

PROPOSED HASTINGS DISTRICT PLAN
PROPOSED VARIATION 4:

APPENDIX 4

IONA
Urban Development Area

SECTION 32 SUMMARY EVALUATION REPORT



Proposed Hastings District Plan

**Proposed Variation 4: Iona Urban
Development Area**

Section 32 Summary Evaluation Report

Proposed Hastings District Plan

Proposed Variation 4: Iona Urban Development Area

Section 32 Summary Evaluation Report

**Prepared
by:**

Anna Sanders, Senior
Environmental Policy Planner
(Special Projects); Anna
Summerfield, Senior Policy
Planner; and Craig Scott,
Senior Policy Planner
Hastings District Council

**Reviewed
by:**

Rowan Wallis

**Policy Manager, Hastings
District Council**

Date:

29 March 2018

File Ref:

HP Records Reference

Status:

Final

Contents

1	Introduction.....	4
1.1	Purpose of this Report	4
1.2	Outline of Proposed Variation 4 to the Proposed Hastings District Plan	5
2	Section 32 Evaluation Requirements.....	5
2.1	The extent to which the objectives of the proposal are the most appropriate way to achieve the purpose of the RMA (s32(1)(a));	6
3	Statutory Basis for Addressing Long Term Land-Use & Infrastructure Issues in the District Plan	7
3.1	Part 2 (Purpose & Principles) of the RMA.....	7
3.2	Part 4 (Functions, Powers & Duties) of the RMA.....	8
3.3	Hawke’s Bay Regional Policy Statement.....	9
4	Background to Proposed Variation 4.....	10
4.1	Overview	10
4.2	Heretaunga Plains Urban Development Strategy.....	14
4.3	Change 4 to the Hawke’s Bay Regional Policy Statement	16
4.4	Sequencing of Planned Urban Development Areas in Hastings District.....	17
4.4.1	Contemporary Issues with Sequencing	18
4.5	Basis for Progressing Iona Urban Development Area.....	19
5	Community Engagement Process & Results	20
5.1	Community Engagement Process	20
5.2	Mana Whenua	22
5.3	Other Stakeholders	23
	Hawke’s Bay Regional Council	23
5.3.1	Ministry of Education.....	23
5.4	Summary of Community Engagement.....	24
5.5	Amendments to Proposed Rezoning and Structure Plan	24
6	Structure Plan Elements.....	24
6.1	RPS Structure Plan Requirements.....	25
6.2	Iona Structure Plan (ISP)	25
7	Confirm Suitability for Urban Residential Development	26
7.1	Regional Policy Statement (RPS) Considerations.....	26
7.2	Urban Design.....	28
7.3	Connectivity, Social Infrastructure and Open Space	33
7.4	Transportation Effects	34
7.4.1	Cycling & Pedestrian Provision	37
7.5	Services Infrastructure	38
7.5.1	Water Infrastructure.....	40
7.5.2	Wastewater Infrastructure	40
7.5.3	Stormwater Infrastructure.....	41
7.5.4	Gas Infrastructure.....	42
7.5.5	Telecommunications.....	43
7.5.6	Power Infrastructure.....	43

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

7.6	Effect on Versatile Soils	43
7.7	Reverse Sensitivity Effects	47
7.7.1	Right to Farm	47
7.7.2	Reverse Sensitivity associated with ‘Intensive Rural Production’ Activities..	49
7.7.3	Provision for Existing Activities within the Development Area	50
7.8	Liquefaction and Geotechnical Assessments.....	50
7.8.1	Liquefaction	50
7.8.2	Geotechnical	51
7.9	Natural Hazards Constraints	55
7.10	Natural/Ecological/Landscape/Historic Heritage Features	56
7.10.1	Significant Natural, Ecological & Landscape Areas or Features.....	57
7.10.2	Historic Heritage	58
7.11	Culturally-Significant Features & Values.....	64
7.12	Other Matters	65
7.12.1	National Environmental Standard for Managing Contaminants in Soils	66
7.12.2	Economic Impacts.....	67
7.12.3	Defendable Urban Boundary	68
7.13	Conclusion as to Suitability.....	68
8	Appropriateness, Efficiency & Effectiveness of Proposed Variation 4 in Achieving the Purpose of the RMA.....	69
8.1	Is the Proposal the Most Appropriate Way to Achieve the Purpose of the RMA?	69
8.1.1	Evaluation of the Proposed New Variation 4 Objectives.....	72
8.2	Are the Provisions the Most Appropriate Way to Achieve the Purpose of the Proposal?	115
8.2.1	Zoning Provisions.....	116
8.2.2	Zone Boundary Options	123
8.2.3	Specific Neighbourhood Provisions within the New Iona Special Character Residential Zone	130
8.2.4	SECTION 32 EVALUATION IONA PLATEAU NEIGHBOURHOOD	148
8.3	ISSUES	149
8.3.1	METHODS: RULES FOR THE BREADALBANE AVENUE SPECIAL CHARACTER AREA.....	150
8.4	Stapleford Park Development Rezoning – Option Evaluation	161
8.5	Risks of Acting or Not Acting.....	163
9	Summary & Conclusions	163
	Appendices	165
	Appendix A – Map of Zoning Extent	
	Appendix B – Current Zoning Map	
	Appendix C – Residential Growth Area Background Information	
	Appendix D – Project Newsletters	
	Appendix E – HPUDS Map for the Iona Area	
	Appendix F – Consultation Log	
	Appendix G – Issues and Options Paper	
	Appendix H – Community Feedback on the Issues and Options Paper	
	Appendix I – Summary of Feedback Received on the Draft Iona Structure Plan	
	Appendix J – Structure Plan	

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Appendix K – Transport Assessment

Appendix L – Stormwater and Wastewater Assessment Servicing Assessment

Appendix M – Wastewater Report

Appendix N- Summary Stormwater Assessment Summary

Appendix O - Landcare Soil Factsheets

Appendix P – Geotechnical Report – Triangle

Appendix Q – Geotechnical Report – Hill

1 Introduction

1.1 Purpose of this Report

This report presents the summary evaluation of proposed Variation 4 to the Proposed Hastings District Plan (Proposed Plan), in accordance with Section 32 of the Resource Management Act 1991 (RMA).

Proposed Variation 4 seeks to rezone a new greenfield growth area and infill area on the western outskirts of Havelock North for residential development, and inserts an accompanying structure plan into the Proposed Plan. The extent of the rezoning area and new zone map is shown below.



This report is required to accompany proposed Variation 4 at the time of public notification under Schedule 1 of the RMA.

The Environment Minister recently approved a request to adopt a Streamlined Planning Process (SPP) for the Iona Variation, and the direction was published in the New Zealand Gazette on 28 February 2018¹. While the variation is being considered under SPP it does not change the need to meet RMA Section 32 requirements. In preparing the variation for notification, a significant proportion of this assessment and resultant variation was carried out before the Ministers direction was issued.

1.2 Outline of Proposed Variation 4 to the Proposed Hastings District Plan

Proposed Variation 4 sets out to rezone a greenfield growth area identified in the Hawke's Bay Regional Policy Statement (RPS) and Heretaunga Plains Urban Development Strategy (HPUDS) for urban residential purposes in the Proposed Hastings District Plan (Proposed Plan). A description of the rezoning extent is outlined in Section 4 below.

In summary, the proposed variation involves:

- i) Rezoning approximately 55.4 hectares of land on the western fringe of Havelock North from a combination of Rural Residential, Deferred Residential and Character Residential to provide for the Districts residential growth needs (43.4 hectares of residential land less roading needs and 12 hectares of open space reserves). The rezoning extent is depicted in the map attached to this report as **Appendix A** and involves both infill (Breadalbane Avenue) and greenfield areas (Iona triangle and hill areas);
- ii) inserting an accompanying Structure Plan and structure plan provisions for the area into the Proposed Plan; and
- iii) consequential amendments to the Proposed Plan.

No designations are involved in the rezoning as new roads are to be vested in Council, along with services. An existing portion of Iona Road is to be stopped and realigned using the process under the Local Government Act 1974 as the land concerned is in single ownership and access needs to be maintained.

2 Section 32 Evaluation Requirements

Clause 5(1) of Schedule 1 of the RMA, requires preparation of an evaluation report for any proposed plan (including any proposed variation to a proposed plan) in accordance with section 32, and for Council's to have particular regard to that report when deciding whether to proceed with the statement or plan.

Section 32 evaluations effectively 'tell the story' of what is proposed and the reasoning behind it. The Section 32 evaluation aims to communicate the thinking behind the proposal to the community and to decision-makers. The evaluation also provides a record for future reference of the process, including the methods, technical studies, and consultation that underpin it, including the assumptions and risks.²

¹ <https://www.gazette.govt.nz/notice/id/2018-go982>

² Ministry for the Environment. 2014. *A guide to section 32 of the Resource Management Act: Incorporating changes as a result of the Resource Management Amendment Act 2013*. Wellington: Ministry for the Environment.

An evaluation report is required to examine both:

2.1 The extent to which the objectives of the proposal are the most appropriate way to achieve the purpose of the RMA (s32(1)(a));

- And whether the provisions in the proposal are the most appropriate way in which to achieve the objectives by identifying other reasonably practicable options for achieving the objectives; assessing the efficiency and effectiveness of the provisions in achieving the objectives; and summarizing the reasons for deciding on the provisions (s32(1)(b)).

The evaluation report must contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal (s32(1)(c)).

Such an evaluation must take into account:

- the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including opportunities for economic growth and employment that are anticipated to be provided or reduced (s32(2)(a)) and, if practicable, quantify them (s32(2)(b)); and
- the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions (s32(2)(c)).

Variation 4 is an ‘amending proposal’ in that it will amend the Proposed Hastings District Plan (PDP) (which is an ‘existing proposal’). Therefore under s 32(3), the examination must relate to the provisions and objectives of Variation 4 and the objectives of the Proposed District Plan which are relevant to Variation 4 and will remain in place if Variation 4 takes effect. Such objectives include those in Section 2.4 – Urban Strategy and Section 8.1 – Havelock North Strategic Management Area. For the Breadalbane Avenue area, the existing objectives of Section 8.2 – Havelock North Residential Environment are also relevant.

In this case, proposed Variation 4 (the amending proposal) includes a number of new objectives in Section 8.1 - Havelock North Strategic Management Area and 8 new objectives as part of a proposed new Plan Section 8.3 – Iona Special Character Zone.

The overall purpose of the proposal’, is:

Purpose of the Proposal:

To make additional land available for ‘greenfield’ housing development in the Iona Road area of Havelock North.

The ‘provisions’ to be evaluated are:

Provisions: i) *the Iona Character Zone Plan policies and methods; and*
ii) *in the case of Breadalbane Avenue, any Plan provisions that will apply to this area.*

The first part of the evaluation therefore has to address:

- *‘Whether the objectives of Variation 4 are the most appropriate way to achieve the purpose of the Resource Management Act.*

Secondly, in evaluating the provisions of the proposal in terms of efficiency and effectiveness, the evaluation has to address:

- *‘Whether the provisions to be introduced or amended by Variation 4 are the most appropriate way to achieve the objectives of Variation 4 and those objectives in Sections 2.4, 8.1 and 8.2 as relevant.*

The overall approach of the plan section is to achieve the sustainable management of the Iona Special Character Zone by managing the effects of land use activities and development.

The following evaluation fulfils Council’s statutory obligations under Clause 5(1) of Schedule 1 of the RMA, in accordance with section 32, for proposed Variation 4 to the Proposed Plan.

3 Statutory Basis for Addressing Long Term Land-Use & Infrastructure Issues in the District Plan

In terms of managing long-term land use associated with urban growth and associated strategic infrastructure, Section 74 of the RMA outlines the requirements for District Councils in terms of the preparation of, and any change to, their district plan in accordance with their functions under section 31 and the provisions of Part 2 of the RMA.

3.1 Part 2 (Purpose & Principles) of the RMA

Managing the provision for long term land-use and infrastructure aligns closely with the purpose of the RMA, which is *‘the sustainable management of natural and physical resources’*. Section 5 of the RMA defines ‘sustainable management’ as:

“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;*
 - (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.”*
-

Proposed Variation 4 directly relates to providing for the long term provision of land for urban growth in the Hastings District. Part 2 requires that this occurs in a way and at a rate which enables people and communities to provide for their social, economic and cultural wellbeing, and meeting the reasonably foreseeable needs of future generations; safeguarding the life-supporting capacity of air, water, soil and ecosystems; and addressing adverse effects on the environment.

Section 7 identifies other matters requiring particular regard. Of particular relevance are:

-
- b) the efficient use and development of natural and physical resources;*
 - ba) the efficiency of the end use of energy;*
-

- c) the maintenance and enhancement of amenity values;*
 - 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.*
-

The land concerned has been identified through the Heretaunga Plains Urban Development Strategy (HPUDS) process and subsequently in the Hawke’s Bay Regional Policy Statement (RPS), as an Appropriate Greenfield Residential Development Area. This indicates suitability in terms of efficient use and development of the land resource, maintaining and enhancing amenity values and the quality of the environment, and any finite characteristics of resources, and having taken into account the end use of energy and the effects of climate change. The relationship of this proposed variation to the Proposed Plan to HPUDS and the RPS, is further addressed in the following sections of this report.

3.2 Part 4 (Functions, Powers & Duties) of the RMA

The particular statutory functions of the District Council in giving effect to the Act as contained in section 31 of the Resource Management Act 1991 also provide a clear mandate for addressing long term provision for urban growth and provision of associated strategic infrastructure issues in a District Plan.

In particular:

-
- “(1)(a) the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district:*
 - (b) the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of—*
 - (i) the avoidance or mitigation of natural hazards; and*
 - ...*
 - (iia) the prevention or mitigation of any adverse effects of the development, subdivision, or use of contaminated land:*
 - ...*
 - (d) the control of the emission of noise and the mitigation of the effects of noise:*
 - (e) the control of any actual or potential effects of activities in relation to the surface water in rivers and lakes:*
 - (2) the methods used to carry out any functions under subsection (1) may include the control of subdivision.”*
-

Proposed Variation 4 expressly seeks to establish and implement plan provisions to achieve integrated management of the effects of a new urban development area in the Hastings District. Existing zone and district wide rules and standards in the Proposed Plan (and proposed amendments to provisions in the proposed variation) provide the mechanism for controlling any actual or potential effects of the subdivision, use and development of new urban development areas within the District.

3.3 Hawke’s Bay Regional Policy Statement

In addition, Section 75 of the RMA states that a district plan ‘*must give effect to*’ any regional policy statement (RPS).

Of particular relevance in terms of long term provision for urban growth and strategic infrastructure, the Hawke’s Bay Regional Policy Statement dedicates a whole chapter to issues, objectives, policies, methods and anticipated environmental results for urban development and the strategic integration of infrastructure across the Region, and particularly within the Heretaunga Plains, titled ‘*Managing the Built Environment*’ (Chapter 3.1B of the RPS).

This includes planned provision for urban development and integration of land use with significant infrastructure. Of particular relevance, the RPS places priority on:

- establishing a compact and strongly connected urban form (OBJ UD1);
- intensification of residential areas (OBJ UD2);
- planned provision for urban development in a planned and staged manner, and integrated with the provision of strategic and other infrastructure (OBJ UD4 & OBJ UD5);
- retention of the versatile land of the Heretaunga Plains, efficient utilization of existing infrastructure and planned infrastructure (POL UD1);
- the establishment of urban limits and criteria for determining future residential greenfield growth areas (POL UD4.1 & POL UD4.2);
- identification of areas appropriate and inappropriate for residential greenfield growth areas in the Heretaunga Plains Sub-Region (POL UD4.3 & POL UD4.4);
- provision for papakainga and marae-based development (POL UD6.1 & POL UD6.2);
- achieving minimum net densities within greenfield growth areas (POL UD8);
- providing for sequencing/staged release of new greenfield growth areas (POL UD9.1 & POL UD9.2);
- requirement for comprehensive structure plans for any new greenfield growth areas (POL UD10.1, POL UD10.2, POL UD10.3, POL UD10.4 & POL UD11); and
- having regard to various matters when preparing or assessing any rezoning, structure plans or other provisions for the development of urban activities (POL UD12).

Relevant Anticipated Environment Results in the RPS include:

AER UD1	<i>Availability of sufficient land to accommodate population and household growth, as and where required, while retaining versatile land for existing and foreseeable future primary production.</i>
AER UD2	<i>Balanced supply of affordable residential housing and locational choice in the Heretaunga Plains subregion.</i>
AER UD3	<i>More compact, well-designed and strongly connected urban areas.</i>
AER UD4	<i>Napier and Hastings retained as the primary urban centres for the Heretaunga Plains sub-region.</i>

<i>AER UD5</i>	<i>Encroachment of urban activities (residential, commercial, industrial) onto the versatile land of the Heretaunga Plains is confined to defined greenfield growth areas within specified urban limits.</i>
<i>AER UD6</i>	<i>The retention, as far as is reasonably practicable, of the versatile land of the Heretaunga Plains for existing and foreseeable future primary production.</i>
<i>AER UD7</i>	<i>Efficient utilisation of existing infrastructure.</i>
<i>AER UD8</i>	<i>Efficient utilisation of infrastructure which has already been planned and committed to by a Local Authority (e.g. by funding) but not yet constructed.</i>
<i>AER UD9</i>	<i>Increased use of public transport and active transport modes (cycling, walking), reduced dependency on the private motor vehicle and reduced energy use.</i>
<i>AER UD10</i>	<i>Planned provision for, and protection of, infrastructure to support existing development and anticipated urban growth in defined growth areas.</i>
<i>AER UD11</i>	<i>Urban activities and urban development maintains groundwater and surface water quality and habitat health.</i>
<i>AER UD12</i>	<i>Urban development is avoided in areas identified as being at unacceptable risk from natural hazard (flooding, coastal inundation, coastal erosion, liquefaction, land instability).</i>
<i>AER UD13</i>	<i>New development is appropriately serviced by wastewater, stormwater, potable water and multi-modal transport infrastructure.</i>

The preparation of proposed Variation 4 to the Proposed Hastings District Plan is therefore subject to a statutory obligation to give effect to the above.

In summary, the RPS sets a vision for planned, compact and well-designed urban development within defined urban limits on the Heretaunga Plains, with limited encroachment on the versatile soils of the Plains; and a staged approach to the release of land for greenfield growth which ensures balanced supply (both in terms of price and location) and the efficient, planned provision of public infrastructure.

‘Giving effect to’ the RPS is addressed in the following sections of this report.

4 Background to Proposed Variation 4

4.1 Overview

Proposed Variation 4 rezones an area of land on the western side of Havelock North a suburb of Hastings City to provide for future greenfield and in the case of Breadalbane Avenue infill residential growth. The proposed rezoning area is depicted in the map attached to this report as **Appendix A**. The current Proposed District Plan zones for the area to be rezoned are depicted in the map appended to this report as **Appendix B**.

The greenfield area is bisected by Iona Road, which is proposed to be realignment around a reserve area currently known as ‘Bull Hill’ (approximately 20 metres high). The topography of this portion of the rezoning area is flat to gently sloping within the ‘Iona triangle’ which is flanked by Iona and Middle Roads. This area is characterised by existing mature trees and established gardens surrounding a large home, and two other dwellings and associated accessory buildings. This parcel is primarily used for lifestyle purposes with some grazing of animals. The portion of the rezoning area which sees an extension to Reynolds Road, adjoins

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

existing established properties. This part of the area is currently zoned Havelock North Character Residential, but it is proposed to integrate it into the remainder of the 'Iona triangle'.

