1**  
**Technical Report: Omaha Rezone Stormwater Management**

**Appendix 2**  
**Existing and Proposed New District Plan Provisions**

**Appendix 3**  
**Summary of the proposed Amendment to the Water Services By-law**

**Appendix 4**

**Omahu Industrial Rezone Project: Issues & Options Report 2008 -  
Table 6.1 - Omahu Re-Zone Stormwater Disposal Options**

**Appendix 5**  
**Literature of review of the key documents pertaining to the Heretaunga**  
**Plains aquifers**

## Appendix 6: Summary of consultation undertaken

### Land Owners

2011/12 - Detailed Stormwater Consultation	
<p>Crasborn Group Ltd (Lee Arlidge) Various Properties. In particular 55 Twyford Road.</p>	<p>The property known as 55 Twyford road includes land identified for use as a swale, part of the infiltration zone for basin 3, and the overland flow path between the proposed basin and the Twyford 1 Drain.</p> <p>A general discussion was held surrounding the nature of the proposed zone and the stormwater solution. The discussion then moved on to the proposed infiltration basin and overland flow path. It was noted that the required volume of basin 3 had increased as a result of the infiltration tests results. This and the Council's desire to identify an infiltration zone rather than a specific infiltration basin meant that the basin could potentially be located within 55 Twyford Road. Mr Arlidge advised that he would have anticipated far higher infiltration rates as the area is extremely gravelly and water does not settle there.</p> <p>A summary of the anticipated effects of the system in different storm events was provided to Mr Arlidge and the options for an overland flow path discussed. As were the Resource Consent, Plan Change, Designation and Land negotiation / purchase processes.</p> <p>Options for the fencing and for the continued cropping of the area of the property on the Omahu Road side of the swale were also discussed. Mr Arlidge did not raise any specific concerns. Rather, he advised that he would report to the Company's Board and come back to us if necessary. Mr Arlidge advised the Crasborn Group also had an interest in the property at the far western end of the proposed zone.</p>
<p>EJAE Co Limited Bruce Ellingham 1337 Omahu Road (On Site Meeting)</p>	<p>1337 Omahu Road includes land identified for use as a swale and for infiltration basin 3. Discussions have been held with Mr Ellingham over a number of years. Hence the discussion focused upon the specific details of the stormwater solution to be included within the application and the processes going forward. It was noted that the required volume of basin 3 had increased due to the infiltration test results. It was also noted that for surety an infiltration zone is now proposed rather than a specific basin. Mr Ellingham advised that water does not settle within the area. A summary of the anticipated effects of the system in different storm events was provided to Mr Ellingham. No specific concerns were raised regarding the proposed stormwater solution.</p>
<p>Totara Holdings Limited Kevin Bayley Various - including 1241 Omahu Road (On Site Meeting)</p>	<p>1241 Omahu Road includes land identified for use as a swale and the entire zone identified for infiltration basin 2. On-going discussions have been held with Mr Ellingham over a number of years. Hence the focus of this meeting was on the details of the stormwater solution to be included within the application and the processes going forward. It was noted that the required volume of basin 3 had increased due to the infiltration test results and that for surety an infiltration zone is now proposed rather than a specific basin. No specific concerns were raised in this respect.</p> <p>A summary of the anticipated effects of the system in different storm events was provided to Mr Bayley. Discussions were then held regarding the overland flow path. Mr Bayley advised that he had in recent years piped that portion of the Flowers 1 Drain which flows through his property. He did this in most part for OSH reasons. Several options for the creation of an overland flow path for those long duration events when the basin overtops were discussed. Mr Bayley expressed a definite preference for an extension to his existing pipe to the Flowers Drain.</p>