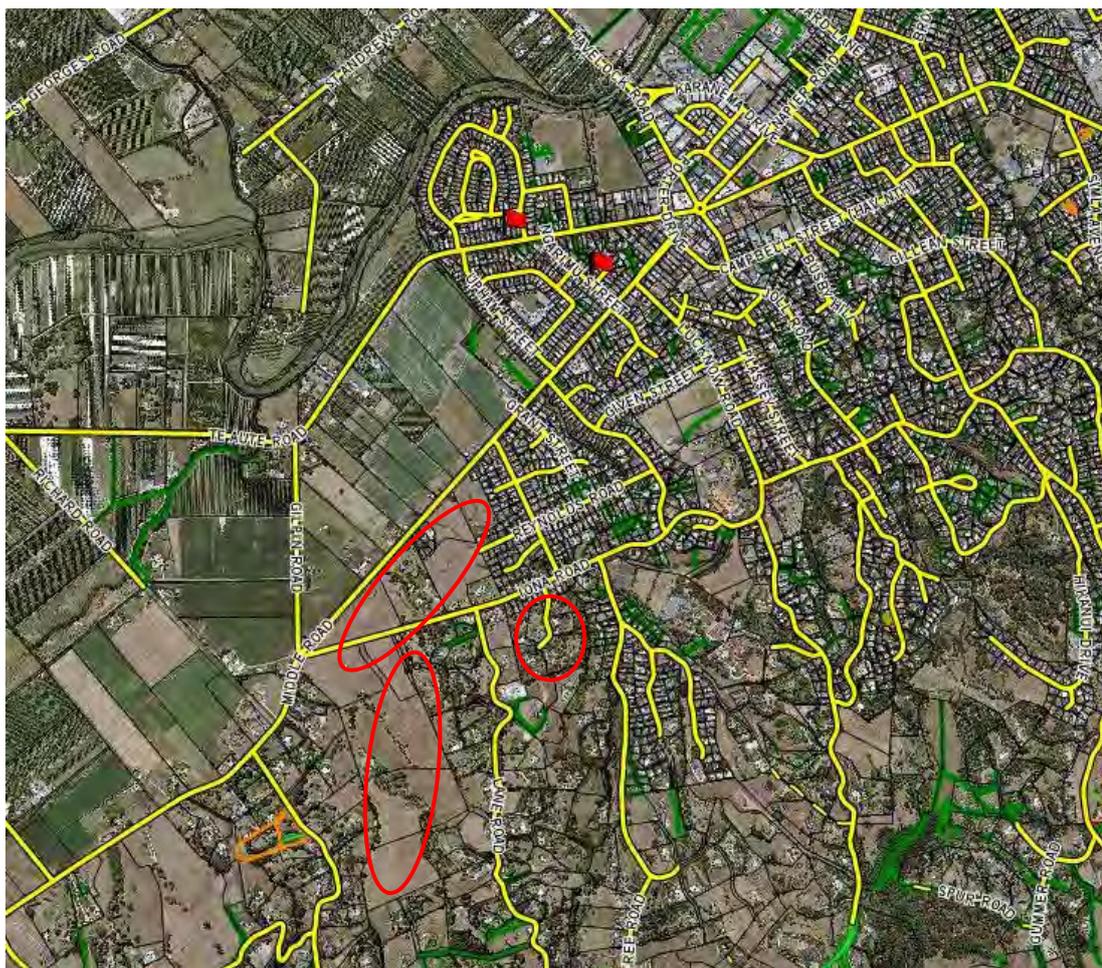
The portion of the rezoning area positioned to the south of Iona Road, lies between Lane and Endsleigh Roads and gently rises from Iona Road. It is made up of a series of valley areas and ridgelines which are orientated towards Iona Road and former part of the lower Havelock Hills (Kohinuraukau Range). The hill block is accessed via Iona Road and an access lot to Lane Road. It is proposed that no residential access be provided to any future development via Lane Road. Within the longest valley of the site is a series of partially manmade connected ponds that form an enhanced wetland fed by surface and groundwater. These ponds have been planted in both natives and exotic species. The remainder of the site is used for grazing purposes. The only building onsite is a hay barn positioned on the lower slopes towards the Iona Road frontage.

The rezoning area is part of the western approach experience to Havelock North Village. Iona Road and Middle Road in the vicinity of the site, form the boundary between the Havelock Hills and the Heretaunga Plains. Situated on the fringe of Havelock North urban area, the site is bounded by rural residential lifestyle properties.

Breadalbane Avenue the infill portion of the rezoning is a small residential enclave located to the south of Iona Road. It is accessed via a small cul-de-sac, and sits surrounded by existing residential and rural residential properties. The cul-de-sac alignment follows that of the original driveway to the Chambers homestead. Six existing properties sit within this portion of the rezoning area.

The rezoning extent and its proximity to the Havelock North Village is depicted in the map below.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan



Land within the Iona triangle has been identified as needed for residential purposes since the late 80's with the remainder of the triangle, lower hill areas and Breadsall Avenue identified in 1993. The upper hill areas has been identified for future greenfield urban expansion since 2010.

This entire area was identified in HPUDS in 2010 as one of a number of areas for greenfield residential growth to 2045, and subsequently in the RPS as being an appropriate residential greenfield growth area within the Heretaunga Plains.

The area was then included in Hastings District Council's prioritisation of greenfields residential areas adopted by Council in 2011 and was scheduled for development in the 2026 to 2046 period – on that basis, because the Iona development area was not anticipated within the 10-year life of the District Plan, no structure planning had been carried out and the requested rezoning of the hill area to large lot residential as part of the Proposed Plan review could compromise the future efficient use of this land, it was not included in the recent Proposed Hastings District Plan as part of its 10-year review. However, at the time decisions on the Proposed Plan were made, it was decided to include the Iona triangle and hill areas in Appendix 2 of the Plan as an 'Area that may meet Greenfield needs within the life of the Plan'.

Recent issues with unsuitability/unavailability of growth areas scheduled for earlier release (namely, the planned Arataki Extension) has resulted in a reconsideration of the timing of the release of the Iona area for greenfield residential development. These sequencing issues were fed into the review of the overarching HPUDS strategy itself. At its meeting on September 24 2015, Council resolved that officers be instructed to progress the preparation of a Structure Plan for the Middle/Iona and Havelock Hills areas on the south western side of Havelock North. Consequentially this area is now needed for residential growth needs within the life of the Proposed Plan. A comprehensive background document to these identified residential growth areas prepared as part of Councils Streamlined Planning application is appended to this report as **Appendix C**.

Following the release of the Proposed District Plan decisions on submissions in September 2015, the Lowe Family lodged two appeals with the Environment Court in respect to the Proposed District Plan's provision for housing in the Iona area. Both appeals seek the more rapid advancement and more intensive development of the identified housing areas. Twenty seven parties (primarily landowners adjoining both the triangle and hill sites) notified their interest to become parties to the Appeal (or section 274 parties). Given the reprioritisation of the Iona area and the resolution of Council to progress the structure plan for this identified urban growth area, the Council requested leave from the Environment Court to pursue mediation of this Appeal via a collaborative design process. This leave was given and these appeals have been, and remain (at the time of writing), on hold. It is intended that once the variation to rezone the land is notified that the PDP appeals will likely be withdrawn by the appellant.

The collaborative design process adopted has involved representatives from Council, 274 parties and the landowner. At the outset, the group established a set of objectives and engaged the services of a Landscape Architect to assist guide the design process. This process resulted in some detailed design concepts emerging which culminated in the release of a draft Structure Plan in August last year for community feedback. These comments have helped refine the Iona Structure Plan which part of this rezoning proposal. Attached to this report as **Appendix D** is a series of newsletters from the Working Group and Council which provide a useful summary of the design process and project outline worked through.

The Hastings District has now been identified as a medium growth area under the National Policy Statement on Urban Development Capacity (NPSUDC), which requires that Council show how it is providing sufficient development capacity to meet the needs of people and communities and future generations in urban environments. The NPSUDC requires medium growth councils to provide an additional margin of feasible development capacity over and above projected demand of at least 20% in the short and medium term and 15% in the long term (PC1).

In making provision for these margins, it needs to be understood that residential development in Hastings is divided between the areas of Hastings and Havelock North and there are distinct and different markets operating between the two. The uptake rates for greenfield sites have been monitored by the Council for a number of years, which is useful in identifying peaks and troughs. On average during periods of higher market activity there have been between 100

and 120 new greenfield sites created per year over both the Hastings and Havelock North markets.

Havelock North currently accounts for between 55 and 60 % of the greenfield demand. We are currently experiencing a period of high demand. Council is monitoring and working to ensure that there is a sufficient supply of sections to meet demand in the Hastings and Havelock North areas. The current level of available residential sites within Havelock North sits at 9, which requires Council to act expeditiously in order to meet the responsive objectives of the NPS and especially Policy PC1.

Bringing forward the Iona development area has the benefit of ensuring that there is sufficient capacity to meet housing needs for Havelock North as required under Policy PA1 of the NPS. PA1 states:

PA1: Local authorities shall ensure that at any one time there is sufficient housing and business land development capacity according to the table below³:

Short term	<i>Development capacity must be feasible, zoned and serviced with development infrastructure.</i>
Medium term	<i>Development capacity must be feasible, zoned either:</i> <ul style="list-style-type: none"> • <i>serviced with the development infrastructure, or</i> • <i>the funding for the development infrastructure required to service that development capacity must be identified in the Long Term Plan under the Local Government Act 2002.</i>
Long-term	<i>Development capacity must be feasible, identified in relevant plans and strategies, and the development infrastructure required to service it must be identified in the relevant Infrastructure Strategy required under the Local Government Act 2002.</i>

The following provides a more detailed account of the background to development of proposed Variation 4.

4.2 Heretaunga Plains Urban Development Strategy

In 2009, the three local authorities with jurisdiction over the Heretaunga Plains (Hawke’s Bay Regional Council, Napier City Council and Hastings District Council), partnered on the development of a comprehensive review of the strategic direction for long term growth on the Heretaunga Plains, out to 2045. The Heretaunga Plains Urban Development Strategy (HPUDS) was formally adopted by the partner Councils in August 2010.

HPUDS recognises that the Heretaunga Plains is a high value, resource rich area, and that the soils and water resources are finite and under increasing pressure and should be better managed. The Strategy purpose is “to assist, in a collaborative manner, the local authorities

³http://www.mfe.govt.nz/sites/default/files/media/Towns%20and%20cities/National_Policy_Statement_on_Urban_Development_Capacity_2016-final.pdf, page 11

to plan and manage growth on the Heretaunga Plains while recognising the value of water and soil as a significant source for ongoing food production and as a major contributor to the regional economy”⁴.

The Strategy adopted a ‘compact development’ settlement pattern for the Heretaunga Plains⁵ – with defined urban limits; higher density development and intensification over time; quality living environments, high levels of amenity, and thriving, resilient communities and economy; and integrated, sustainable and affordable infrastructure provision; while minimising the need for urban development on versatile soils.

The Strategy set new residential density targets to be achieved over time (by 2045), of 15 households per hectare (gross density targets) – described as reflecting a ‘Small Lot Suburban’ density⁶.

The Strategy identified growth areas for the Heretaunga Plains beyond 2015. These sites were selected where:

- Soils are of lesser versatility; or
- Productive capacity is compromised;
- Clear natural boundaries exist; or
- Logical urban edge greenbelts can be created;
- Greenbelts could provide opportunities for walking and cycling connections;
- Sites support compact urban form, can be serviced at reasonable cost and integrated with existing development.⁷

The Iona area is specifically identified in HPUDS as one of the greenfield growth areas for Hastings City, beyond 2015⁸.

One of the expectations in HPUDS is:

“That the Strategy be reviewed every five years after the results of the national census are available. In addition, if there is a substantial change affecting the assumptions that underlie the Strategy then a review of strategy actions will commence at the discretion of the strategy partners.”⁹

HPUDS underwent its first 5-yearly review last year, including updating trends in demographics from Census 2013 data, and reviewing the assumptions on which HPUDS is based, underpinned by monitoring of various growth drivers and trends over the past 5 years.

The draft outcomes were released for community input, which submissions were received on Iona with the final review document released and adopted by the three partner Councils earlier this year. In it the Iona area is reconfirmed as a residential growth area for the period 2015-2045, with it specifically stating at page 41 for the lower hills area *“This area of land is located between Breadalbane Ave, Lane Road and Endsleigh Road Middle Road/Te Aute Road*

⁴ HPUDS 2010, page 3

⁵ HPUDS 2010, page 12

⁶ HPUDS 2010, page 59-60

⁷ HPUDS 2010, page 57

⁸ HPUDS 2010, Section 4.3.2 Growth Areas (page 58), Section 8.8.3 Residential Greenfield Sites (page’s 173/174), Map 3 Heretaunga Plains Settlement Pattern (page 175), & Map 22 – Howard Street (page 190)

⁹ HPUDS 2010, Section 5.7 Monitoring and Review, Action 3, page 75

Block. It has a number of locational advantages being close to existing development for services, not impacting on versatile soils for productive purposes, not conflicting with adjacent land uses, not impacting on landscape qualities and not impacting of transport infrastructure. It may be marginally more expensive to develop due to the rolling nature of the topography. It is recommended as a greenfield growth area for the period 2015-2045”.

Comments regarding the other HPUDS areas included within the proposed rezoning area are included in the original document. The HPUDS map for the Iona area is attached to this report as **Appendix E**. It is noted that the proposed rezoning area subject to this variation is slightly smaller than that identified in HPUDS. This is covered in the evaluation section of this report.

4.3 Change 4 to the Hawke’s Bay Regional Policy Statement

In response to a specific ‘Action’ in HPUDS to integrate HPUDS in regional and district plans¹⁰, Hawke’s Bay Regional Council developed and notified Change 4 to its Regional Policy Statement (RPS) in December 2011 (operative January 2014). This Change embedded the HPUDS’s settlement pattern and principles into the RPS with insertion of a new Chapter 3.1B Managing the Built Environment (refer section 2.2.3 of this report above).

The area subject to this variation (Middle Road/Iona/Hills) is specifically identified in the RPS as one of the appropriate greenfield growth areas within the Heretaunga Plains sub-region, in Policy POL UD4.3.

APPROPRIATE RESIDENTIAL GREENFIELD GROWTH AREAS (HERETAUNGA PLAINS SUB-REGION)

POL UD4.3 *Within the Heretaunga Plains sub-region, areas where future residential greenfield growth for the 2015-2045 period has been identified as appropriate and providing choice in location, subject to further assessment referred to in POL UD10.1, POL UD10.3, POL UD10.4 and POL UD12, are:*

- a) Bay View*
 - b) Park Island / Parklands*
 - c) Taradale Hills*
 - d) Te Awa / The Loop*
 - e) Arataki Extension*
 - f) Haumoana (south of East Road) / Te Awanga*
 - g) Havelock North Hills (lower extension)*
 - h) Howard Street*
 - i) Irongate Road / York*
 - j) Kaiapo Road*
 - k) Lyndhurst*
 - l) Lyndhurst Road extension*
 - m) Maraekakaho rural settlement*
 - n) Middle Road / Iona / Hills*
 - o) Murdoch Road / Copeland*
 - p) Omaha / Bridge Pa (marae-based)*
 - q) Waimarama*
- All indicative areas are shown in Schedule XIVa.1b*

¹⁰ HPUDS 2010, Section 5.9 Development and Integration of Plans and Policies, Action 2, page 79

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

The Strategy and the RPS (through policies POL UD9.1 & POL UD9.2), both left it up to the territorial local authorities to determine the prioritisation and sequencing of the release of greenfield growth areas within their respective districts:

SEQUENCING (HERETAUNGA PLAINS SUB-REGION)

POL UD9.1 *In the Heretaunga Plains sub-region, district plans shall provide for the strategic integration of infrastructure and development through the staged release of new greenfield growth areas.*

SEQUENCING DECISION-MAKING CRITERIA (HERETAUNGA PLAINS SUB-REGION)

POL UD9.2 *In the Heretaunga Plains sub-region, the sequencing of development for greenfield growth areas shall be based on the following criteria:*

- a) Availability and costs of infrastructure services (water, wastewater, stormwater, transport and electricity distribution);*
- b) The operational capacity of strategic infrastructure (particularly strategic transport networks); and*
- c) Balanced supply and locational choice across the sub-region.*

Other factors that may be taken into account include (but are not limited to):

- d) The accessibility and capacity of social infrastructure (particularly community, education, sport and recreation facilities and public open space);*
- e) The sustainable management of natural and physical resources;*
- f) The availability of employment opportunities in and near the greenfield growth areas;*
- g) The willingness and timeframe of landowners to participate in greenfield growth plans;*
- h) The opinion of developers regarding land for greenfield growth to ensure the sequencing is feasible and will result in positive growth and investment.*

Sequencing in the Hastings District context is addressed below in section 4.4 of this report.

4.4 Sequencing of Planned Urban Development Areas in Hastings District

Hastings District Council adopted a sequencing of greenfield residential areas for Hastings and Havelock North on 30 November 2017, as follows:

Growth-Area* ¹¹	2018-2023 ¹¹	2023-2028 ¹¹	2028-2033 ¹¹	2033-2038 ¹¹	2038-2043 ¹¹	2043-2048 ¹¹
Northwood ¹¹	70 ¹¹					
Lyndhurst-2 ¹¹	200 ¹¹	70 ¹¹				
Howard Street ¹¹	185 ¹¹	85 ¹¹				
Lyndhurst Extension ¹¹		155 ¹¹	75 ¹¹			
Kaiapo ¹¹		125 ¹¹	80 ¹¹	100 ¹¹	35 ¹¹	10 ¹¹
Copeland ¹¹			20 ¹¹	75 ¹¹	40 ¹¹	70 ¹¹
Irongate ¹¹						-40 ¹¹
Iona/Middle ¹¹	210 ¹¹					
Havelock Hills ¹¹	15 ¹¹	75 ¹¹	50 ¹¹	20 ¹¹		
Brookvale Romanes ¹¹	10 ¹¹	175 ¹¹	125 ¹¹	155 ¹¹	75 ¹¹	30 ¹¹
Coastal/Other ¹¹	25 ¹¹	25 ¹¹	25 ¹¹	25 ¹¹	25 ¹¹	25 ¹¹
Total¹¹	715¹¹	710¹¹	375¹¹	375¹¹	175¹¹	175¹¹

¹¹Note: This programme may need to be adjusted if the Arataki Extension is re-instated as a growth area following resolution of odour issues associated with the nearby mushroom farming operation.¹¹

11

¹¹ Source: Table 7 of the report "HPUDS 2017 Proposed Resetting of Greenfields Priorities and Sequencing for the Long Term Plan" presented to Council's Policy & Strategy Committee on 30 November 2017 – and subsequently adopted by Council.

Middle Road/Iona and Havelock Hills was included in the adopted Sequencing of Greenfield Growth Areas for Hastings, which envisaged that these areas would be developed as needed in the 2018-2023 time period in the case of Middle Road/Iona and from 2018 in the case of the Havelock Hills.

Previously priorities sequencing adopted in 2011 had these areas, as being envisaged in 2021-2026 time period in the case of Middle Road/Iona and from 2026 in the case of the Havelock Hills. On that basis, when the Hastings District Plan Review commenced soon after, culminating in notification of the Proposed Plan in 2013, the Iona growth areas were not included as part of the 10-year horizon for this District Plan Review cycle, as it was scheduled to be developed in a later period. However, as covered above it was included in Appendix 2 of the Proposed Hastings District Plan as *'areas that may meet greenfield needs within the life of the plan'* to allow for flexibility to interchange areas and to signal growth areas to property owners in the locality.

4.4.1 Contemporary Issues with Sequencing

The 2011 Hastings Greenfields Residential Area Prioritisation and Sequencing report (and latter 2017 report) acknowledged that some flexibility to interchange areas needed to be preserved, and that there were other sequencing options available.

As outlined in section 3.3 above, POL UD9.1 of the RPS requires district plans to provide for the staged release of new greenfield growth areas, and POL UD9.2 provides criteria for decisions around the sequencing of greenfield growth areas, including:

- Availability and costs of infrastructure services;
- Operational capacity of strategic infrastructure;
- Balanced supply and location choice;
- Accessibility and capacity of social infrastructure;
- Sustainable management of natural and physical resources;
- Availability of employment opportunities in and near greenfield growth areas;
- Willingness and timeframe of landowners to participate in greenfield growth plans;
- Opinion of developers regarding land for greenfield growth to ensure feasibility.

By inference, these criteria would also equally apply to decision making around adjustments to sequencing and interchanging areas.

Since adoption of the original sequencing schedule in 2011, a number of issues have arisen with some of the planned urban growth areas, and also anecdotally in terms of demand and supply factors, that have warranted reconsideration of the greenfields residential area prioritization. There are issues with the Arataki Extension Growth Area in Havelock North (primarily in response to reverse sensitivity issues around odour associated with the proximity of Te Mata Mushrooms). As a result, the advancement of the Arataki Extension area has been placed on hold indefinitely. In addition, there is a view being expressed within the development community that the market demand for new housing is higher than the figures projected in HPUDS. This has led to a call for additional greenfield land to be advanced earlier than planned. Hence, Council has been investigating the need/desire for additional supply and locational choice.

In response to this, Hastings District Council agreed at its meeting on 24 September 2015, to amend the sequencing programme to advance the next 'cab off the rank' for Havelock North, being the Middle Road/Iona growth area (originally proposed for advancement in the 2021-2026 period). As previously mentioned, this area was signaled as an area that may meet the Greenfield needs within the life of the Plan. After this 2015 resolution, officers began detailed structure planning investigations in preparation for residential development (this work coincided with appeal discussions and the formation of the Iona Working Group outlined above). This work is now the subject of this variation.

Post the 2015 amendment, the 2017 resolution to alter the Greenfields Residential Area Prioritisation and Sequencing saw the time period for Iona altered - 2018-2023 time period in the case of Middle Road/Iona and from 2018 in the case of the Havelock Hills.

In respect of the Hastings City growth areas, whilst Lyndhurst Stage 2 and the Lyndhurst Extension are progressing, significant engineering constraints have been identified for Kaiapo Road which need to be overcome prior to any development proceeding.

The next priority growth areas identified for Hastings are the Howard Street and Copeland/Murdoch Road growth areas. Howard Street is identified for advancement from 2018 - 2028 and Copeland/Murdoch Road from 2028 - 2048.

An approach to Council in 2015 by developers to proceed with a planned 70-unit 'lifestyle village' development on land within the identified Howard Street growth area, provided stimulus to the advancement of the wider Howard Street growth area. For this reason, Council decided to advance the rezoning of the Howard Street growth area at a Planning and Regulatory meeting on 17 November 2015. The variation to rezone Howard Street was notified in July 2016, with decisions released in March 2017. This variation is currently subject to appeal around the matter of stormwater mitigation, which is currently being mediated between parties.

4.5 Basis for Progressing Iona Urban Development Area

When assessed against the criteria in POL UD9.2 above, the **Iona urban development area represents a suitable greenfield growth area for advancing ahead of other urban growth areas**, given the following:

- it has already been identified as a suitable greenfield growth area for Hastings in HPUDS and the RPS;
- confirmation of available strategic infrastructure services in the vicinity, that can be extended to provide sufficient capacity;
- provision of additional locational choice for urban residential development for Hastings, with strong appeal in the market across a variety of housing densities and typologies – being located in Havelock North, where there is currently limited greenfield residential land provision, and as an alternative to the current development occurring in other areas;
- the creation of additional public open space areas to the benefit of the wider Havelock North community;

- presence of accessible social infrastructure, including community, education, sport and recreation facilities, public open space and shops;
- a Havelock North location providing nearby employment opportunities within the village itself and within easy commuting distance of Hastings; and
- the presence of a majority single landowner/developer with a strong desire to progress residential development within the area.

Confirmation of the suitability of this area for urban residential development is further addressed in sections 5, 6 & 7 of this report.

5 Community Engagement Process & Results

A Consultation Plan was developed prior to the formation of the Iona Working Group, and updated as required. The stated aim was:

'To involve key stakeholders at the commencement of the structure plan and variation development process during the pre-notification phase, to:

- *inform about the project and the process going forward;*
 - *facilitate early identification of issues/constraints and options;*
 - *seek feedback during development of the initial design concept and structure plan;*
 - *build awareness to ensure that potentially affected persons are able to make informed submissions during the public notification phase.'*
-

A full record of the consultation actions and summary of issues raised and feedback is attached to this report as **Appendix F**.

5.1 Community Engagement Process

Consultation has occurred at varying stages of the rezoning investigation process and has included those landowners within the proposed rezoning area (including the appellant); owners adjoining and adjacent to the subject areas; those who registered an interest in the appeal as a 274 party; those who can view the site; those who could be affected by any increase in traffic volumes as a result of the additional houses; those with existing stormwater outlets; iwi authorities and hapu. Consultation to date has been targeted and with both individual/s and key stakeholders. Organisations consulted include the Hawkes Bay Regional Council; Ngāti Kahungunu Iwi Incorporated; Te Taiwhenua O Heretaunga; the Ministry of Education; Unison Networks (Electricity Distribution); Chorus (Telecommunications) and Powerco (Gas Distribution).

Post the decision to commence structure planning for the Iona area, Council in July 2016 released for public comment an Issues and Options Paper, which outlined three possible options for rezoning land in this area (attached to this report as **Appendix G**). Many residents took the time to comment on this paper, with Council receiving comprehensive feedback from more than 34 individuals and groups. A summary of the issues and concerns raised in the comments received is attached as **Appendix H**. These comments have been used by Council

and the Iona Working Group to inform Working Group discussions and help shape the Draft Structure Plan.

As previously mentioned, an Environment Court Appeal was received for a portion of the land proposed to be rezoned, which helped shape the collaborative process adopted by Council for rezoning investigations. Late in 2016, a Working Group was set up to encourage discussions between the parties involved in the Environment Court Process. The Working Group members agreed to work cooperatively for the long term benefit of the Iona area and Havelock North as a whole. At the outset a set of group objectives were developed as goals or outcomes sought to be achieved through the rezoning of this area:

- *a place that adds value to Havelock North;*
- *recognition that this is an opportunity to create innovative land development responses to this unique environment;*
- *a quality environment that reflects best practice urban design outcomes;*
- *development provisions that shape the Iona Growth Area and seek to achieve HPUDS objectives - uses land efficiently, while creating a high quality residential community; and*
- *a structure plan that is developed in a collaborative manner and reflects the above objectives.*

To ensure these objectives were met a best practice design led process was adopted as part of investigating options for rezoning this area. This work was led by a Landscape Architect with input from the Working Group. During the course of discussions, the following concepts emerged:

- retention of the central ridge and valley to divide the area into 'neighbourhoods';
- stormwater neutrality;
- location of any potential spine road to service the hill area – in the saddle of the central ridge to reduce visibility;
- means of achieving buffer areas between existing residences and new development;
- a loop connection for recreational purposes;
- scarps landscaped;
- walking track circuit through reserves with pedestrian access only to Lane Road;
- three residential neighbourhood areas – Triangle (including lower hill area), Middle Hill and Upper Hill;
- placement or location of building platforms provides the basis of density in the Upper Hill neighbourhood;
- a range of lot sizes and a mixed layout of lots so they are not uniform – i.e. avoidance of 'cookie cutter' style of development

- street frontages that enable an open feel to the development; and
- treatment of the main spine road to provide rural character – no parking, footpath on one side only, informal groups of street trees, sloping grassed berms, no kerb and channel.

The work completed by the Iona Working Group has been instrumental in shaping the Draft Structure Plan, released for community feedback at the beginning of August 2017. Details of the draft Structure Plan are outlined in the newsletter attached to this application as part of **Appendix D**. In the lead up to the release of the draft Structure Plan and upon its release Council met with property owners within the rezoning area and held a series of neighbourhood meetings and held a community open day to discuss the draft and issues of concern. People were encouraged to provide feedback on elements of the Structure Plan they supported, along with those they felt needed further consideration and investigation. Feedback received as been used to refine the notified version of the Structure Plan. A summary of the feedback received on the draft Structure Plan is attached to this assessment as **Appendix I**.

5.2 Mana Whenua

The Iona area was largely adopted as a greenfield growth area through the development of HPUDS, which involved input from Ngati Kahungunu at that time, and was also signaled through the subsequent incorporation of Heretaunga Plains Urban Development Strategy (HPUDS) principles into the RPS. The process of rezoning of the Iona greenfield growth area in the Proposed Hastings District Plan is therefore, not wholly unexpected.

In terms of clauses 75(b)(vi), 76(2) and 76(6) RMA, it is noted that there is no relevant iwi participation legislation nor Mana Whakahono a Rohe which apply to this proposal. Further, there are no iwi participation agreements or Memoranda of Understanding or equivalent that have needed to be taken into account in undertaking consultation on this proposed rezoning. Council has a policy of engaging with whanau, hapu and marae, as well as iwi authorities like Ngati Kahungunu Iwi Incorporated, settlement trusts and post settlement entities. Council recognises that hapu is the terminal identity in customary law where whakapapa is the source of mana [authority]. For this reason, Council has been engaging for 12 years with hapu as tangata whenua with mana whenua. This has enabled Council to effectively consult on matters provided for under the Resource Management Act. This approach has continued in undertaking consultation on the proposed rezoning of land at Iona.

Council commenced its mana whenua consultation on this proposal with Ngati Kahungunu, as an Iwi Authority and Te Taiwhenua o Heretaunga, which is a local Māori authority for Heretaunga and surrounding district, who has representatives from local Marae/ Hapū. Through this process it was confirmed that there were no sites of significance involved in the proposal, but reconfirmation was provided of the need to speak with hapu. A copy of the draft Structure Plan and a verbal outline of its inclusions was provided to Ngati Kahungunu prior to the release of the draft Structure Plan in August last year. No issues were raised in response to the information provided or the Structure Plan process, but it was agreed to

provide information to Ngati Kahungunu upon release of the draft Structure Plan for wider community feedback.

In October last year, a hui was held where the suggestion of a Cultural Impact Assessment (CIA) was traversed. This has been built into the proposed plan provisions as a result. A further korero was then held on the variation and suggested wording provided to hapu including that around the CIA, with a suggestion of guidance on wording if necessary prior to notification. No amendments have been suggested, but direct notification of the variation will occur and hapu have been advised that any submission made on the variation could incorporate amended wording. The relevant post settlement trust were also sent a copy of the Structure Plan and Plan provisions with invitations to meet and provide feedback.

A further korero was held with Ngati Kahungunu upon the issue of a direction by the Environment Minister. This was to discuss the timeline of the Ministers direction and the proposed variation, including the draft Structure Plan and inclusion of the Cultural Impact Assessment at the request of hapu at a hui in October last year. Any advice but in particular that which relates to the CIA was discussed. No advice on or amendments to the variation have been suggested either at the meeting or after, but discussions at the meeting reinforced the importance of hapu engagement. Ngati Kahungunu are to receive direct notification of the variation when this occurs.

5.3 Other Stakeholders

Hawke's Bay Regional Council

Hawke's Bay Regional Council staff have been briefed about timing for the proposed variation and discussions have occurred with the Engineering Group around the stormwater solution proposed by the landowner including the detention areas, swales within the road reserves and acceptable stormwater mitigation for the wider catchment. Extensive modelling has occurred to determine pre and post development flows, which has been provided and discussed with the Regional Council. Modifications have occurred to the stormwater solution as a result of both Regional Council (and Hastings District Council) Engineers reviews, but they reserve the right to submit on the variation. The Regional Council will receive direction notification of the variation, so that they can submit if they choose to.

5.3.1 Ministry of Education

The Ministry of Education is aware of the new District growth areas identified through the Heretaunga Plains Urban Development Strategy. Council has consulted with the Ministry of Education who has advised that there is sufficient provision within the Havelock North schooling network to accommodate "in zone" students living within the Havelock North catchment. However, the Ministry will continue to monitor the schooling network to ensure that its making best use of the network and providing for any future growth in the area, with a strategy review planned for 2018. Council will continue to liaise with the Ministry in implementing its regional growth strategy.

5.4 Summary of Community Engagement

Generally, whilst there are reservations about some specifics, there appears to be reserved support for rezoning of the Iona greenfield growth area. Affected landowners are understandably wary of the details and how the rezoning may impact on their current amenity and way of life and reserve the right to submit on the variation once notified.

The last lot of community engagement which resulted in the provision of feedback on the draft Structure Plan, identified the following:

- The location of some of the structure plan components is questioned by some.
- There is also some apprehension expressed around the potential for low quality, higher density residential development that could detract from the current residential character and outlook for neighbouring residents.
- Residents living in Havelock North have expressed apprehension around traffic impacts that additional residential development might have and that this will exacerbate existing traffic issues occurring at peak times including in the village.

A number of affected landowners have even expressed an interest in the future development potential of their land – some with development concepts particularly for Breadalbane Avenue already in play.

5.5 Amendments to Proposed Rezoning and Structure Plan

A number of significant changes to the proposed rezoning and development of the Structure Plan resulted following the community engagement phase, partly in response to issues and feedback from stakeholders as well as results of further technical investigations.

These changes include:

1. **Road Layout:** Altering the road layout within the triangle portion of the Bull Hill neighbourhood to better manage amenity considerations for existing residential properties and encourage the retention of established trees as part of street character treatment;
2. **Neighbourhood Boundaries:** Reconsidering neighbourhood boundaries to ensure best practice urban design principles are met;
3. **Commercial Node:** Altering the location of the proposed commercial node to create better connections with the neighbourhood reserve and manage traffic and parking effects; and
4. **Landuse Rules:** Further consideration of landuse rules to ensure amenity effects are avoided, remedied or mitigated for existing properties and within the neighbourhoods themselves.

6 Structure Plan Elements

As outlined in the statutory context above, Section 75 of the RMA states that a district plan 'must give effect to' any regional policy statement (RPS). The Hawke's Bay RPS is a higher

level document that sets a clear direction in terms of urban development and strategic integration of infrastructure. The RPS addresses inclusion of new greenfield growth areas/structure plans in District Plans.

Policy UD10.1 of the RPS requires that development within greenfield growth areas must occur in accordance with a comprehensive structure plan.

6.1 RPS Structure Plan Requirements

Policy UD10.3 provides a list of matters required to be incorporated in any structure plan within the Region. These matters essentially aim to confirm that the area can be appropriately developed and serviced, and that any significant features are identified.

Policy UD10.4 requires a degree of supporting documentation to accompany any structure plan that also confirms the development can be serviced effectively and efficiently.

STRUCTURE PLANS (HERETAUNGA PLAINS SUB-REGION)

POL UD10.1 *In the Heretaunga Plains sub-region, development of urban activities within greenfield growth areas shall occur in accordance with a comprehensive structure plan. Structure plans shall be prepared when it is proposed to amend the district plan, and shall be included in the district plan to provide for urban activities.*

STRUCTURE PLANS (REGION)

POL UD10.3 *Notwithstanding Policy UD10.1, structure plans for any area in the Region shall:*

- a) Be prepared as a single plan for the whole of a greenfield growth area;*
- b) Be prepared in accordance with the matters set out in POL UD12;*
- c) Show indicative land uses, including:*
 - i. principal roads and connections with the surrounding road network and relevant infrastructure and services;*
 - ii. land required for stormwater treatment, retention and drainage paths;*
 - iii. any land to be set aside for business activities, recreation, social infrastructure, environmental or landscape protection or enhancement, or set aside from development for any other reason; and*
 - iv. pedestrian walkways, cycleways, and potential public passenger transport routes both within and adjoining the area to be developed;*
- d) Identify significant natural, cultural and historic or heritage features;*
- e) Identify existing strategic infrastructure; and*
- f) Identify the National Grid (including an appropriate buffer corridor).*

6.2 Iona Structure Plan (ISP)

Structure planning is an important component of planned urban development. It provides a mechanism to plan all the necessary aspects of a new residential area such as roading layout, infrastructure services, parks and reserves and walkway and cycleway connections as well as to ascertain the appropriate development density and the location of any buffer areas required. Structure planning will integrate new urban development with existing neighbourhoods and ensure urban growth is accommodated in a sustainable way. The structure plan process ensures that all constraints are investigated and addressed at the time of rezoning.

In accordance with POL UD10.1 and UD10.3, a Structure Plan has been prepared for the Iona rezoning area as a single plan for the entire area, with accompanying Structure Plan 'Outcomes' and 'Performance Standards'. As part of proposed Variation 4, this Structure Plan will be treated similarly to other urban development areas within the Hastings District and included in the appendices to the Proposed District Plan.

Council's Structure Plan for the Iona Urban Growth Area, is a more detailed than Council has produced previously, given the unique landscape within which this area sits, and the desire to retain many of the existing landscape features that the local community identify with and value.

The elements of the proposed Structure Plan for the Iona Urban Development Area provide fixed or indicative locations for (a copy of the Structure Plan is attached as **Appendix J**):

- » **Distinct Neighbourhoods:** Three distinct residential neighbourhoods to enable the imposition of separate plan provisions to appropriately manage effects;
- » **Road Network:** A road network, with connections to the existing road network off Middle and Iona Roads and a new Spine Road to access the Iona Terraces and Plateau neighbourhoods;
- » **Walkways and Cycleways:** internal provision for pedestrian walkways and cycleways, and connections to existing pedestrian and cycling networks in and around Middle, Iona and Lane Road's;
- » **Infrastructure Services:** internal water supply and wastewater services corridors, and network connections to existing and planned infrastructure, including a future planned water and wastewater infrastructure upgrade;
- » **Stormwater Detention Area:** Land set aside as a stormwater detention area on the opposite side of Middle Road, and provision for drainage swales to it;
- » **Public Open Space:** 12 hectares of reserve to be set aside for public open space/recreation purposes; and
- » **Existing Trees:** Identifies the location of existing trees with road reserve to contribute to streetscape character.

Note1: the National Grid is not present within the rezoning area.

Note 2: The Breadalbane area is not included in the ISP area as this is considered an infill rezoning and no additional elements, beyond the services to the existing road corridor alignment are needed.

The Iona Structure Plan is confirmed as meeting the requirements for Structure Plans in the RPS.

7 Confirm Suitability for Urban Residential Development

7.1 Regional Policy Statement (RPS) Considerations

The RPS provides a list of matters for the territorial authorities to consider during preparation of any rezoning or structure planning for urban development of land within the Region.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Policy UD12 of the RPS provides a list of matters for the territorial authorities to consider during preparation of any rezoning or structure planning for urban development of land within the Region. Policy POL UD10.4 also includes matters that should be addressed in supporting documentation. These matters essentially aim to confirm the suitability of an area for urban development purposes.

MATTERS FOR DECISION-MAKING (REGION)

POL UD12 *In preparing or assessing any rezoning, structure plans, or other provisions for the urban development of land within the Region, territorial authorities shall have regard to:*

- a) The principles of the New Zealand Urban Design Protocol (Ministry for the Environment, 2005);*
- b) New Zealand Standard NZS4404:2010 Land Development and Subdivision Infrastructure, and subsequent revisions;*
- c) Good, safe connectivity within the area, and to surrounding areas, by a variety of transport modes, including motor vehicles, cycling, pedestrian and public transport, and provision for easy and safe transfer between modes of transport;*
- d) Location within walkable distance to community, social and commercial facilities;*
- e) Provision for a range of residential densities and lot sizes, with higher residential densities located within walking distance of commercial centres;*
- f) Provision for the maintenance and enhancement of water in waterbodies, including appropriate stormwater management facilities to avoid downstream flooding and to maintain or enhance water quality;*
- g) Provision for sufficient and integrated open spaces and parks to enable people to meet their recreation needs, with higher levels of public open space for areas of higher residential density;*
- h) Protection and enhancement of significant natural, ecological, landscape, cultural and historic heritage features;*
- i) Provision for a high standard of visual interest and amenity;*
- j) Provision for people's health and well-being through good building design, including energy efficiency and the provision of natural light;*
- k) Provision for low impact stormwater treatment and disposal;*
- l) Avoidance, remediation or mitigation of reverse sensitivity effects arising from the location of conflicting land use activities;*
- m) Avoidance of reverse sensitivity effects on existing strategic and other physical infrastructure, to the extent reasonably possible;*
- n) Effective and efficient use of existing and new infrastructure networks, including opportunities to leverage improvements to existing infrastructure off the back of proposed development;*
- o) Location and operational constraints of existing and planned strategic infrastructure;*
- p) Appropriate relationships in terms of scale and style with the surrounding neighbourhood; and*
- q) Provision of social infrastructure.*

POL UD10.4 *Notwithstanding Policy UD10.1, in developing structure plans for any area in the Region, supporting documentation should address:*

- a) The infrastructure required, and when it will be required to service the development area;*
 - b) How development may present opportunities for improvements to existing infrastructure provision;*
-

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

- c) How effective provision is made for a range of transport options and integration between transport modes;*
 - d) How provision is made for the continued use, maintenance and development of strategic infrastructure;*
 - e) How effective management of stormwater and wastewater discharges is to be achieved;*
 - f) How significant natural, cultural and historic or heritage features and values are to be protected and/or enhanced;*
 - g) How any natural hazards will be avoided or mitigated; and*
 - h) Any other aspects relevant to an understanding of the development and its proposed zoning.*
-

In addition, the RPS seeks the following outcomes:

- AER UD1 Availability of sufficient land to accommodate population and household growth, as and where required, while retaining versatile land for existing and foreseeable future primary production.*
 - AER UD2 Balanced supply of affordable residential housing and locational choice in the Heretaunga Plains subregion.*
 - AER UD3 More compact, well-designed and strongly connected urban areas.*
 - AER UD4 Napier and Hastings retained as the primary urban centres for the Heretaunga Plains subregion.*
 - AER UD5 Encroachment of urban activities (residential, commercial, industrial) onto the versatile land of the Heretaunga Plains is confined to defined greenfield growth areas within specified urban limits.*
 - AER UD6 The retention, as far as is reasonably practicable, of the versatile land of the Heretaunga Plains for existing and foreseeable future primary production.*
 - AER UD7 Efficient utilisation of existing infrastructure.*
 - AER UD8 Efficient utilisation of infrastructure which has already been planned and committed to by a Local Authority (e.g. by funding) but not yet constructed.*
 - AER UD9 Increased use of public transport and active transport modes (cycling, walking), reduced dependency on the private motor vehicle and reduced energy use.*
 - AER UD10 Planned provision for, and protection of, infrastructure to support existing development and anticipated urban growth in defined growth areas.*
 - AER UD11 Urban activities and urban development maintains groundwater and surface water quality and habitat health.*
 - AER UD12 Urban development is avoided in areas identified as being at unacceptable risk from natural hazard (flooding, coastal inundation, coastal erosion, liquefaction, land instability).*
 - AER UD13 New development is appropriately serviced by wastewater, stormwater, potable water and multi-modal transport infrastructure.*
-

In 'giving effect to' the RPS, the following addresses the above matters in terms of the proposed Iona area rezoning and accompanying structure plan for inclusion in the Proposed Hastings District Plan.