	Advice was provided about the need for additional survey and engineering investigations. The anticipated future opportunities for discussions / submissions were discussed along with the Resource Consent, Plan Change, Designation and Land negotiation / purchase processes.
N P Vesty Vesty family members Cnr Omahu & Twyford Rds (On Site Meeting)	<p>This property includes land identified for use as a swale, the entire infiltration zone for basin 1, and depending upon the final location of the basin an overland flow path. On-going discussions have been held with the Mr Vesty and his family over a number of years. Hence, the focus of this meeting was on the details of the stormwater solution to be included within the resource consent application and the processes going forward. It was noted that the required volume of basin 3 had increased due to the infiltration test results and that for surety an infiltration zone is now proposed rather than a specific basin. No specific concerns were raised in this respect. The Vesty's desire for the zone to be enlarged and both the zone and the basin to be 'squared up' was reiterated.</p> <p>A summary of the anticipated effects of the system in different storm events was provided. Options for the creation of an overland flow path for those long duration events when the basin overtops were discussed. The suggestion was made that the basin should be moved entirely - to adjacent to Twyford Road. This would remove the need for a flow path over private land. Were the basin to remain in the same position, a preference was stated for a piped solution through their property.</p> <p>Advice was provided about the need for additional surveys and engineering investigations, the anticipated opportunities for further discussions and the Resource Consent, Plan Change, Designation and Land purchase processes.</p>
CMP & MD Donnelly 1141 Omahu Road (On Site Meeting)	<p>1141 Omahu Road includes the overland flow path between basin 1 and the Flaxmere Drain. A general discussion was held surrounding the nature of the proposed zone and the stormwater solution. The remainder of the meeting focused on the details of the stormwater solution to be included within the resource consent application and the processes going forward. A summary of the anticipated effects of the system in different storm events was provided. Discussions were then held regarding the options available for the overland flow path for those long duration events when the basin overtops.</p> <p>Mr Donnelly raised concern over the level of water in the drain in the proximity of this house. He advised that he had only seen the drain full on one occasion since he had been there (approx 30 years). He felt that the basin should be moved and the Twyford Road reserve utilised as the overland flow path – negating the need for a flow path through private property. If the basin to stay in the same position a preference was expressed by Mr Donnelly for a piped solution through their property.</p> <p>Advice was provided about the flat gradients along the length of Omahu Road and the need for additional surveys and engineering investigations before a final design can be confirmed. Also regarding the anticipated opportunities for further discussions and the Resource Consent, Plan Change, Designation and Land purchase processes.</p>
<b>2010</b>	
November/December	
Letters were sent to all Land Owners in the vicinity.	An update with a draft Structure Plan, a summary of the proposed Plan Change and a description of the proposed stormwater system. An offer was made to meet with individually with all parties. The consultation resulting from this offer is discussed below.

JM Bostock Limited Tony Fraser and Neil Chittock 1139 Omahu Road	The discussion commenced with an explanation of the proposed new zone. However, the questions / concerns raised were primarily about the existing Kirkwood Road Deferred Industrial zone. The logic of proceeding with the proposed new zone Industrial 2 zone was questioned when the existing deferred zone is still in place. It was suggested that the Kirkwood Road deferment should be uplifted in advance of or at the same time of the proposed new re-zoning. Correspondence was then exchanged regarding the future of the deferred industrial zone on Kirkwood Road.
R and A Bastin 1327 Omahu Road (On Site Meeting)	Robyn and Andrew Bastin expressed concern at the proposed zone in its entirety. They consider that this will negatively impact upon them both in terms of physical effects but also in terms of land values. They considered that they should be compensated for this loss. They expressed concern regarding the value of the Councils public consultation and submissions processes. A detailed conversation was held regarding the proposed zone, servicing and staging. The removal of the requirement for a shelterbelt was questioned, as was the increased width of the zone. It was explained that the previously proposed shelterbelt was around the edge of the zone, not around individual sites within the zone. The deepening of the zone behind their site and the introduction of an infiltration basin were noted. The Bastin's also considered that: 1) the expanded zone would further 'hem in' their property and 2) that the basin would create nuisances. The Bastin's view that the value of their property for residential purposes would be severely impaired was unaltered.
David Osborne and Hamish Campbell	David Osborne and Hamish Campbell expressed their continued support for the proposed zone. They expressed no concerns regarding potential negative impacts on their properties – even on the residence on the Campbell property. A desire was however stated for the zone boundary to return to that of the previous structure plan - as a boundary adjustment subdivision was undertaken using that boundary.
Hustler 18 Jarvis Road	General support was expressed for the rezoning. Following a discussion of the potential development options for their site a desire was expressed for the zone to be wider.
N P Vesty Vesty family members Cnr Omahu & Twyford Rds (On Site Meeting)	After expressing support for an industrial rezoning, the Vesty family took the opportunity to show the layout of their orchard and the levels of the site. They felt that the boundaries of the zone and the position of the basin should be squared off to facilitate the orcharding on the remainder of the site. They sought the overall width of the zone to be larger.
Oak Glen Ltd 45 Ormond Road (Oak Avenue)	General support was expressed for the rezoning. The expansion of the zone to include part of their property was however suggested in light of the subdivision proposal which was before the Council.
April	
A letter / update were sent to all potentially interested parties.	Updates were provided with an offer for additional consultation. The consultation arising from this mainly consisted of queries regarding the timing of the project.