7.2 Urban Design

Relevant RPS provisions:

- POL UD12 In preparing or assessing any rezoning, structure plans, or other provisions for the urban development of land within the Region, territorial authorities shall have regard to:*
-

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

- a) *The principles of the New Zealand Urban Design Protocol (Ministry for the Environment, 2005);*
- e) *Provision for a range of residential densities and lot sizes, with higher residential densities located within walking distance of commercial centres;*
- i) *Provision for a high standard of visual interest and amenity;*
- j) *Provision for people's health and well-being through good building design, including energy efficiency and the provision of natural light;*
- p) *Appropriate relationships in terms of scale and style with the surrounding neighbourhood; and*

AER UD3 *More compact, well-designed and strongly connected urban areas.*

DENSITY OF RESIDENTIAL DEVELOPMENT AREAS (HERETAUNGA PLAINS SUB-REGION)

POL UD8 *In the Heretaunga Plains sub-region, residential subdivision and development shall seek to achieve the following minimum net densities, where appropriate, within greenfield growth or intensification development areas, to be achieved in a staged manner by 2045:*

- *an average yield of 15 lots or dwellings per hectare in each greenfield growth area developed post 31 December 2015;*

Hastings District Council is a signatory to the NZ Urban Design Protocol¹² which outlines the essential qualities that should guide development of the built environment, and has developed and adopted an urban design framework for the District¹³.

HPUDS (of which Hastings District Council is a partner) also incorporates aspects of urban design in terms of guiding urban development – some of the key principles of HPUDS being ‘quality living environments with high levels of amenity and thriving communities’, ‘urban centres of Napier and Hastings have distinct identities and provide complementary working, living and learning opportunities’, and ‘community and physical infrastructure is planned, sustainable and affordable’.

The recent District Plan Review for Hastings involved a significant shift towards a ‘place-based’ approach to planning for communities, recognizing the differing character of the various residential areas within the District, and the resulting Proposed Plan encapsulates that approach.

Ultimately, the current provisions in the Proposed Hastings District Plan for Havelock North include objectives, policies, rules, standards and anticipated outcomes (as well as refer to other methods outside of the District Plan) that build in urban design principles. These District Plan provisions collectively seek to maintain and enhance residential amenity values; create visual interest; and address building design and relationship in scale and style with the surrounding neighbourhood etc.

The District Plan zone provisions provide guidance and control to ensure resulting residential development will be of similar quality, and represent appropriate relationships in terms of scale and style, to neighbouring residential areas, in line with what the local community anticipates and has come to expect i.e. ‘requiring’ a level of good design based on urban

¹² New Zealand Urban Design Protocol, March 2005, Ministry for the Environment

¹³ Report on Urban Issues and Urban Design Framework for Hastings District Council, adopted by Council resolution 2010, Urbanismplus Ltd

design principles. Further to this, community feedback on this proposed residential rezoning has reinforced the Working Groups objectives that the resultant built environment adds value and that it reflects the environment in which it sits. There has been a strong sentiment that Council avoid cookie cutter development that has occurred elsewhere in the District.

In addition, subdivision densities and lot sizes in the District Plan, and infrastructure services requirements within the District Plan, also contribute to the achievement of quality urban environments for Hastings District.

HPUDS aspires to achieving higher density residential development for greenfield growth areas on the Heretaunga Plains by 2045, based on achieving 15 lots or dwellings per hectare over time, in line with its adopted 'compact development' settlement pattern.

Accordingly, the RPS adopted the following density policy:

DENSITY OF RESIDENTIAL DEVELOPMENT AREAS (HERETAUNGA PLAINS SUB-REGION)

POL UD8 *In the Heretaunga Plains sub-region, residential subdivision and development shall seek to achieve the following minimum net densities, where appropriate, within greenfield growth or intensification development areas, to be achieved in a staged manner by 2045:*

- an average yield of 15 lots or dwellings per hectare in each greenfield growth area developed post 31 December 2015;*

The Proposed Plan has carried through the adopted minimum net site area of 400m², with a minimum average site size of 700m² for Urban Development Areas in the Hastings General Residential Zone (Rule 30.1.6A, Table 30.1.6A Minimum Site Sizes and Dimensions). This minimum and average site size has generally been achieving a density of around 12 dwellings per hectare to-date in greenfield growth areas within Hastings District (Arataki/Lyndhurst).

However as more identified new urban development areas are rezoned, consideration of the most appropriate density provisions to achieve the RPS and HPUDS target of 15 dwellings per hectare will inevitably result in provisions that encourage greater density while balancing the need to achieve a high quality residential environment.

Variation 4 takes a different approach to density than previous new urban growth areas. The need to marry retention of the special characteristics of the zone while ensuring an efficient use of the land requires a unique set of density provisions that cater to each individual neighbourhood identified within the Zone. The topography, landscape values and visibility of each neighbourhood have been key aspects in determining the density provisions that would be appropriate to ensure that development is sympathetic to the existing special character features, and to the adjoining rural residential areas. Another significant consideration in developing appropriate density provisions for this area has been the desire to create variety in section sizes to encourage the provision of a range of housing typologies.

In order to facilitate a move towards a higher density in line with the RPS, the Bull Hill neighbourhood has been identified as the most appropriate neighbourhood to accommodate the bulk of higher density development within this new urban development area. The Bull Hill neighbourhood is considered appropriate because it is contiguous with the existing residential area, is of relatively flat topography and has the ability to internalise the impacts of increased density levels to a greater degree.

In order to achieve variety in site size, and the retention of special character features (in particular an avenue of mature trees) there is a need to allow for flexibility in how and where (within the neighbourhood) greater density is achieved. As such, the density provisions for the Bull Hill neighbourhood apply across the neighbourhood as a whole. Specifically the provisions set a minimum density of 15 dwellings and a maximum density of 17 dwellings per hectare to be achieved. An exception to this is the requirement that a minimum site size of 700m² applies to all new sites created adjoining or opposite existing lower density zones (such as Havelock North Character Residential, Rural Residential, and Plains Zones). This standard seeks to retain amenity levels for property owners neighbouring the new urban development area.

The Proposed Plan has introduced the concept of 'comprehensive residential development' and specifically provides for it in specific locations (Appendix 27 of the Proposed Plan). New urban development areas primarily comprising vacant greenfield land provide a unique opportunity to develop land for comprehensive residential development without the constraints that exist within an existing residential suburb or area. In order to change the perception of higher density living, there is a need to provide opportunities to showcase high quality compact housing that is designed comprehensively and desirably located. In the Bull Hill neighbourhood, appropriate locations for comprehensive residential development, include those that are opposite amenity tree plantings or public open space areas in order to provide such developments with an additional source of amenity and recreational space to offset their smaller section sizes. There is also potential to further offset the high density of any such development with the retention of existing mature trees beyond those identified on the Iona Structure Plan.

Within the Bull Hill neighbourhood 'comprehensive residential development' is provided for as a controlled activity where subdivision and land use concept plans for the development have already been approved (subdivision within the Iona Special Character Zone is a restricted discretionary activity). As part of the subdivision consent process an urban design assessment is required to ensure the development is in accordance with the principles (including the seven C's) of the NZ Urban Design Protocol. A controlled activity status for the subsequent land use consent seeks to encourage this development type and allows for assessment against the set of specific performance standards and assessment criteria which enables such developments to be scrutinized to ensure their design achieves a quality residential environment that has a high level of amenity.

Within the Iona Terraces neighbourhood, the primary objective is to achieve a density that transitions from the more intensive Bull Hill neighbourhood to the much lower density Iona Plateau and adjoining Havelock North Rural Residential Zone. This ensures that density levels will decrease as the development progresses from the relatively flat Bull Hill neighbourhood to the Iona Plateau at the top of the hill.

The provisions within areas A, B and C of this neighbourhood (and shown on the Iona Structure Plan) require a minimum lot size of 600m² with an 800m² average lot size and an overall maximum of 13 dwellings per hectare across Areas A-C as a whole. These provisions seek to

ensure that site sizes within the Iona Terraces neighbourhood are predominantly larger than those of the Bull Hill neighbourhood. However, in order to achieve further variety in site sizes and thereby encourage a range of housing typologies, the density provisions also provide opportunities for a finite number of smaller size sizes within specific locations.

To assist with the transition between this neighbourhood and the existing Havelock North Rural Residential Zone, sites on the eastern side of the main spine road (Area D on the Iona Structure Plan) will have a higher minimum site size of 1000m². This requirement recognises the larger lot sizes and higher levels of amenity associated with the adjoining Rural Residential Zone.

Density within the Iona Plateau Neighbourhood has been restricted to ensure the retention of the special landscape character of this area and to protect the amenity of the adjoining Rural Residential Zone. The Iona Structure Plan, Iona Plateau Masterplan and Iona Special Character Zone provisions allow for a maximum of 20 residential lots to be created in the Iona Plateau neighbourhood.

There is often a tension between development goals (particularly for higher density development) and achieving quality urban design and maintaining and enhancing amenity values. It is the policy framework, rules and standards within the proposed new Iona Special Character Zone, as well as the inclusion of the Iona Structure Plan and accompanying provisions, that will act to manage residential development in a way that maintains and enhances amenity values. This is discussed further in the evaluation of whether the proposed specific development provisions of the Zone are appropriate in terms of achieving the proposed objectives of Variation 4 and those relevant existing objectives of the Proposed District Plan.

In specifically addressing the issue identified in Policy HSMAP4 of ensuring new development on arterial or collector roads is of high quality and contributes to pleasant streetscape, the Iona Structure Plan specifically includes a requirement to set aside a landscaping strip for those properties along a portion of the Middle Road edge of the rezoning area. For traffic safety reasons, sections created within this area will not be afforded access to Middle Road. Development layout within this area is therefore likely to result in dwellings backing onto the Middle Road frontage resulting in the fencing of this part of Middle Road.

The landscape strip planting along with land use provisions controlling the colour of fencing in this area seek to ensure a pleasant streetscape amenity. Particularly as this arterial road provides for the main approach and entrance into Havelock North. Planting of this landscape strip along with any planting associated with the Bull Hill reserve will ensure an attractive entrance to the suburb.

In addition given that the Plains Zone is located opposite the subject land on Middle Road, larger site sizes of a minimum of 700m² on this edge of the urban growth area are required in order to maintain amenity and streetscape values.

Breadalbane Avenue:

Within the Breadalbane Special Character Area, the primary objective is to provide for a greater level of housing intensification, while still ensuring that the existing open and rural

natured character is retained. As such densities of 1000m² minimum site size have been created. It is considered that that density level will allow for the retention of many of the existing trees where possible, and will ensure greater setbacks on site. It will also retain an element of openness, and will encourage the less uniform site layout and larger road reserve areas.

The Character Area is also surrounded by Rural Residentially Zoned land on the slopes above the development. It is considered that the larger minimum site size will ensure a transition from existing residential below, to larger lot sizes above. The Breadalbane Special Character Area will complement the variety of site sizes of the overall Iona Residential Rezoning by establishing lower density residential of a similar nature to the Iona Terraces Neighbourhood.

Overall, the new Iona Special Character zone provisions and subdivision rules and standards proposed will facilitate good urban design outcomes and ensure appropriate land development and subdivision infrastructure standards in conformity with the outcomes and policies of the RPS for new urban growth areas.

7.3 Connectivity, Social Infrastructure and Open Space

Relevant RPS provisions:

-
- POL UD12** In preparing or assessing any rezoning, structure plans, or other provisions for the urban development of land within the Region, territorial authorities shall have regard to:*
- c) Good, safe connectivity within the area, and to surrounding areas, by a variety of transport modes, including motor vehicles, cycling, pedestrian and public transport, and provision for easy and safe transfer between modes of transport;*
 - d) Location within walkable distance to community, social and commercial facilities;*
 - g) Provision for sufficient and integrated open spaces and parks to enable people to meet their recreation needs, with higher levels of public open space for areas of higher residential density;*
 - p) Provision of social infrastructure;*
- POL UD10.4** Notwithstanding Policy UD10.1, in developing structure plans for any area in the Region, supporting documentation should address:*
- c) How effective provision is made for a range of transport options and integration between transport modes;*
- AER UD3** More compact, well-designed and strongly connected urban areas.*
- AER UD9** Increased use of public transport and active transport modes (cycling, walking), reduced dependency on the private motor vehicle and reduced energy use.*
- AER UD13** New development is appropriately serviced by wastewater, stormwater, potable water and multi-modal transport infrastructure.*
-

In response to POL UD12, it is considered that in signaling this area for greenfield residential growth through HPUDS and the RPS, that its proximity to the Havelock North Village and associated facilities and amenities has already been considered. HPUDS identifies in relation to this area "... it has a number of locational advantages being close to existing development for services, not impacting on versatile soils for productive purposes, not conflicting with

adjacent land uses, not impacting on landscape qualities and not impacting of transport infrastructure”¹⁴.

As discussed below in the transportation and cycling and pedestrian provision section, the rezoning area will provide improved connectivity within the area itself and to surrounding residential areas, which sit on the periphery of the Havelock North village.

Appropriate provision is made for a small commercial node on the edge of the Bull Hill Neighbourhood, opposite the Bull Hill Reserve, to serve new and existing residents and assist in providing a sense of place for this new community.

In terms of provision of open space, the proposed Iona Structure Plan includes two new accessible public neighbourhood reserves with a combined area of 12 hectares. Bull Hill Reserve lies between Iona and Middle Roads on one of the main entrances to the Village and is to retain the knoll and the former meatworks chain ‘bull sculpture’ that sits atop. The second is located on the Western side of Middle Road and follows a ridgeline almost to Lane Road. This reserve incorporates a series of ponds and recreational walkways. A recreational connection to Lane Road is also allowed for in the Structure Plan. These new reserves are within easy walking distance of all residents within the rezoning area and to those surrounding it.

Appropriate infrastructure provision is assessed below.

Breadalbane Avenue:

After the removal of the Lane Road area from the overall rezoning following consultation, the Breadalbane Special Character Area became isolated from the remainder of the Iona Residential Rezoning. As such, achieving additional links, other than what was already established to Iona Road became difficult.

Given that the Breadalbane Special Character Area contains only 6.3 hectares of land, it was considered existing transport links would be sufficient, and it would be inefficient to establish addition transport and pedestrian links through established land. The Breadalbane Neighbourhood would still benefit from the additional transport links and open space areas discussed below.

For these reasons, Proposed Variation 4 is not considered inconsistent with POL UD12.

7.4 Transportation Effects

Relevant RPS provisions:

-
- POL UD12** *In preparing or assessing any rezoning, structure plans, or other provisions for the urban development of land within the Region, territorial authorities shall have regard to:*
- c) Good, safe connectivity within the area, and to surrounding areas, by a variety of transport modes, including motor vehicles, cycling, pedestrian and public transport, and provision for easy and safe transfer between modes of transport;*
-

¹⁴ Heretaunga Plains Urban Development Strategy, Review 2017, page 41 - <http://www.hpuds.co.nz/assets/Document-Library/Strategies/2017-Heretaunga-Plains-Urban-Development-Strategy-incl-Maps-AUG17.pdf>.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

POL UD10.4 Notwithstanding Policy UD10.1, in developing structure plans for any area in the Region, supporting documentation should address:

c) How effective provision is made for a range of transport options and integration between transport modes;

AER UD13 New development is appropriately serviced by wastewater, stormwater, potable water and multi-modal transport infrastructure.

A high level Transport Assessment (TA) was carried out by MWH to assess the impacts of the proposed Iona development area on the transport network (attached as **Appendix K – Reference ENV-9-19-4-16-22**). The TA assumed a yield figure of 448 dwellings which is greater than what is likely to result. A number of strategic long term planning documents influencing the provision of transport infrastructure in Hastings District, also informed the TA and development of the Structure Plan for the Iona development area.

It is proposed that a portion of Iona Road to Middle Road be realigned as a means of improving safety and enhancing the layout, which wraps around one side of the ‘Bull Hill’ reserve area. Further principles at the time of assessment (April 2016) were:

- The retention of the existing main waterway, located within the southern end of the Iona Hills area (Iona Plateau Neighbourhood(then identified as III)), as a ‘green corridor’;
- Introduction of two ‘spine’ roads. The first being the continuation of Reynolds Road, terminating at the aforementioned knoll and the second from Iona Road running south along the existing gully and terminating at the end of the Iona Plateau Neighbourhood (then identified as III); and
- The proposed internal ‘spine’ roads are noted as being fixed with the configuration of the eastwest ‘side’ streets being flexible.

It is noted that this assessment was based on some of the very early design concepts, which have evolved through the course of the work undertaken by the Iona Working Group. These concepts however have not altered greatly, but instead been refined to achieve better environmental outcomes. These being that the alignment of the spine road heading up the hill has changed to a more eastern alignment so that the saddle of the ridge is utilised to decrease visibility, and that some of the internal roads are fixed, rather than flexible, so that natural features are utilised and amenity benefits result. It is intended that the new hill spine road be developed to have a rural character (similar to that experienced in Lane Road), with no parking, footpath on one side only, informal groups of street trees, sloping grassed berms (including swales) and no kerb and channel.

It is intended that the location, character and treatment of the hill spine road, achieve the following:

- ❖ Enables suitable falls for gravity infrastructure and servicing;
- ❖ Assists to create a low speed environment;
- ❖ Provides for a landscaped road reserve area along the eastern site boundary with neighbouring Rural Residential properties;

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

- ❖ Mimics the nature of existing rural spur roads, complimenting this character;
- ❖ Helps to create different block sizes in the residential area, which provides character;
- ❖ Provides opportunities for open views of the central ridge reserve from the end of the connecting residential lanes which assists in creating a feeling of space; and
- ❖ Ensures that there are no barriers to access the reserve area and that the central ridge reserve is easily accessible and visible.

No designations are involved in the rezoning as new roads are to be vested in Council (along with services). An existing portion of Iona Road is to be stopped and realigned using the process under the Local Government Act 1974, as the land concerned is in single ownership and access needs to be maintained.

Upgrades are required to both Middle and Iona Roads to ensure levels of service are maintained, as the area develops to a more urbanised area. These upgrades need to be aligned with the road stopping procedures and realignment of Iona Road. The design of Iona Road is to retain a rural character on the southern side of the road with a more urban character on the northern side of the road to complement the existing and proposed density levels and site development respectively. The design of Middle Road is to incorporate the following characteristics:

- ❖ a flush kerb continued both sides;
- ❖ a larger berm on south-eastern side to accommodate any swales or stormwater conveyance devices, street trees and the cycleway and footpath;
- ❖ continue the existing shoulder strip / parking lane to the intersection of Gilpin Road;
- ❖ continue the existing footpath/cycleway on the southern side of Middle Road from its intersection of Breadalbane Road to Gilpin Road;
- ❖ street lighting only at intersections on the north-western side of road; The south eastern side of Middle Road should have a more urban standard of street lighting;
- ❖ a larger berm area on the south eastern side of Middle Road from the intersection with the realigned Iona Rd through to the Gilpin Road intersection to provide for a landscaping strip, cycleway and footpath. The extended area of landscaping will seek to address the impacts of the rear lotting of these properties on the streetscape; and
- ❖ For traffic safety reasons (proximity to Middle and Gilpin Roads intersection) properties located along a portion of Middle Road, will have their access restricted to internal access only.

These road treatments have resulted from both discussions with the Working Group, comments received during community consultation and Councils Transportation Engineers.

The Iona Structure Plan shows intended access points to reach the internal network of the development. The roads throughout the development would be classed as a 'local access road' in terms of Council's roading hierarchy. The identified access points facilitates access to

all land within the development area; provides for safe and efficient traffic circulation throughout the development area.

The attached report assesses the effect of the proposed Iona development area on the wider roading network, internal roading and traffic circulation, and provision for cycling and walking. It finds that *“although the introduction of the proposed residential development will bring additional trips, the impact in terms of traffic operation at a mid-block and intersection level is expected to be minimal. The design of the road network therefore does not need to be driven by any need to provide additional intersection capacity¹⁵”*. The report includes recommended external network upgrades including the realignment of Iona Road and Gilpin Road plus the introduction of a roundabout at the Middle Road/Iona Road/Gilpin Road intersection. Council Engineers have advised that monitoring of this intersection would need to occur before any design details for any upgrade might occur.

As a result of comments received during the course of community consultation about the level of service (LOS) commuters might experience in Havelock North village itself (Middle Road/Porter Drive intersection), additional comment was requested from Council engineers about this aspect. These comments are also attached to this report as part **Appendix K** and seek to clarify the LOS findings of the TIA. It concludes that there will be *“no appreciable reduction in the Level of Service it provides even with the development traffic. Therefore, the impact from the development traffic does not warrant any interventions/ improvements to the Porter Drive/ Middle Road intersection”*.

Further comments were received during consultation, that Council look at reducing the current speeds of traffic in the rezoning area prior to any development occurring. Current speed limits will be reduced as part of the carriageway works proposed in the Iona area, however in order to meet the criteria for reduction some residential development needs to occur first. Any speed reductions should extend out to the intersection with Gilpin Road.

7.4.1 Cycling & Pedestrian Provision

The existing streets within the area make some provision for walking and cycling, but are limited by the semi-rural nature of the area currently. There is a formed limestone path on the southern side of Middle Road, but no loop connection currently provided by way of Iona Road.

The TA identifies that *“there are no major barriers to internal connectivity for walking (besides some water features), although roads and cycle routes are slightly more restrained by the topography of the Iona Hills area. However, sympathetic re-contouring through earthworks would likely solve most issues relating to vehicular internal connectivity¹⁶”*. A loop connection will in time be provided by urbanising the northern side of Iona Road as previously mentioned, to provide walking and cycling connections. A further opportunity for recreational connection will be provided through the hill reserve area to Lane Road. This is provided for on the Structure Plan.

¹⁵ Middle Road/Iona Road Growth Area – Transport Assessment, MWH, April 2016, page 23

¹⁶ Middle Road/Iona Road Growth Area – Transport Assessment, MWH, April 2016, page 17

Hastings District was one of the first walking and cycling model communities with support funding from the New Zealand Transport Agency (NZTA). Model communities are urban environments where walking and cycling are ultimately offered to the community as the easiest transport choices by:

- » developing direct, connected and convenient walking or cycling networks;
- » improving safety for walking and cycling;
- » improving awareness of walking and cycling opportunities; and
- » monitoring effectiveness and improving level of service over time.¹⁷

Ongoing improved provision for cycling and walking is a feature of Council's strategic transportation and planning documents.

The above confirms that the proposed rezoning can effectively and safely connect to the transportation network by a variety of transport modes, and can provide for the integration and safe transfer between modes of transport.

7.5 Services Infrastructure

Relevant RPS provisions:

-
- POL UD12** *In preparing or assessing any rezoning, structure plans, or other provisions for the urban development of land within the Region, territorial authorities shall have regard to:*
- a) New Zealand Standard NZS4404:2010 Land Development and Subdivision Infrastructure, and subsequent revisions;*
 - f) Provision for the maintenance and enhancement of water in waterbodies, including appropriate stormwater management facilities to avoid downstream flooding and to maintain or enhance water quality;*
 - k) Provision for low impact stormwater treatment and disposal;*
 - n) Effective and efficient use of existing and new infrastructure networks, including opportunities to leverage improvements to existing infrastructure off the back of proposed development;*
 - o) Location and operational constraints of existing and planned strategic infrastructure;*
- POL UD10.4** *Notwithstanding Policy UD10.1, in developing structure plans for any area in the Region, supporting documentation should address:*
- a) The infrastructure required, and when it will be required to service the development area;*
 - b) How development may present opportunities for improvements to existing infrastructure provision;*
 - d) How provision is made for the continued use, maintenance and development of strategic infrastructure;*
 - e) How effective management of stormwater and wastewater discharges is to be achieved;*
- AER UD7** *Efficient utilisation of existing infrastructure.*
- AER UD8** *Efficient utilisation of infrastructure which has already been planned and committed to by a Local Authority (e.g. by funding) but not yet constructed.*
- AER UD10** *Planned provision for, and protection of, infrastructure to support existing development and anticipated urban growth in defined growth areas.*
-

¹⁷ 'The Walking and Cycling Model Community Story with New Plymouth and Hastings', NZTA, July 2013

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<i>AER UD11</i>	<i>Urban activities and urban development maintains groundwater and surface water quality and habitat health.</i>
<i>AER UD13</i>	<i>New development is appropriately serviced by wastewater, stormwater, potable water and multi-modal transport infrastructure.</i>

A high level service assessment was carried out by MWH to assess two of the three waters being wastewater and stormwater including infrastructure requirements for the proposed Iona development area, and implications for existing infrastructure networks and long term capacity improvements planned for Hastings. An assessment of water provision was undertaken by Councils Asset Management Group.

This work was all carried out at the time of receiving the rezoning requests for a portion of the subject land as part of the Proposed Plan review, but it was instead asked that it be carried out for an intensified residential area consistent with HPU DS and the RPS rather than on the lower density of development requested for the hill site. The wastewater and early stormwater assessment is attached in **Appendix L** (ENV-9-4-15-93).

A further detailed options wastewater report was undertaken by MWH in June 2016 (ENV-9-19-4-16-32) and is attached as **Appendix M**. The findings of these reports and requirements for the Iona development area, and constraints associated with existing and planned infrastructure, have been addressed, and are summarised for each infrastructure service below. Servicing for Breadalbane Avenue is also separately discussed.

The Services Assessments conclude that the proposed rezoning can effectively and efficiently connect to the existing water supply network once upgrades have occurred, can address stormwater through low impact treatment and disposal via dedicated detention areas that achieve stormwater neutrality, and provide for linkage to additional public wastewater infrastructure that can be further linked to future wastewater infrastructure upgrades proposed.

Along with the servicing standards and assessment criteria contained in Chapter 30.1 Subdivision and Land Development, and in Chapter 8.3 Iona Special Character Zone, of the Proposed Plan, the proposed Iona Structure Plan also incorporates specific Performance Standards and Outcomes proposed to further ensure that servicing is achieved in line with these Services Assessments.

Local infrastructure will be constructed by developers in accordance with the structure plan and to the appropriate ECoP standards prior to assets vesting with Council and ensures that the new infrastructure will function to the intended level of service and minimize maintenance and operational costs. Any upsizing of services will be met by Council and provision for this is incorporated into the Long Term Plan as follows¹⁸¹⁹:

¹⁸ Note that 'Land and buildings New Works' refers to Parks and Reserves purchase.

¹⁹ Hastings District Council Long Term Plan 2015-2025 - <https://www.hastingsdc.govt.nz/assets/Document-Library/Plans/Annual-Plan/hdc-long-term-plan-2015-25.pdf>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

GROWTH PROJECTS												Total forecast LTP capex	
Project Number	17/18 Annual Plan (includes Carry fwrds)	2018/19 LTP	2019/20 LTP	2020/21 LTP	2021/22 LTP	2022/23 LTP	2023/24 LTP	2024/25 LTP	2025/26 LTP	2026/27 LTP	2027/28 LTP		
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10		
Iona / Middle													
6541 - Land & Buildings New Works	-	-	306,600	41,760	64,020	54,600	-	-	-	-	-	-	466,980
6619 - Subdivision Support	1,715,000	-	-	-	-	-	-	-	-	-	-	-	-
6631 - Water Supply New Works	300,000	-	-	188,820	-	-	-	-	-	-	-	-	188,820
6651 - Stormwater New Works	200,000	500,000	307,500	-	-	-	-	-	-	-	-	-	807,500
6671 - Wastewater New Works	200,000	1,380,000	-	839,200	-	-	-	-	-	975,200	-	-	3,194,400
431 - Iona / Middle	2,415,000	1,880,000	614,100	1,069,780	64,020	54,600	-	-	-	975,200	-	-	4,657,700

7.5.1 Water Infrastructure

Wider Rezoning Area:

There is currently no supply available to service the proposed area to residential intensities, as all water services near the Iona area are at or nearing capacity. The large diameter trunk main running up the centre of Havelock North (which was recently upsized and upgraded) currently provides the backbone of the supply. By the end of this year it is intended that Havelock North be supplied via a new Hastings trunk main, so that water supply from the Brookvale bore field can be discontinued. This is to improve the safety, capacity and resilience of the Districts water supply. Contacts for this work have been let, with work in Howard Street towards Hastings and Crosses work currently being carried out. Work in St Georges Road is about to commence.

To supply Iona, capacity and pressure from this new main needs to be brought across. This includes firefighting capacity to comply with the NZ Fire Service Code of Practice for Firefighting Water Supplies (SNZ PAS 4509:2008). Renewal works in the Iona Road are planned to upsize the network to support the proposed growth area. Internal service mains and connections will be located within the road corridor and constructed in accordance with Council's Engineering Code of Practice (ECoP). Water services are shown on the Structure Plan including a loop connection to Lane Road.

Only the upsizing costs would need to be assigned to the growth areas. Internal reticulation costs are borne by any developer. Once constructed the services are vested in Council.

Breadalbane Avenue:

There would need to be an upgrade of the existing infrastructure within Breadalbane Avenue to cope with addition demand of development. This would follow the existing road alignment within Breadalbane Avenue. Upgrades to the overall water network would be incorporated into ongoing works being currently undertaken to the wider Havelock North network (refer to the discussion above).

7.5.2 Wastewater Infrastructure

Wider Rezoning Area:

The most recent detailed options wastewater report prepared by MWH (ENV-9-19-4-16-32) forms the basis of this assessment. The earlier higher level report however has informed it as mentioned above.

The present situation is that there is no provision for wastewater services to the rezoning area. Council's wastewater network model was used to evaluate a range of wastewater options in order to determine the most suitable option based on effectiveness, infrastructure efficiency and cost.

The preferred solution involves a new Middle Road Pump Station (PS) discharge wastewater which flows into a new Middle Road gravity system which in turn discharges into the existing Breadalbane PS. While existing wastewater infrastructure is within close proximity to the rezoning area, it is at capacity and the ability to accept any increase in flows.

Internal services will be located within the road corridor and gravitate to the new pump station. The location of the new Middle Road PS is identified on the Structure Plan, on the western side of Iona Road at the entrance to the open space area. In terms of the size and scale of the wastewater pump station, most of the infrastructure is located below ground. Screen planting to the rear and sides of the pump could be carried out to assist screen it from surrounding properties.

Local infrastructure will be constructed by developers in accordance with the structure plan and to the appropriate ECoP standards prior to assets vesting with Council and ensures that the new infrastructure will function to the intended level of service and minimize maintenance and operational costs.

Breadalbane Avenue:

There would need to be an upgrade of the existing infrastructure within Breadalbane Avenue to cope with addition demand of development, this would follow the existing alignment within Breadalbane Avenue

The majority of development within the Breadalbane Neighbourhood would occur at lower heights than the main wastewater trunk within Breadalbane Avenue. It is anticipated that new dwellings would be required to install individual pumps onsite, to ensure wastewater can reach the main council networks. However gravity fed systems can still be utilised if achievable. Council would not be supportive of multi-dwelling shared wastewater pumps.

7.5.3 Stormwater Infrastructure

The primary objective in stormwater management is to minimise any impacts of flooding on the downstream network and to ensure that stormwater quality is not adversely affected. New residential areas create the potential for additional stormwater to be generated over and above the currently undeveloped land through the introduction of impermeable surfaces such as roofs, roads, footpaths and paved areas.

Stormwater services need to consider the impacts of development on water quantity and quality up to the design criteria within the Engineering Code of Practice (ECoP) which is largely based on NZS4404: 2010 Land Development and Subdivision Infrastructure. Council's design specifications for stormwater require up to a 1 in 5 year rain event to be contained within a piped network and consideration for control of overland flow in a 1 in 50 year rainfall event.

Council's Best Practice Design Guide for Subdivision and Infrastructure Development compliments the ECoP and provides guidance for developers to ensure that any new

subdivision, or the upgrading of roads or other infrastructure (such as stormwater drains) enhances the quality of the built environment in the Hastings District.

The implementation of low impact sustainable practices in accordance with the ECoP ensures that stormwater solutions are targeted and appropriate for the intended development and all urban residential developments are required to comply with the specifications within the ECoP for bulk services and individual lot developments that are connecting to those services. These measures include onsite detention for mitigation of stormwater runoff from individual sites that exceed the maximum permitted runoff. Treatment is not typically required for discharges from residential lots however the receiving infrastructure that services the carriageways employs standard treatment via sumps to assist in removing solids, sediments, metals and hydrocarbons.

The stormwater solution for Iona includes utilisation of an existing pond system (and its extension) in the upper reaches of the site, roadside swales and detention areas. These features are identified on the Structure Plan. Significant re-contouring of certain areas of the site are necessary as part of the proposed stormwater solution. Appended to this report is a precis of the stormwater assessment prepared by Tonkin and Taylor (T + T) stormwater consultant for the majority landowner (**Appendix N**). This report including the modelling has been peer reviewed by Councils Asset Management Group, Stormwater Consultant and the Hawkes Bay Regional Council. Work on the stormwater solution has been ongoing and there remains one outstanding issue around the assessment and mitigation of outlet D. Outlet D is approximately located where Iona Road currently meets Gilpin and Middle Roads. The solution proposed by T + T requires that new residential lots within the lower sub-catchments install individual tanks for detention purposes.

Councils Stormwater Engineer has advised that onsite detention in the form of individual tanks for a new greenfield development, is not a sustainable solution for Council, as the ongoing maintenance of this solution relies on individual property owners. Councils position is that it should retain control of stormwater management infrastructure. Therefore, in order for suitable mitigation to be provided for this catchment, Council has identified an additional stormwater detention area on Middle Road at the western extent to satisfactorily manage stormwater effects from Outlet D.

It is intended that the stormwater solution for the wider Iona area include the existing ponds and their extension in the upper reaches of the site, roadside swales and detention pond/s. It is Councils intent that the stormwater solution achieve stormwater neutrality to appropriately manage stormwater effects.

Breadalbane Avenue:

Breadalbane Avenue would require upgrading to have a more comprehensive swale system within the road reserve. Curb and Channel is not anticipated to be installed on Breadalbane Avenue.

7.5.4 Gas Infrastructure

Infrastructure consultation was undertaken with Powerco as gas infrastructure supplier.

Powerco have advised that “....Powerco does not currently have gas mains and services in the area Hastings District Council is looking to rezone. The nearest gas main terminates in front of 45 Iona Road however this can be extended and Powerco would be happy to look at providing gas infrastructure to the development and the potential dwellings. Although there are no current works planned in the area Powerco can work directly with the development managing any works with other services and infrastructure to future proof supply”.

7.5.5 Telecommunications

Chorus as telecommunications infrastructure supplier have advised that currently there is no capacity available in its current network to service the scale of the proposed development resulted from the rezoning. However, capacity can be built in for this area via the Havelock North telephone exchange.

7.5.6 Power Infrastructure

Following consultation with Unison on the rezoning proposal and structure plan they have advised:

There are two 11kV feeders that run along these roads that flank the structure plan area, namely the Te Aute feeder and the Iona feeder. At this point in the network both feeders are rural and therefore a network upgrade would be required to service the proposed new residential area.

These feeders may need to be repositioned, but this work can be built into the project plan.

Currently there are overhead lines that service properties within the structure plan area. Unison have advised that “If the subdivision necessitates the undergrounding of the lines Unison will be willing to look at this option with the costs going to the developer”.

The above confirms that the proposed rezoning can effectively and efficiently connect to existing public infrastructure and can be appropriately serviced for water, wastewater and stormwater.

The proposed Structure Plan also ensures effective management of wastewater and adoption of low impact stormwater treatment and disposal, in a way that protects water quality and avoids downstream flooding.

7.6 Effect on Versatile Soils

Relevant RPS provisions:

AER UD1	<i>Availability of sufficient land to accommodate population and household growth, as and where required, while retaining versatile land for existing and foreseeable future primary production.</i>
AER UD5	<i>Encroachment of urban activities (residential, commercial, industrial) onto the versatile land of the Heretaunga Plains is confined to defined greenfield growth areas within specified urban limits.</i>
AER UD6	<i>The retention, as far as is reasonably practicable, of the versatile land of the Heretaunga Plains for existing and foreseeable future primary production.</i>

Note:

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

1. The existing undeveloped residential zoned area to east of the Iona triangle, which is subject to this variation, has not been considered in detail as part of the soils assessment, as it has been assumed that this occurred when the area was originally rezoned; and
2. Breadalbane has not been considered as while it is zoned Rural Residential, where lifestyle uses can occur the area is more akin to residential.

‘Soil type’ represents a unique combination of chemical, physical, biological and mineralogical characteristics and site features. Soil type classifications are often designated by a geographic name and/or topsoil textural and depth qualifier.

The Middle / Iona Road greenfield growth area portion of the rezoning area is currently zoned Plains Production. The site is not used for productive purposes at present with only a 3.4ha block of grazing available on the triangle parcel and a lifestyle block and gardens being the predominant use of the remaining land (4.04ha). Soil maps prepared by Landcare Research indicate that this part of the area has a soil type of ashy sandy loam on sandy loam (loess) on pan over gravel (Duric Perch-gley Pallic Soil). The drainage class is poor and the water holding capacity is low²⁰. The soil type is the same as the existing land to the east which is already zoned residential (includes land subject to this variation which is already zoned residential but undeveloped and land in Reynolds Road (west of Breadalbane Road) and Chestnut Court which has been developed for residential use.

The hill block is currently zoned Rural Residential and is used for grazing purposes, with the only building being a hayshed situated approximately 50 metres from Iona Road. Soil maps indicate that that this part of the area has a soil type of Loam Over Sandy Loam (Typic Orthic Gley Soil). The drainage class is poor and the water holding capacity is moderate over slow.²¹. The Landcare soil factsheets for both areas are appended to this report as **Appendix O**.

The Land use capability (LUC) system classifies land according to those properties that determine its capacity for long term sustained production. Capability is used in the sense of suitability for productive use after taking into account the physical limitations of the land. The Hawkes Bay Regional Council LUC identifies:

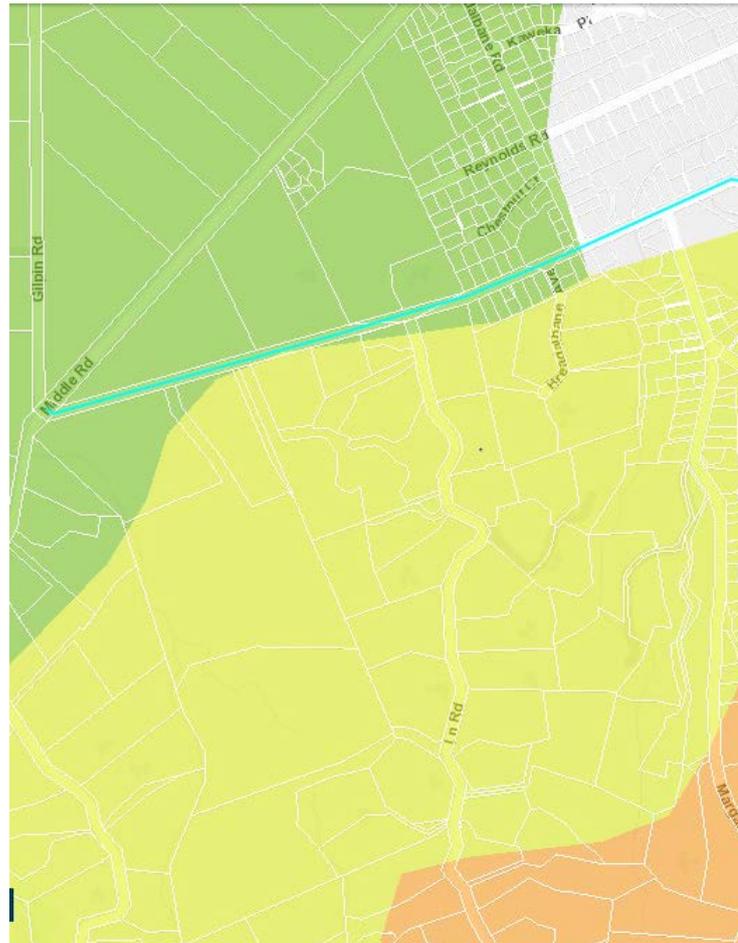
- the triangle as land with slight limitations for arable use and suitable for cultivated crops, pasture or forestry (LUC Class 2); and
- the hill block as land with slight limitations for arable use and suitable for cultivated crops, pasture or forestry (LUC Class 2 - small triangular shaped piece commencing at the intersection of Gilpin, Middle and Iona Roads) and land with moderate limitations for arable use, but suitable for occasional cropping, pasture or forestry for the remainder LUC Class 4) (see map below, sourced from the Hawkes Bay LUC website²²).