<b>2007</b>		
December		
Newsletter	An update was provided.	
June - July		
Structure Plan Letter Public Meetings Landowners Meeting Open Day Submissions	A summary was provided, along with an invitation for further consultation, to lodge a written submission, and to attend a public meeting and/or open day	A number of submissions were made re the Omahu Structure Plan and other feedback provided. Site specific comments made within submissions are summarised below. General issues included: limited storage in the Upper Kaiapo Rd stormwater detention basin; traffic safety, noise, the impact on dwellings in the surrounding area, that commercial service activities be allowed, and boundary plantings
Robyn Bastin 1319 Omahu Road	Do not support any industrial zoning of their or surrounding properties. Believe that this would devalue their house (1929). Can't see any mitigation measures that could alleviate situation. Concern re noise and look of industrial development. More traffic will be dangerous for children who bike to school.	
Oak Glen Ltd 45 Ormond Road (Oak Avenue)	Suggests a larger zone, including part of their property.	
K&K Bayley Various	Support zone. A greater mix of commercial activities should be allowed.	
Peter and Maureen Vesty 1139 Omahu Road	Supports an industrial re zoning. Would like a larger area zoned. Would like the area currently used for road formalised as such & to retain entrance on Omahu Road as access lot to property.	
Como Orchards (Previous Owner) 1447 Omahu Road Tui Dwight (Previous Owner) 1437 Omahu Road	Sought the inclusion of their property within the zone	
B&W Meade 1347 Omahu Road	Supports the re-zoning.	
Karl Hansen Twyford Road	Concerned about the split zoning of properties	

David Osbourne 1411 & 1393 Omahu Road, HG Campbell 1 Twyford Road E Ligan (Previous owner) 1431 Omahu Road	Supports the re-zoning. Suggests that the land within the proposed is of poor quality, has a soil disease and is not productive.	
Steele Ltd (Previous owner) 1203 Omahu Road	Supports the re-zoning. A greater mix of commercial activities should be allowed.	
John Winters(Previous owner) 1337 Omahu Road	Supports the re-zoning. Include a number of other properties.	
J & S Currie 18 Jarvis Road	Supports the re-zoning. Extend the boundary north.	
Omahu Land Trust (G&C Honor)	Supports the re-zoning. Questions use of shelterbelt plantings.	
M & M Donnelly 1141 Omahu Road	Opposed rezoning as it is adhoc and will affect their property.	
2003 - Industrial Site Selection / Initial Industrial Strategy		
Various correspondence and meetings	All affected and adjacent Land Owners were written to in February & November 2003.Other meetings & discussions were held as requested.	Comments were requested and consultation invited on the potential industrial expansion areas. The majority of directly affected landowners who responded supported the strategy. Landowners who opposed the strategy were concerned with the potential decline in amenity values, character and property values in the area. There had been a great deal of interest from industrial type businesses wanting to locate to this area. The extent of zone and effect on surrounding rural residential and orcharding properties and enterprises is also of concern. The protection of historic buildings and trees in this area and their possible future value was also an issue that was raised.