²⁰landcareresearch.co.nz factsheet for Duric Perch-gley Pallic Soil

²¹landcareresearch.co.nz factsheet for Typic Orthic Gley Soil

²²<https://hbmaps.hbrc.govt.nz/mapviewer/?map=67686b47a9dc4def9987143ded8c6f60>.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan



LUC Map Layers	
Land Use Capability	
	Land with virtually no limitations for arable use and suitable for cultivated crops, pasture or forestry
	Land with slight limitations for arable use and suitable for cultivated crops, pasture or forestry
	Land with moderate limitations for arable use, but suitable for cultivated crops, pasture or forestry
	Land with moderate limitations for arable use, but suitable for occasional cropping, pasture or forestry
	High producing land unsuitable for arable use, but only slight limitations for pastoral or forestry use
	Non-arable land with moderate limitations for use under perennial vegetation such as pasture or forest
	Non-arable land with severe limitations to use under perennial vegetation such as pasture or forest
	Land with very severe to extreme limitations or hazards that make it unsuitable for cropping, pasture or forestry

LUC classes 1-4 are described as having long term capability to sustain a wide range of productive uses from arable cropping and horticulture, to pastoral grazing and production forestry²³, and are therefore considered highly versatile soils. Noting that there are slight limitations identified by the Landcare soil maps due to soil typologies. Rezoning of the Iona triangle from Plains Production Zone to an urban residential zoning will, therefore, lead to an

²³ 'Landuse Capability Handbook, A New Zealand Handbook for the Classification of Land, 3rd Edition', 2009, Landcare Research New Zealand Ltd

inevitable loss of an area of productive and versatile soils on the Heretaunga Plains. This is unavoidable, however the following needs to be considered.

This area has already been signaled for greenfield residential growth through HPUDS & through inclusion in the RPS. As outlined in Section 3.2 of this report, HPUDS adopted a 'compact development' scenario for the Heretaunga Plains by 2045 – with defined urban limits; higher density development and intensification over time, as a means to limit encroachment onto the versatile soils of the Heretaunga Plains. The central tenement is development that is carefully managed, with future growth occurring largely off the Plains. Greenfield growth areas in HPUDS (and ultimately adopted in the RPS) were selected based on the ensuring supply of sufficient greenfield land to cater for household growth projections but with higher density and intensification to be achieved over time. They are areas representing the following characteristics:

- Soils of lesser versatility; or
- Productive capacity has been compromised;
- Clear natural boundaries exist; or
- Logical urban edge greenbelts can be created;
- Greenbelts could provide opportunities for walking and cycling connections;
- Sites support compact urban form, can be serviced at reasonable cost and integrated with existing development.²⁴

The area proposed for rezoning is an area where productive capacity is considered somewhat compromised due to:

- the proximity of the Hastings urban area and that it has been identified in the RPS as needed for urban growth needs so its policy direction in the higher order Strategy is already determined;
- the triangle portion is not completely flat, with bull hill located to the west;
- the remainder of the site zoned Plains is used for residential lifestyle purposes with substantial well established gardens and not productive purposes; and
- the hill blocks existing Rural Residential zoning means that its versatility for these uses are already compromised through its pre-determination of use under the Proposed District Plan.

Clear natural boundaries for this area exist, due to it being surrounded by roads or being sandwiched between existing lifestyle properties. Additional opportunities for cycling will be created by the creation of the loop connection. Recreational opportunities will be created through the two new reserves.

Finally, the area has been confirmed (refer section 7.5 above) as able to be serviced at reasonable cost and integrated with existing development.

The long term strategy for urban growth over the Heretaunga Plains adopted through HPUDS and the RPS recognises that the loss of productive land will inevitably occur on the

²⁴ HPUDS 2010, pg 57

fringe of Hastings City in order to provide for urban growth that does not compromise the greater Heretaunga Plains soil resource for food production. Given this, the loss of this (arguably somewhat already compromised) area of versatile soils is a necessary and unavoidable consequence of providing for long term urban growth in Hastings.

7.7 Reverse Sensitivity Effects

Relevant RPS provisions:

POL UD12 In preparing or assessing any rezoning, structure plans, or other provisions for the urban development of land within the Region, territorial authorities shall have regard to:

- 1) Avoidance, remediation or mitigation of reverse sensitivity effects arising from the location of conflicting land use activities;*
-

Reverse sensitivity applies to situations where a potentially incompatible land use is proposed to be sited next to an existing land use. The expansion of the urban environment may increasingly result in conflict at the urban/rural interface (e.g. amenity standards expected by new residential dwellers could place constraints on existing permitted rural activities such as orchard operations), but also in respect of introducing noise sensitive activities adjacent to existing arterial roads. Typically, concerns largely revolve around noise, agrichemical use, odour, and the visual effects of rural production operations.

7.7.1 Right to Farm

Existing rural activities may have effects beyond the site boundaries that may not be able to be completely avoided or mitigated, however it is reasonable to expect that existing rural activities are able to continue to operate within the environmental limits provided for in the District Plan.

As a result of rezoning Plains Production Zones to an urban zoning, there is a very real risk of exacerbating or creating new urban/rural interface conflicts.

The Proposed Plan addresses reverse sensitivity effects comprehensively in terms of enabling ‘the right to farm’. This is clearly articulated in Chapter 2.8 Rural Resource Strategy, as follows:

2.8 RURAL RESOURCE STRATEGY

2.8.2.2 Managing Reverse Sensitivity Effects (Enabling “The Right to Farm”)

Where there is a greater range of land uses the potential for conflict between the land uses increases. This has been witnessed with the significant increase in the number of residential lifestyle sites that have been created in the rural area since the time that the previous District Plan was made operative in 2003. The District Plan will need to determine what level of amenity it will adopt in rural areas. In this sense amenity means how noise levels, odour strength, air quality and visual appearance may detract from or contribute to the overall pleasantness and attractiveness of the rural environment. Therefore, high rural amenity levels are characterised by low levels of unnatural noise and odour, clean air and a pleasant visual appearance. However, the inherent nature of primary production activities, means that intermittently high noise levels will be produced when agricultural machinery is being used, including rural airstrip use, stock is being moved or held, or crop protection mechanisms are activated. These activities may also result in increased odour levels and reduced air quality. Therefore, current amenity

levels in the rural areas of the Hastings District are characterised by fluctuations in noise and odour levels, air quality and visual appearance due to both routine and seasonal primary production management practices.

Enforcing excessively high amenity levels without regard to these fluctuations may lead to established management practices and activities becoming unsustainable, thereby undermining the very activities that generate attraction into the area. The 'Right to Farm' recognises that there are well established 'amenity levels' associated with the principal activities of the area, and that new or emerging activities must acknowledge these amenity standards, as part of the ongoing operation and development of the rural resources of the Hastings District. It further recognises that non-land based activities must integrate their amenity expectations with those which are reasonably achieved in the rural environment. This does not suggest that the community should not expect to see the agricultural sector improve its amenity performance nor does it remove the duty in Section 17 of the Act to avoid, remedy or mitigate the adverse effects of an activity. The District Plan should therefore ensure that the Best Practicable Options are utilised to ensure that amenity levels are maintained and improved over time throughout the Hastings District. Best Practicable Option in the Plan means, in addition to its meaning under the Act, the use of the most effective and efficient industry practices given available technology.

2.8.2.3 Pressure on the Rural Resource Close to Urban Centres

There is significant pressure on rural land close to the urban centres of Hastings and Havelock North to accommodate additional residential, commercial and industrial activities. This demand is generated from activities which seek to complement the agricultural activities in the area, and from those which desire to utilise the rural ambience, or increase their marketing profile by locating on selected high traffic routes through the rural area. This reflects lifestyle and marketing preferences by the business community. In addition there is a general pressure to expand urban boundaries onto the adjoining rural area. While some accommodation of these is inevitable, it should not be allowed to occur in an ad-hoc manner but rather as part of a wider integrated strategy for urban development. This has been achieved by means of the Heretaunga Plains Urban Development Strategy which establishes a clear urban boundary for Hastings.

The area under the most direct pressure corresponds largely to the land immediately beyond the urban periphery, and land located between existing urban centres. If the conflicting demands are not carefully managed, there are likely to be increasing amenity conflicts which will weaken the ability to efficiently and economically manage the physical resources of the area, and damage the long term sustainability of the resource base. The District Plan must set a clear strategy to manage the demand pressure for urban activities which reflects the community's need to balance the future of both its urban and rural components.

Areas further beyond the immediate urban area are less prone to major development pressure, but are also generally more able to accommodate the loss of land and manage any potential effects generated by activities. The District Plan has developed policies that reflect the potential impact, and the level of threat to the resources of the Hastings District.

2.8.3 ANTICIPATED OUTCOMES

RRSA05 Maintaining and enhancing rural character and amenity including avoiding reverse sensitivity effects.

Further to this, Chapter 6.1 Plains Strategic Management Area includes the following relevant policy:

6.1 PLAINS STRATEGIC MANAGEMENT AREA

PSMP5 Establish clear and distinct urban boundaries to prevent incremental creep of urban activities into the Plains Production Zone. Explanation The Heretaunga Plains Urban Development Strategy (HPUDS) identified that future urban development must be cognisant of the value of the Plains versatile resource to the District and that it was important to identify distinct urban boundaries. HPUDS has recommended where growth is appropriate and where it is not. The Regional Policy Statement has implemented these recommendations.

Land uses occurring on adjacent Plains Production Zone land currently comprise primarily of orchards. For this area HPUDS noted that conflicts with adjacent land uses are unlikely to occur. This is because the site is separated, by Middle Road which acts as a buffer. As part of the Iona rezoning, the area would be identified in the District Plan as an 'Urban Development Area'. Special building setbacks for Urban Development Areas are provided for in the Hastings Residential Environment, which would be similarly applied to Iona Urban Development Area, as follows:

7.2 HASTINGS GENERAL RESIDENTIAL ENVIRONMENT

7.2.5G SPECIAL BUILDING SETBACKS

(b) Urban Development Areas (Appendix 2 Figure 1)

Residential buildings shall be erected a minimum distance of 30 metres from a Plains Zone boundary or a minimum distance of 10 metres from a road which provides the boundary between a residential and Plains Zone.

Outcome

An open space buffer will be provided which maintains on site and neighbourhood amenity

This will effectively result in a front yard setback requirement of 10 metres for any future residential development of the land along the Middle Road frontage which, in combination with the 20 metre road reserve, will achieve a 30 metre buffer between any residential dwellings within the Iona Urban Development Area and activities occurring on the adjacent Plains Production zoned land to the north.

The policy direction and open space buffer requirement in the Proposed Plan is expected to sufficiently mitigate any potential urban/rural interface issues associated with the rezoning and subsequent residential development of the Iona development area.

For the new zone where it adjoins the Rural Residential Zone similar principles around the need to mitigate interface issues exist. For this reason, a setback of 7.5 metres is intended.

7.7.2 Reverse Sensitivity associated with 'Intensive Rural Production'

Activities

Within the Residential and Rural Residential Zones, Intensive Rural Production Activities are not permitted. This is because the smaller size of sites in the Zone means that there is less opportunity for these activities to be separated sufficiently from residential activities within the Zone, or on land in adjoining zones, in order to avoid or mitigate any significant adverse effects which they may have.

A check of Councils GIS system identifies no historic Intensive Rural Production Activities that require consideration in investigating this area for rezoning.

7.7.3 Provision for Existing Activities within the Development Area

Another issue is the ability for existing activities to continue during the area's development. Development will not occur overnight and rezoning does not oblige landowners to cease their existing activities and develop their land. These activities retain existing use rights.

7.8 Liquefaction and Geotechnical Assessments

Relevant RPS provisions:

POL UD10.4 Notwithstanding Policy UD10.1, in developing structure plans for any area in the Region, supporting documentation should address:

g) How any natural hazards will be avoided or mitigated;

AER UD12 Urban development is avoided in areas identified as being at unacceptable risk from natural hazard (flooding, coastal inundation, coastal erosion, liquefaction, land instability).

7.8.1 Liquefaction

In September 2017 a report *Planning and engineering guidance for potentially liquefaction-prone land* was issued by EQC, Ministry of Innovation and Employment and the Ministry for the Environment. The purpose of the report is to provide guidance associated with the use and development of land in potentially liquefaction-prone areas. This guidance covers the consistent planning approach that will make it easier for councils to prepare Resource Management Act policies and plans (including land rezoning's), and to process resource and building consent applications.

Not long after this guidance document was released, findings of a study commissioned by Hawkes Bay Regional Council and the Natural Hazards Research Platform to re-evaluate the liquefaction hazard across the region and to evaluate the consequential risks posed was released (*Assessment of Liquefaction Risk in the Hawkes Bay Volume 1 : The Liquefaction Hazard Model*, GNS Science Consultancy, October 2017). Accordingly a Council policy was adopted for any land in the Hastings District identified as having medium or high liquefaction vulnerability.

An examination of the Liquefaction and Land Vulnerability map (Figure 8.1, page 87) identifies that liquefaction is unlikely – very low to low liquefaction vulnerability for the proposed rezoning area (refer to the map below). As a result it is considered that no site specific liquefaction investigations are needed for the proposed rezoning area, as a result of these findings.

However, geotechnical investigations for the wider proposed rezoning area were carried out in February 2016 and are discussed in greater detail below.



7.8.2 Geotechnical

Breadalbane Avenue:

No geotechnical investigations were carried out for Breadalbane Avenue as part of the Iona rezoning work. This is due to this area being proposed for infill development and that land in the area with the same topography has been successfully developed for residential purposes which signals that the land is generally suitable for this use. In making this decision the following investigations took place:

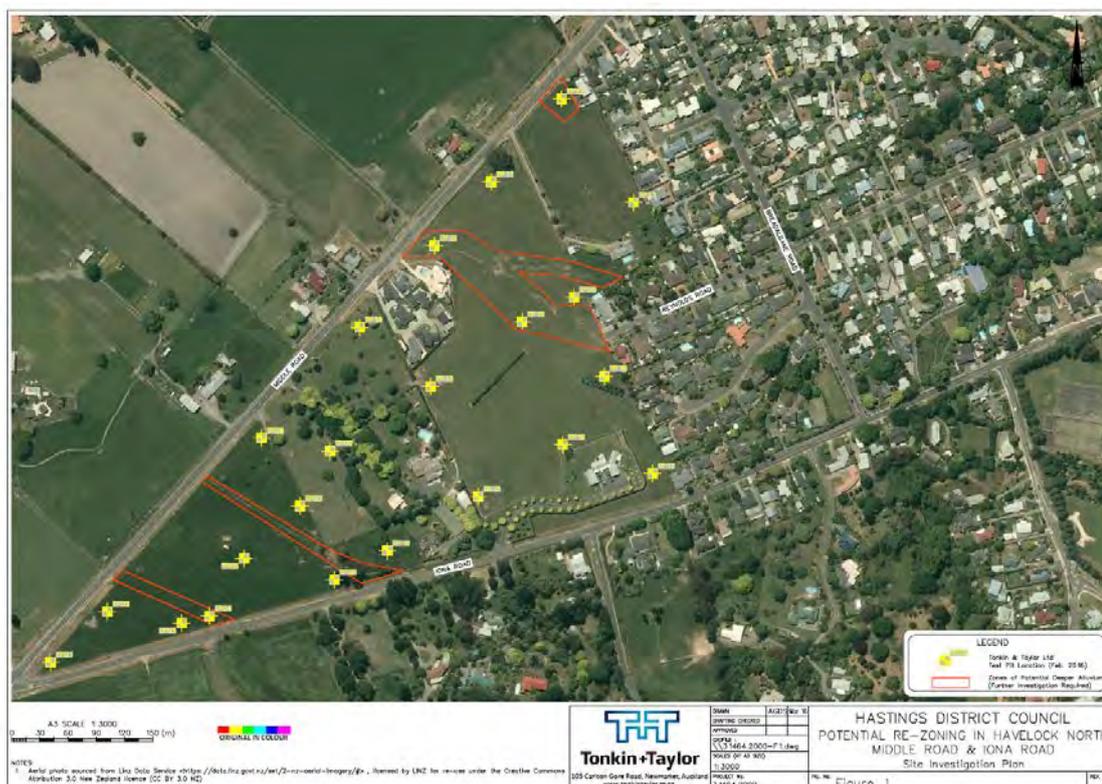
- An examination of the Liquefaction and Land Vulnerability map prepared by GNS Science and discussed in the section above, identifies that liquefaction is unlikely – very low to low liquefaction vulnerability;

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

- A check of Councils GIS shows that there is no instability hazard identified for this area and groundshaking is identified as 'Bedrock/Redolith, which is the same over all of Breadalbane Avenue; and
- A check of the Landcare soils map shows that soil type is the same over all of Breadalbane Avenue (Typic Orthic Gley Soil).

Iona Triangle:

Geotechnical investigations were carried out in February 2016 by Tonkin & Taylor Ltd to assess subsurface conditions and outline any potential geotechnical issues that may affect any future residential rezoning (attached in **Appendix P**; HPRM Reference ENV-9-19-4-16-19). Investigations comprised twenty-two (22) test pits excavated 0.55m to 2.2m below existing ground level to assess subsurface conditions. The information obtained from the investigations has been used in developing a typical ground model for the site. The location of these tests are shown in the figure below:



Published geology²⁵ indicates the site is underlain by a variable group of middle to late Pleistocene alluvial fan deposits, collectively known as the Kidnappers Group²⁶. These typically consist of extremely to very weak siltstones and sandstones. A weathered cap of sandy silt

²⁵ Lee, J.M. et al (2011). *Institute of Geological & Nuclear Sciences 1:250 000 Geological Map 8*. Geology of the Hawke's Bay area. GNS Science.

²⁶ Kingma, J.T. (1971). *Geological Map of New Zealand 1:63 360, Sheets N134 Napier and Hastings and N135 Kidnappers*. Department of Scientific and Industrial Research.

often overlies the sandstone rock. Tonkin and Taylor's preliminary geotechnical investigations have generally confirmed the published geology.

The Geotechnical Investigation Report concludes as follows:

- *The site is typically underlain by Kidnappers Group sandstone and siltstone. Pockets of alluvial deposits (interbedded sand and silt) were encountered in localised gullies across the site;*
- *The Kidnappers Group is considered to have negligible susceptibility to liquefaction. For alluvial and gully deposits, further investigation and laboratory testing are recommended to further characterise and delineate these materials;*
- *Minor earthworks may be required to form platforms and fill gullies;*
- *Areas with thick alluvial deposits may require some form of ground improvement such as removal and replacement with engineered fill or pre-loading;*
- *We recommend that site specific foundation assessments be carried out where alluvial soils were encountered to allow site specific earthwork and foundation design;*
- *Shallow foundations in accordance with NZS 3604:20115 bearing on "good ground" are considered to be generally appropriate for typical residential structures; and*
- *During detailed design, lot specific investigations such as hand augers (with shear vane measurements), Scala penetrometers and additional test pits should be carried out to confirm the underlying geological conditions for each proposed site.*

Based on the results of site investigations and the results of the seismic assessment, the report considers robust shallow foundations for typical residential structures, would be suitable for the sites being considered for residential re-zoning. Plan provisions have been incorporated to ensure that these recommendations are adopted. These require that specific geotechnical investigations be carried out as part of any subdivision application.

On the basis of the conclusions in the Geotechnical Investigation Report, there are no significant geotechnical constraints that would appear to prevent or pose significant impediments to residential development of the land proposed for rezoning within the Iona triangle.