## Tangata Whenua

<b>2010</b>		
November		
Letters were sent to all potentially interested parties.	An update with a draft Structure Plan, a summary of the proposed Plan Change and a description of the proposed stormwater system. An offer was made to meet with individually with all parties. No issues were raised.	
June		
Hui	Letter sent to the following marae: Omahu; Ruahapia; Waipatu; Kohupatiki; Mangaroa Korongata; Waiohiki and other Manu Whenua organisations inviting them to a hui to discuss the stormwater issues & options for the proposed zone.	The only attendee was Peter Paku. No significant issues were raised. The presentation was provided to Mr Paku for dissemination to other interested parties.
April		
A letter / update were sent to all potentially interested parties.	Updates were provided with an offer for additional consultation. The consultation arising from this mainly consisted of queries regarding the timing of the project.	
<b>2007</b>		
Letter	Te Taiwhenua o Heretaunga, Ngati Kahungungu Iwi Inc, Taraia Marae, Waimarama Maori Committee, Omahu Marae, Waiohiki Marae, Mihiroa Marae, Runanga Marae, Korogata Marae, Mangaroa Marae, Houngarea Marae, Matahiwi Marae, Te Awhina Marae, Waipatu Marae, Ruahapia Marae	Summary, invitation / request for consultation, & an invitation to the open day
HDC Maori Advisory Standing Committee	Update & request for feedback	Allow for Servicing of nearby Maori communities, consider reverse sensitivity, and notify owners of that land not to be included in the proposed new areas post the 2003 strategy decision.
Hui / Meetings	July 9 – 13 was scheduled for the holding of hui / meetings as requested.	No requests were made for any such meetings.
2003		
February		
HDC Maori Advisory Standing Committee	Advice sought on appropriate consultation for the Industrial project and on the Industrial Strategy	To undertake consultation at marae level with all marae in the district

Meeting	Monty & Peter Paku	No concerns with Omaha
April		
Hui	Specific invitations sent out to: Ngati Kahungunu Iwi Inc; Te Taiwhenua o Heretaunga; Te Taiwhenua o Whanganui o Rotu; Ahuriri Maori Executive; Heretaunga Maori Executive; Marae Committees in Hastings District; Maori Committees in Hastings District; Whakatu Community Trust; MASC Members; HDC Councillors	12 representatives of local marae and Maori landowners attended. Advised need to exclude land under treaty claims, should undertake a cultural audit of land identified, and should avoid conflicts between residential and industrial uses. Raised questions about the impacts on property values if rezoning occurs.
HDC Maori Advisory Standing Committee	An update was provided on the Hui	
June		
Letter	Sent to all who were invited to / attended the Hui requesting comments & offering individual meetings. No such consultation was sought with respect to Omaha.	