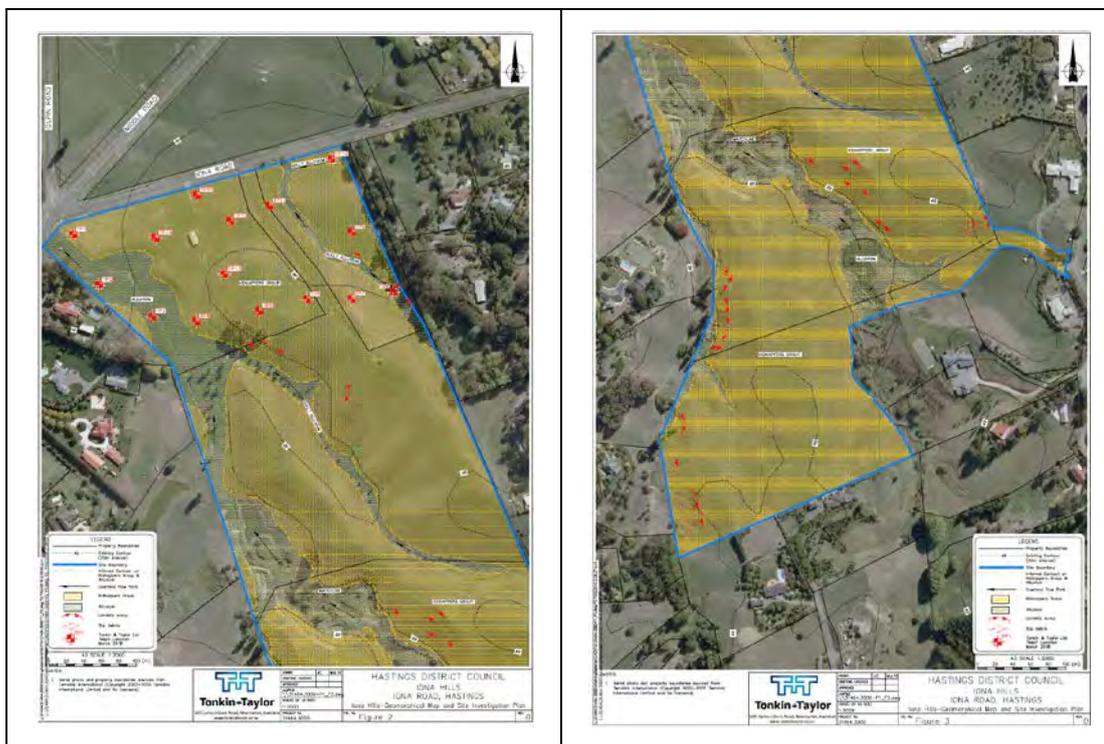
Iona Hill Block:

Preliminary geotechnical investigations were separately carried out in February 2016 by Tonkin & Taylor (T + T) Ltd to assess subsurface conditions for the hill site (attached in **Appendix Q**; HPRM Reference ENV-9-19-4-18-284), in order to achieve acceptable slope stability for a successful residential subdivision development.

Investigations comprised (15) test pits carried out with a 14 tonne excavator. The test pits were undertaken until refusal in hard ground, until the pit sides collapsed or to the maximum reach of the excavator. The test pits were logged and supervised by an engineering geologist from T+T to NZGS standards. Shear vane testing was undertaken within cohesive material

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

where the vane could penetrate into the sub-soils. The location of these tests and subsurface conditions are shown in the figures below:



Published geology²⁷ indicates that the site is underlain by early Pleistocene river, lake and shoreline deposits collectively known as the Kidnappers Group. These deposits are often described as very weak to extremely weak sandstones, siltstones and gravels. These deposits form much of the land south and east of Havelock North. Tonkin and Taylor's preliminary geotechnical investigations have generally confirmed the published geology. Some alluvium deposits were discovered in northwestern and northeastern parts of the site in low lying streams, swamps and gully areas. These deposits varied in depth. As part of the site investigations T+T have mapped any existing instability features across the site. It is noted that these features are largely located within the reserve areas.

The Geotechnical Investigation Report concludes the following:

- Provided the site is suitably earthworked, the subject site can be satisfactorily engineered to achieve a successful residential development. Some undercutting of the weathered sandstone and topsoil would be required to establish dwelling platforms on suitable grades. Site specific investigations will be required to confirm factors such as slope stability behaviour and bearing capacities. This will occur at the detailed design phase of development
- Any development within the gullies or alluvial soils would require gully muck outs and replacement with engineered fill;

²⁷ Kingma, J.T. (1971). *Geological Map of New Zealand 1:63 360, Sheets N134 Napier and Hastings and N135 Kidnappers*. Department of Scientific and Industrial Research.

- Areas underlain by alluvium sediments will require deeper site investigations during detailed design to delineate these zones and confirm the susceptibility to liquefaction. Specific foundation design will also be needed.

Based on the results of site investigations, it is concluded that the hill area can be successfully developed for residential purposes. However, as the site is to be extensively earthworked to achieve the densities intended it is recommended that specific geotechnical investigations be carried out and assessed as part of any subdivision application.

On the basis of the conclusions in the Geotechnical Investigation Report, there are no significant geotechnical constraints that would appear to prevent or pose significant impediments to residential development of the land proposed for rezoning.

7.9 Natural Hazards Constraints

Relevant RPS provisions:

POL UD10.4 Notwithstanding Policy UD10.1, in developing structure plans for any area in the Region, supporting documentation should address:

g) How any natural hazards will be avoided or mitigated;

AER UD12 Urban development is avoided in areas identified as being at unacceptable risk from natural hazard (flooding, coastal inundation, coastal erosion, liquefaction, land instability).

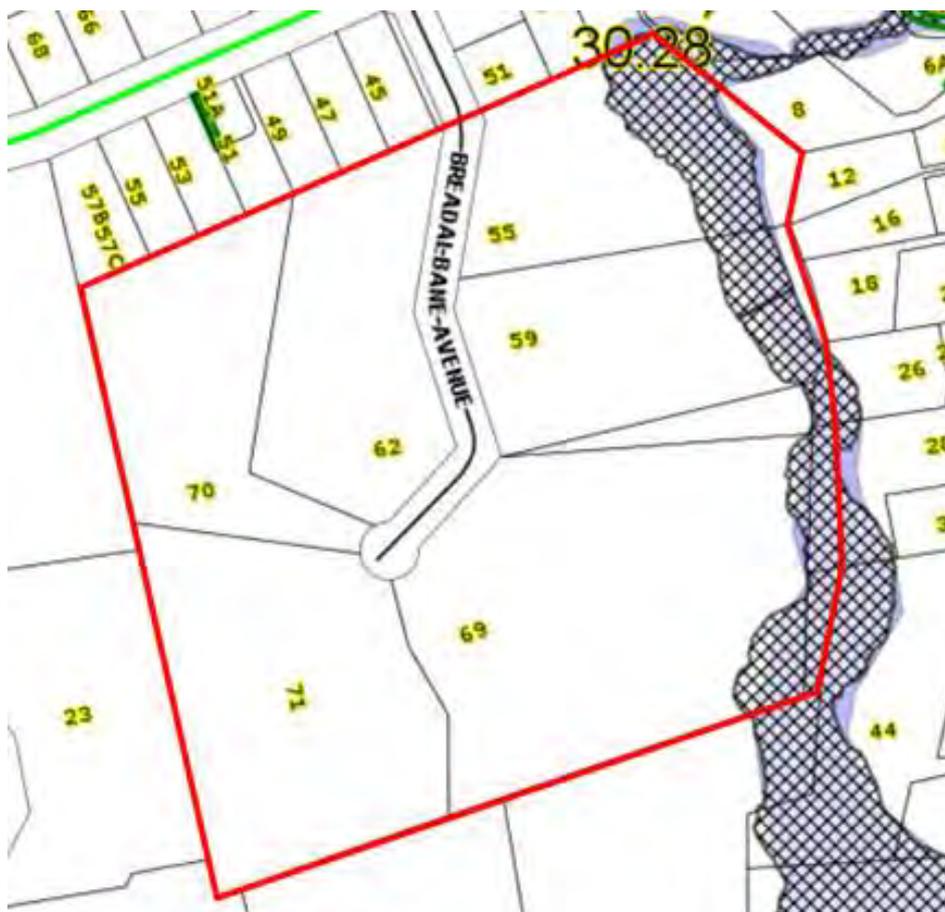
Hastings District Council GIS Database has multiple natural hazards recorded over the District. The following hazards were reviewed in respect of the land contained within the Iona development area:

- Flooding, Filling, Ponding, Inundation Areas, Fault locations, Contaminated Sites and Instability Hazards.

Section 7.8 above deals with geotechnical constraints. No additional hazards were identified in reviewing Councils GIS database. A review of the Hawkes Bay Emergency Management Hazard Information Portal was also undertaken, however no hazards were recorded with this information. However the pond furthest to the south in the hill area was identified as a feature.

Breadalbane Avenue:

There is a risk of flooding on the Eastern boundary of the Breadalbane Special Character Rezoning. The map below shows the extent of flooding from a 1 in 50 year event from the Herehere/Mangarau Stream. Any building work, building platforms or stormwater detention area located in or near this hazard would be required to mitigate potential risks. This is likely to impact the ability to establish dwellings within this area.



A review of available information indicates there are no identified natural hazards to cause impact on the overall viability of the rezoning.

7.10 Natural/Ecological/Landscape/Historic Heritage Features

Relevant RPS provisions:

POL UD12 In preparing or assessing any rezoning, structure plans, or other provisions for the urban development of land within the Region, territorial authorities shall have regard to:

- f) Provision for the maintenance and enhancement of water in waterbodies, including appropriate stormwater management facilities to avoid downstream flooding and to maintain or enhance water quality;*
- h) Protection and enhancement of significant natural, ecological, landscape, cultural and historic heritage features;*

POL UD10.3 Notwithstanding Policy UD10.1, structure plans for any area in the Region shall:

- d) Identify significant natural, cultural and historic or heritage features;*

POL UD10.4 Notwithstanding Policy UD10.1, in developing structure plans for any area in the Region, supporting documentation should address:

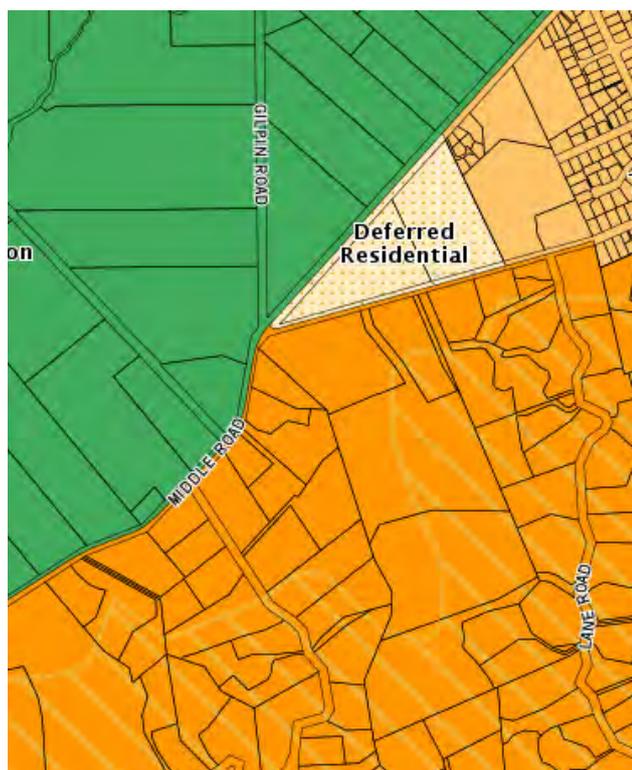
- f) How significant natural, cultural and historic or heritage features and values are to be protected and/or enhanced;*

AER UD11 Urban activities and urban development maintains groundwater and surface water quality and habitat health.

7.10.1 Significant Natural, Ecological & Landscape Areas or Features

There are no 'Significant Natural Areas' or any significant ecological or landscape features identified on the Planning Maps, within or in close proximity of the Iona development area (refer to the map below).

However, a portion of the hill block (refer to map below) is located within the Rural Landscape Character Area (RLCA). There are no plan rules that accompany this overlay, it is instead intended that non-regulatory tools be used. Development is encouraged to be undertaken in accordance with Councils Landscape and Development Guide (The Guide) to encourage design that protects and enhances the qualities of the District's rural landscapes.



 **Rural Landscape Character Area**

Due to a desire to rigorously consider the potential landscape effects, the Working Group engaged the services of a Landscape Architect to assist them in the design led process previously mentioned. This work included several site visits to determine the character and quality of the landscape experience and physical viewing catchment of the site. This process has resulted in recommended amended plan rules to manage landscape and amenity effects. For this reason, because the plan provisions are non-regulatory and because the site no longer has a rural zoning, consequentially it is suggested that the RCLA over the subject area be removed.

It is accepted that the landscape qualities currently experienced in this location will change. As previously mentioned this land has been identified for residential growth needs for some time as part of the regions intensification policies (HPUDS), which seeks to avoid development pressures on the Heretaunga Plains. Intensification of smaller lot development in the

Havelock Hills in this location is consistent with this intent. HPUDS principals require that land be utilised to its maximum natural capacity within the constraints that exist (i.e. topography and amenity values). Council through the work undertaken by the Working Group has endeavored, irrespective of the density and intensity of development that occurs onsite to ensure that any development which occurs onsite is sympathetic to the landscape context. Therefore, time was spent very early on identifying the key landscape features of the site and whether there was an ability to integrate them, resulting in their retention and how amenity and landscape effects could be appropriately managed. The elements of the proposed Structure Plan for the Iona Urban Development Area provide fixed or indicative locations for:

- Three distinct residential neighbourhoods to enable the imposition of separate plan provisions to appropriately manage effects;
- A road network, with connections to the existing road network off Middle and Iona Roads and a new Spine Road to access the Iona Terraces and Plateau neighbourhoods;
- internal provision for pedestrian walkways and cycleways, and connections to existing pedestrian and cycling networks in and around Middle, Iona and Lane Road's;
- internal water supply and wastewater services corridors, and network connections to existing and planned infrastructure, including a future planned water and wastewater infrastructure upgrade;
- Land set aside as a stormwater detention area on the opposite side of Middle Road, and provision for drainage swales to it;
- 12 hectares of reserve to be set aside for public open space/recreation purposes; and
- Identifies the location of existing trees within road reserve to contribute to streetscape character.

The only other area of interest are the natural watercourses and wetlands over the upper reaches of the site. In terms of providing for the maintenance and enhancement of water in waterbodies, and ensuring urban activities and urban development maintains groundwater and surface water quality and habitat health, the proposed Iona Structure Plan confirms that the area will be fully serviced for water and wastewater, and a stormwater management regime proposed that will ensure stormwater is treated and discharged in a manner that does not adversely affect water quality or habitat (including to the Karamu Stream which is located downstream of the proposed rezoning area. This is covered in greater detail above in section 7.5 of this report).

One further area is the aim of retaining established trees in the Breadalbane Special Character Area. While these trees have not been identified on the Structure Plan encouragement will be given to the retention of the trees which contribute significantly to the special character of this area, through policy direction.

7.10.2 Historic Heritage

Archaeological Sites:

The New Zealand Archaeological Association (NZAA) manages a national database of recorded archaeological sites in New Zealand.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Examination of the database indicates there are no recorded archaeological sites within the identified area, nor are there any archaeological sites within close proximity, as shown in the figure below (note that V21 is a map number reference and not an archaeological site).



Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan



Legend

- NZAA Site
-  Pending
-  Approved
-  Inactive

The rezoning area may contain unrecorded sites, however the Proposed Plan does contain sufficient safeguards to ensure that archaeology is considered at subdivision and detailed land development stage, and the Heritage New Zealand Act imposes further statutory obligations on all persons in respect of any work that may lead to the destruction or modification of any recorded or unrecorded archaeological sites.

Heritage New Zealand Register:

Heritage New Zealand compiles and maintains a register of buildings, places or areas of historic significance and/or waahi tapu. There are no known buildings or sites within the project area that are registered as significant with Heritage New Zealand as shown in the figure below).

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan



Source: <http://www.heritage.org.nz/the-list> (February 2018)

John Scott Dwelling – 71 Breadalbane Avenue

The late John Scott (9 June 1924 – 30 July 1992) has been recognised as a pioneering Maori architect and prominent figure in 20th century New Zealand Architecture. His unique work has been recognised by the New Zealand Institute of Architects as incorporating ideas from both “*Maori and cultural architecture*²⁸” and also strongly influenced by traditional rural New Zealand buildings. He was the recipient of several awards by the New Zealand Institute of Architects, including receiving the New Zealand Institute of Architects Gold Medal for the second time in 1999 (posthumously), for his “*unique contribution to architecture*²⁹”. Some of his buildings (both residential and community) have received registration with Heritage New Zealand.

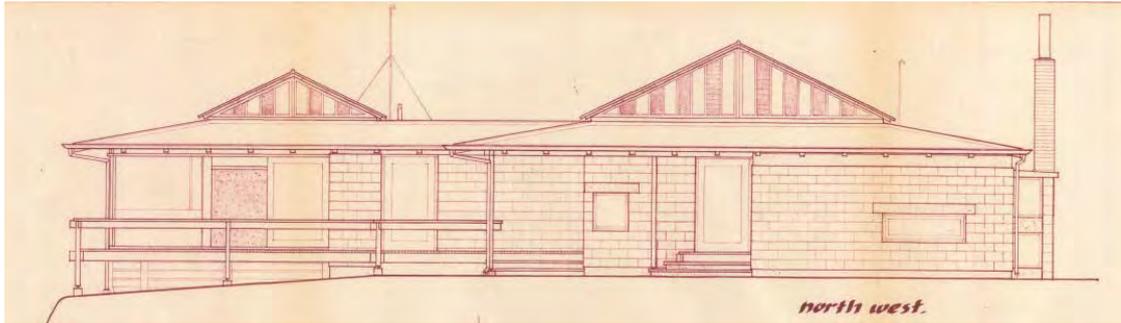
Born, raised and later residing in Hawkes Bay there are numerous examples of his work here. Within the proposed Breadalbane rezoning area there is a dwelling which was designed in 1960 by John Scott:

²⁸ [https://en.wikipedia.org/wiki/John_Scott_\(architect\)](https://en.wikipedia.org/wiki/John_Scott_(architect))

²⁹

[http://www.johnscott.net.nz/extras/Historic%20Place%20Report%20Urewera%20National%20Park%20Visitor%20Centre%20\(consultation2\).pdf](http://www.johnscott.net.nz/extras/Historic%20Place%20Report%20Urewera%20National%20Park%20Visitor%20Centre%20(consultation2).pdf)

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan



The dwelling is not listed with Heritage New Zealand. However, Council also lists in its District Plan, buildings which are deemed of regional significance, but don't have this recognition.

The current owners recognise the significance of this building and have given in principal support for its inclusion in the variation, as a Category II listed building. The proposed inclusion has also been discussed with Heritage New Zealand who advised that they are supportive of any regional initiatives to protect historic heritage. Both the owners of this property (due both to the inclusion of the site in the proposed rezoning area and the listing of the dwelling as a heritage item) and Heritage New Zealand will be notified of the variation.

More on its inclusion is outlined in later sections of this report.

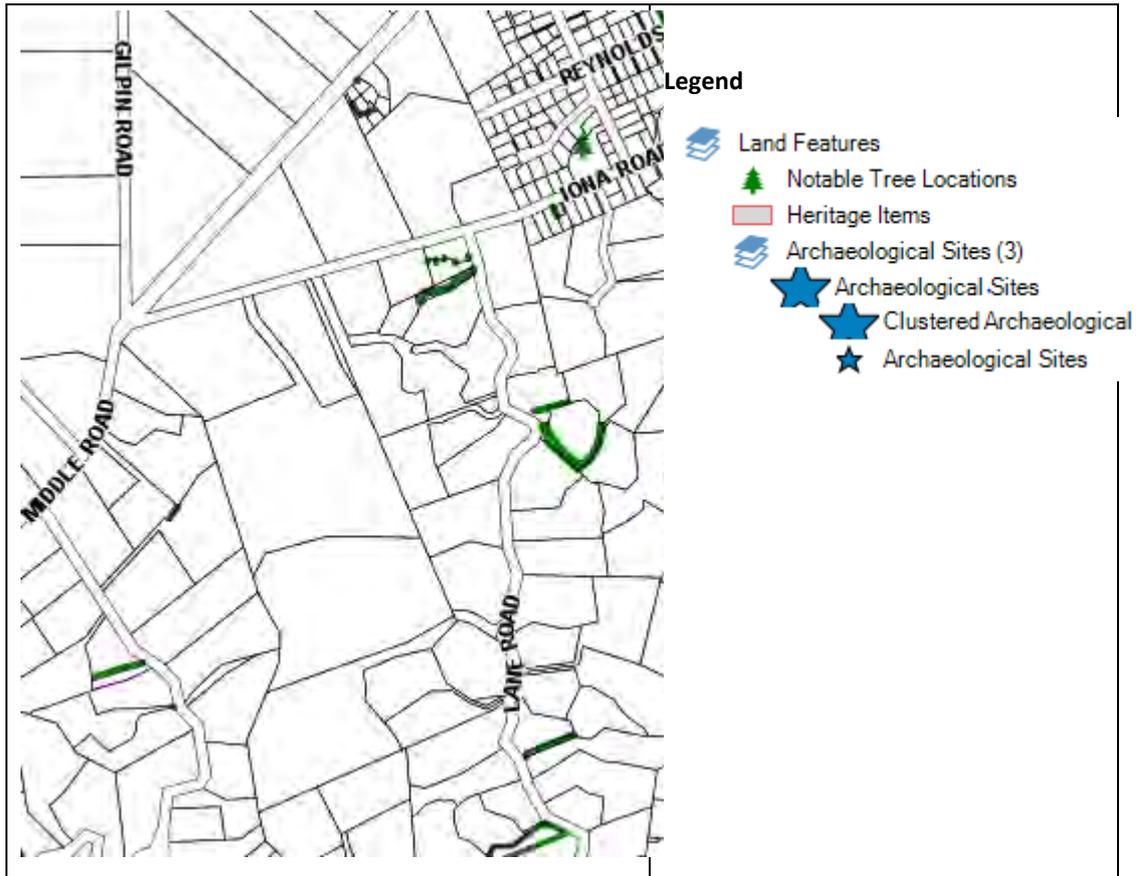
Hastings District Council GIS Database Information

Council also records areas of significant heritage, archaeological sites, protected trees and waahi taonga sites. Much of these records are a replication of the above mentioned databases, and most are identified in the District Plan but not all.