## Stakeholders / Interested Parties

2010		
November		
Letters were sent to all Land Owners and interested parties.	An update with a draft Structure Plan, a summary of the proposed Plan Change and a description of the proposed stormwater system. An offer was made to meet with individually with all parties. The consultation resulting from this offer is discussed below.	
April		
A letter / update were sent to all potentially interested parties.	Updates were provided with an offer for additional consultation. The consultation arising from this mainly consisted of queries regarding the timing of the project.	
June -July 2008		
Correspondence and discussions	NZ Fire Service	The water supply necessary to comply with SNZ PAS 4509:2003
Correspondence	NZ Archaeological Society	No sites within the area
June & July 2007		
Structure Plan Letter Stakeholder Meetings Open Day Submissions	DoC, Napier CC, HBDHB, NZHPT, Sustaining Hawke's Bay Trust, Bay Watch Environmental Group, Royal Forest & Bird Protection Society, Fish & Game New Zealand, NZ Fire Service, HB Fruit growers Association, HB Wine Growers, HB Federated Farmers, NZ Pip Fruit, Horticulture New Zealand	A letter summarising the structure plan & inviting further consultation, & inviting all to stakeholder meetings and an open day was sent.  Submission received from: David Renouf, Hastings; Baywatch HB; and the HB Fruit growers Assn. The issues raised included: low quality / low productivity values of the land; protection of the right to farm adjoining properties; the potential for industrial creep; and pedestrian& cycle links.
June 2006		
Correspondence and discussions	NZ Fire Service	Proposals for fire fighting water supplies
2003		
Industrial Site Selection / Initial Industrial Strategy:  Various correspondence and meetings and focus group interviews	Napier CC, NZHPT, NZ Fire Service, Land user groups such as: New Zealand Fruit Growers Federation and Hawke's Bay Grape Growers Association, Federated Farmers, and an 'Industry Leaders Consultative Group'	The initial consultation undertaken by the Council in 2003 was intended to assist in the identification of the most appropriate sites for industrial zoning within the district.  The HB Fruit Growers Assn wishes the poorest quality land to be used first in order to protect prime land. They support an Omahu option provided consideration was given to the ability for orchardists to continue their normal practices without hindrance.

## Network Utilities

2010		
Various meetings / correspondence	Unison	Detailed discussion re proposed road layouts, asset relocations and the potential for undergrounding.
November 2008		
Various meetings / correspondence	Unison - Will equipment need to be moved?; No limits on supply to the zone; Undergrounding would be the last option location Seimens NZ Ltd - No gas supply in the area	
2007		
Meeting	HDC Works Committee	Requirements for the setback of shelterbelts, the undergrounding of services, use of Low Impact Design options
Stakeholder Meetings Submissions Open Day	No submissions were received from any Network utility. Nor was HDC aware that any network utility attended the open day.	
2004		
Various correspondence / Meetings	Transit / NZTA expressed no concerns re the Omaha Area. Unison asked Council to bear in mind undergrounding with street tree options. Telecom provided a plan locating all Telecom services.	
2003		
Various correspondence, discussions & Meetings	All Network were provided a Description of the preferred sites / proposed strategy and consultation was offered. Transit / NZTA had no particular comment re Omaha Road. Telecom supported the proposed industrial re-zonings. Transrail preferred Omaha, Irongate & Tomoana / Whakatu. Unison foresaw no particular concerns with proposed areas	

## HBRC

<b>2009 -2012</b>		
Various meetings, discussions and correspondence regarding the assessment of the options for the management of stormwater		
<b>2007 &amp; 2007</b>		
Consultation on the publicly circulated structure plan	Feedback was provided on the servicing options & assessment. Questions were raised regarding the assumptions within the assessment of the effects of the Upper Southland Drain option.	
<b>2005</b>		
Various correspondence	Stormwater Management	Models / options were provided by HBRC for consideration
<b>2004</b>		
Meeting Various correspondence	Structure Plans Flood Hazards / stormwater	The servicing of the areas was discussed. Major issues were identified with the capacity of the Upper Southland Drain to accept stormwater also with the discharge of stormwater over the unconfined aquifer. Updated flood maps were provided & potential quality effects raised
<b>2003</b>		
Various meetings and correspondence	The industrial expansion opportunities within the district, including Omahu.	Any stormwater entering the Raupare Stream Catchment would need to meet high quality standards. The on-going maintenance of on-site stormwater systems was queried. A need to consider best practice options was identified. Concern was expressed re industrial activity above the unconfined part of the aquifer and its possible effects on the aquifer.

**Appendix 7:**  
**Certificates of Title for the Properties**  
**Affected by the Proposed Infrastructure**