All of these records are compiled and shown within the GIS database. A check of this database (and as depicted in the maps below) has shown no recorded heritage sites, archaeological sites or waahi tapu areas on the land in question or within close proximity.

There is a protected tree located on 58 Iona Road (Camphor Laurel (T17)), towards the corner of Iona and Breadalbane Roads, however this is separated some 150 metres from the closest boundary of the rezoning extent. It is separated from the rezoning area by several residential properties.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan





Map depicting location of the closest notable tree to the rezoning area

A review of available information indicates there are no significant natural, ecological, landscape, or historic heritage areas or features that would be adversely affected by the development of the subject area for residential housing.

In terms of unrecorded historic heritage sites, if any are discovered at the development stage the Proposed Plan along with the Heritage New Zealand Act, contain sufficient safeguards.

7.11 Culturally-Significant Features & Values

Relevant RPS provisions:

POL UD12 In preparing or assessing any rezoning, structure plans, or other provisions for the urban development of land within the Region, territorial authorities shall have regard to:

- f) Provision for the maintenance and enhancement of water in waterbodies, including appropriate stormwater management facilities to avoid downstream flooding and to maintain or enhance water quality;*
- h) Protection and enhancement of significant natural, ecological, landscape, cultural and historic heritage features;*

POL UD10.3 Notwithstanding Policy UD10.1, structure plans for any area in the Region shall:

- d) Identify significant natural, cultural and historic or heritage features;*
-

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

POL UD10.4 Notwithstanding Policy UD10.1, in developing structure plans for any area in the Region, supporting documentation should address:

- f) *How significant natural, cultural and historic or heritage features and values are to be protected and/or enhanced;*

AER UD11 Urban activities and urban development maintains groundwater and surface water quality and habitat health.

There are no waahi taonga or significant culturally significant features or values identified on the Planning Maps, within or in close proximity of the Iona development area.

Consultation with mana whenua as part of this process did not identify any sites of significance, but the cultural significance of the Karanema Reserve under which this land sits was raised and as a result it was suggested to Council as part of its early consultation that a Cultural Impact Assessment (CIA) be carried out. This has been included as part of the Variation. The CIA required as part of any subdivision of the Iona triangle and hill area requires that it cover:

- Information on the relevant cultural values associated with the site;
- The effects on those values, and the relationship of mana whenua to them, as a result of the proposed activity; and
- Recommendations to avoid, remedy or mitigate adverse effects, including but not limited to recommended conditions of consent should the application be granted.

The CIA is further discussed later in this assessment. No additional concerns have been raised to date. It is possible that because future urban development of this area has already been signaled through the HPUDS process, such issues would have been raised at that time.

It is, however, acknowledged that the mauri of waterways is important to tangata whenua generally. Hence, the protection of water quality within the ponds and the downstream catchment. This will be achieved through full servicing of the development and the appropriate treatment and discharge of stormwater as part of the Structure Plan for the area and through associated District Plan standards, and these are addressed in detail in section 7.5 of this report.

A review of available information and consultation with mana whenua to date indicates there are no waahi taonga or significant cultural features or values that would be adversely affected by the development of the subject area for residential housing. However, Council will continue to engage with mana whenua throughout this plan variation process and has included a requirement for a Cultural Impact Assessment at the subdivision stage for the Iona triangle and hill areas.

7.12 Other Matters

Relevant RPS provisions:

POL UD10.4 Notwithstanding Policy UD10.1, in developing structure plans for any area in the Region, supporting documentation should address:

h) Any other aspects relevant to an understanding of the development and its proposed zoning;

In addition to the matters above, other aspects deemed relevant to the confirmation of the suitability of the proposed Iona development area for urban residential development, include:

- i) the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS);
- ii) economic considerations; and
- iii) whether the rezoning results in a defensible urban boundary.

These matters are addressed below.

7.12.1 National Environmental Standard for Managing Contaminants in Soils

According to the Ministry for the Environment, New Zealand has a legacy of soil contamination that is mainly associated with past practices involving storage and use of hazardous substances, and disposal of hazardous wastes. Contaminants are a problem when they are at a concentration and a place where they have, or are reasonably likely to have, an adverse effect on human health and the environment.

The objective of the NESCS is to ensure land affected by contaminants in soil is appropriately identified and assessed when soil disturbance and/or land development activities take place and, if necessary, remediated or the contaminants contained to make the land safe for human use.³⁰

The NESCS requires consideration at time of a change in landuse, subdivision or earthworks on a piece of land upon which an activity on the Hazardous Activities and Industrial List (HAIL) has/is or is more likely than not been undertaken.

It is noted on the property file for a site visit undertaken as part of a subdivision application, that spray equipment and petrol drums were observed during a site visit near the old woolshed located onsite.

The woolshed is positioned approximately 50 metres back from Middle Road frontage, on the southern side, within the Bull Hill Neighbourhood. A check of the historic photos Council has available, shows no evidence of hazardous activities, however livestock dip or spray race operations (A.8) and storage drums tanks or drums for fuel, chemicals or liquid waste (A.17), which could be associated with pastoral uses, are considered a Hazardous Activity under the NESCS Hazardous Activities and Industries List. It is considered that any use would likely be localised to the woolshed area:

³⁰ Users' Guide: NES for Assessing and Managing Contaminants in Soil to Protect Human Health, April 2012, Ministry for the Environment



This area will require further investigation and if necessary remedial works if they are to be developed into Residential uses. There is nothing to suggest that the remainder of the site, which has been in pastoral use is subject to NESCS.

It is unlikely that the development area presents any significant impediment in terms of potential risk to human health that would prevent safe conversion to urban residential land use. However, the area surrounding the woolshed will require further investigation and potential remedial works prior to residential development.

7.12.2 Economic Impacts

Section 32 requires specific consideration of the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated as a result of adoption of the plan variation, including opportunities for economic growth and employment that are anticipated to be provided or reduced (s32(2)(a)).

Residential development of the proposed Iona development area is financially feasible from a public investment perspective, and in terms of the development contributions set by Council for urban greenfield developments in Hastings.

Given the absence of any significant natural or physical constraints to development within the area, development of this area is not considered to be difficult or likely to involve unexpected site development costs. It is recognised in HPUDS that the cost of developing the hill block is greater than the flatter areas.

Rezoning of this area presents significant economic benefits to landowners, developers and the building sector, through improved land values for landowners, and through economic growth and employment resulting from subsequent development and construction opportunities.

This also has flow on economic benefits to the wider Hastings and Hawke's Bay community, through provision for population growth, and an increase in the local authority rating base.

In the case of the hill block, changing the use of this land from rural to residential land use will result in the loss of some primary production potential. However, this could occur under its existing rural residential zoning to an extent by means of lifestyle uses and is considered inevitable with such a change of use. For the remainder, it achieves HPUDS objectives by providing for the residential growth needs efficiently, within natural constraints, while avoiding encroachment onto the Plains.

These aspects have already been traversed to some extent, when the area was considered for inclusion as a growth area in HPUDS and embedded in the RPS.

7.12.3 Defendable Urban Boundary

Identified Greenfield growth areas need to have a defendable urban boundary to ensure that growth does not creep outwards onto the Plains Production Zone.

Part of the subject site the boundary is contained along the ridgeline above Iona Road and within the fingers of existing rural residential development accessed from Lane and Endsleigh Road. No access to the hill area is to be provided via Lane Road to retain existing character. In the case of Breadalbane Avenue, this results in discrete infill development, which is all accessed via one internal road. These factors provide barriers to incremental urban growth.

7.13 Conclusion as to Suitability

HPUDS and the RPS have already identified the area subject to this rezoning, as being generally suitable as a residential growth area for Hastings. The above assessment confirms that there are no other significant factors that suggest the proposed Iona development area is unsuitable for residential development.

On the basis of the assessment above, and against the matters contained in RPS Policies POL UD12 & POL UD10.4 and the relevant RPS Anticipated Environmental Outcomes AER UD1–AER UD13, the Iona urban development area is ultimately confirmed as being suitable for urban residential development.

8 Appropriateness, Efficiency & Effectiveness of Proposed Variation 4 in Achieving the Purpose of the RMA

8.1 Is the Proposal the Most Appropriate Way to Achieve the Purpose of the RMA?

As outlined in section 2.1 of this report, the first part of this evaluation is:

‘Whether the objectives of Variation 4 are the most appropriate way to achieve the purpose of the Resource Management Act’.

The objectives of Variation 4 include the following:

- New objectives within Section 8.1 Havelock North Strategic Management Area (HNSMA07 and HNSMA08);
- New Objectives within the new Iona Special Character Zone (ISCO1-6);
- A new objective within Section 8.2 Havelock North Residential Environment to provide for the intensification of the Breadalbane Avenue Special Character Area (HNRO9)

The new objectives proposed to be included in the Havelock North Strategic Management Area (the SMA) reflect the need for urban development in the Havelock North Area to be contained within the boundaries of the SMA in line with the Hawkes Bay Regional Policy Statement (RPS) and also outline the overall objective behind the Iona Urban Growth Area.

The new objectives for the Iona Special Character Zone formulate the basis for this new Zone under the Havelock North Residential Environment Section of the Proposed District Plan. This special character zone seeks to put in place specific planning provisions in order to protect and retain the special features that characterise this particular area. As this area transitions from its current rural and lifestyle land use to an urban residential area these provisions will help to ensure that the amenity values and characteristics of the area that are valued by the local community are retained.

It is important that new development adds value to this area so that it continues to be a unique and special environment. The creation of a new residential area with high amenity and recreational values will ensure that this area maintains its special character while its current rural land use evolves and changes to a more urban environment.

The landscape and character of the Iona Special Character area pre development is considered a special environment within the local Havelock North community. It also has a direct bearing post development as the area needs to consider the high level of amenity attached to the Rural Residential Zone that adjoins certain parts of the special character area.

The landscape values of this area do contribute to the existing pleasant amenity of the zone and the surrounding rural residential area that it previously formed a part of. The Iona Special

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Character Area is also considered unique as it sits at the southern entrance to the village of Havelock North and has the potential to create a gateway experience.

The purpose and key aspects of the Zone are set out in the table below:

Key Aspects of the Iona Special Character Zone	Objective	Policy
Seeks to provide regulatory support for the urban development of a specific area on the southwestern edge of Havelock North that results in a range of high amenity residential neighbourhoods.	ISCO1 ISCO2 BHO1 ITO1 IPO1	ISCP2 ISCP3 BHP1 BHP2 BHP3 ITP1 ITP2 ITP3 ITP5 IP1 IP2 IP3
Seeks to encourage innovative development that is responsive to the different neighbourhood environments within the Zone.	ISCO1 ISCO2 BHO2 ITO1 ITO2	ISCP2 BHP5 BHP6 ITP5 ITP7
Seeks to protect and maintain the special landscape features of the Zone from the adverse effects of development. There are several distinctive landscape features which are highly valued by the community and provide for the Zone's special character. These special features include: the bull hill, the ridge landforms to the south of Iona Road and a set of ponds and wetland areas with associated planting and bird life located in the valley of the central ridgeline.	ISCO1 BHO1 ITO3 IPO1	ISCP1 ISCP2 BHP2 ITP9 IP1 IP2 IP3
Seeks to ensure land is used efficiently while creating a high amenity residential area that provides housing types that suit a variety of households.	ISCO3 BHO2 ITO2	ISCP2 ISCP3 ISCP5

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

		<p>BHP4</p> <p>BHP5</p> <p>BHP6</p> <p>BHP7</p> <p>ITP8</p>
Seeks to protect people and property from the adverse effects of stormwater.	ISCO4	ISCP6
Seeks to ensure the Zone provides a definitive and defensible urban boundary that supports the Regional Policy Statement and Heretaunga Plains Urban Development Strategy.	ISCO5 ITO3	ISCP7 ITP10
Seeks to allow non-residential activities to establish where these are appropriate and at a scale that will not detract from the special character and amenity of the area.	ISCO6 BHO3 IPO2	ISCP8 BHP8 BHP9 BHP10 IP4 IP5
Seeks to protect the existing residential amenity of adjoining zones.	BHO1 ITO1 IPO3	BHP1 BHP3 ITP1 ITP2 ITP3 ITP4 ITP6 ITP9 IP6

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

8.1.1 Evaluation of the Proposed New Variation 4 Objectives

The following assessment evaluates how the proposed new Havelock North Strategic Management Area (SMA) and Zone objectives are consistent with the higher order objectives in the Urban Strategy section (Section 2.4) and the Havelock North SMA (section 8.1) of the Proposed District Plan (PDP) and how they meet Part 2 of the Resource Management Act. This assessment also evaluates new objective HNRO9 (which relates to the intensification of Breadalbane Avenue area) under the Havelock North Residential Environment (Section 8.1) of the PDP and how this is consistent with the Section 2.4 and 8.1 objectives and Part 2 of the Resource Management Act.

New Havelock North Strategic Management Area And Iona Special Character Zone Objectives & How They Meet The Higher Order Objectives In Section 2.4 And 8.1 Of The Proposed District Plan And Achieve Part II Of The Resource Management Act 1991

IONA SPECIAL CHARACTER ZONE OBJECTIVES	SECTION 2.4 OBJECTIVES	SECTION 8.1 HAVELOCK NORTH STRATEGIC MANAGEMENT AREA (SMA) OBJECTIVES	CONSISTENCY OF ZONE OBJECTIVES WITH HIGHER ORDER OBJECTIVES IN SECTION 2.4 URBAN STRATEGY AND 8.1 HAVELOCK NORTH SMA	PART II OF THE RESOURCE MANAGEMENT ACT 1991
<p>OBJECTIVE ISCO1</p> <p>To create a unique residential environment that retains the special character and amenity values of the Iona Special Character Zone</p>	<p>OBJECTIVE UDO1</p> <p>To reduce the impact of urban development on the resources of the Heretaunga Plains in accordance with the recommendations of the adopted Heretaunga Plains Urban Development Strategy (HPUDS).</p>	<p>OBJECTIVE HNSMAO1</p> <p>To ensure that the characteristics which make the Havelock North environment distinctive and memorable are identified, retained and enhanced.</p>	<p>ISCO1 is consistent with UDO1 and HNSMAO1 in that the Iona area was identified as an appropriate greenfield growth area in HPUDS and subsequently the RPS. Sites for growth were selected where:</p> <ul style="list-style-type: none"> - Soils are less versatile, or - Productive capacity of the soil is compromised, or - Logical urban edge greenbelts could be created, or - Greenbelts could provide opportunities for walking and cycling connections, or - Sites support compact urban form, can be serviced at reasonable cost 	<p>Objective ISCO1 achieves the purpose of the Act by promoting the sustainable management of this unique environment (Sec 5(1)). It supports the maintenance and retention of the natural landscape features (the Bull Hill, Central Ridgeline and the set of ponds and wetland areas) that provide this area with its special character while allowing the remainder of the area to be developed for residential housing and hence enabling the owners of this land to provide for their economic wellbeing while ensuring that future generations will benefit from the recreation</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

			<p>and integrated with existing development.</p> <p>The rationale that underpins the zone seeks to utilize the land in the most efficient manner taking into account the need to protect and maintain the special features and landscape values of the Zone in order to retain the amenity and special character of this distinct environment. This is achieved on a neighbourhood basis ensuring that development is undertaken at an appropriate intensity and scale and that any adverse effects on the environment are avoided, remedied or mitigated through specific development control provisions or in the case of the Iona Plateau area through the detailed Masterplan.</p>	<p>reserves established as part of the development of the land (Sec5(2)(a)).</p> <p>This objective also achieves sustainable management by supporting the protection and enhancement of these natural resource features in a way which enables people and the community to provide for their social and cultural well-being (sec 5(2)); and by safeguarding the life supporting capacity of the natural ecosystems that the pond and wetland areas form a part of (sec 5(2)(b)). The site was part of the Karanema Reserve and the cultural significance of the site must be recognised.</p> <p>This objective will also help to meet the following matter of national importance under section 6 of the Act</p> <p>(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taonga.</p> <p>This objective will also help achieve the following matters to be given particular regard in section 7:</p> <p><i>(a) kaitiakitanga</i></p> <p><i>(b) the efficient use and development of natural and physical resources;</i></p> <p><i>(c) the maintenance and enhancement of amenity values;</i></p>
--	--	--	--	---

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

				<p><i>(f) the maintenance and enhancement of the quality of the environment;</i></p> <p>and will give effect to Section 8 Treaty of Waitangi by taking into account the principles of the Treaty of Waitangi.</p>
<p>OBJECTIVE ISCO2</p> <p>To provide for and encourage new and innovative forms of residential development that respond to this unique environment and will add value to the surrounding existing residential area creating a high quality residential environment for all residents</p>	<p>OBJECTIVE UDO2</p> <p>To ensure that new urban development is planned for and undertaken in a manner that is consistent with the matters outlined in the Hawke's Bay Regional Policy Statement.</p>	<p>NEW OBJECTIVE HNSMA08</p> <p>The Iona Growth Area will provide a place that adds value to Havelock North providing an opportunity to create innovative land development responses to this unique environment.</p>	<p>HPUDs and the Hawkes Bay Regional Policy Statement seek to ensure integrated and planned residential development that achieves high amenity and high quality residential environments. The new objectives ISCO2 and HNSMA08 both seek to ensure that the development of this area occurs in a manner that will result in an urban form that provides for choice in the housing market, retains character and identity, demonstrates the principles of urban design, takes into account the special character and amenity values of this area and in doing so achieves a residential environment that is healthy, environmentally sustainable, and functionally efficient.</p>	<p>Objective ISCO2 and HNSMA08 seek to achieve the following matters outlined in Section 7(b) – the efficient use and development of natural and physical resources, 7(c) – the maintenance and enhancement of amenity values and Section 7(f) the maintenance and enhancement of the quality of the environment.</p> <p>Encouraging innovation and variety in the form of development seeks to ensure that land and infrastructure is used as efficiently as possible taking into account the need to protect the special characteristics of the area (Section 7(b)).</p> <p>Section 7(c) and (f) matters are achieved by encouraging development to be undertaken in a manner that respects the special character features of the area and is responsive to the landscape values that are being protected. Protection of the existing landscape values and enhancement through the significant planting proposed will</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

				ensure the maintenance and enhancement of amenity values and the quality of the environment.
<p>OBJECTIVE ISCO3</p> <p>To ensure that the development provisions that shape the Iona Special Character Zone seek to use land efficiently while creating a high quality residential community.</p>	<p>OBJECTIVE UDO3</p> <p>To establish an effective and sustainable supply of residential and business land to meet the current and future demands of the Hastings District Community.</p>	<p>OBJECTIVE HNSMAO6</p> <p>The diverse range of housing demands, preferences and lifestyles in Havelock North are met and residential use is compatible with the surrounding environment.</p>	<p>Objectives ISCO1, 2 and 3 all seek to ensure that a sustainable supply of residential land is established in order to give effect to objective UDO3. The premise and rationale that underpins the new Iona Special Character Zone is to allow land to be used in the most efficient manner while protecting and maintaining the landscape values and special character features of this area. A significant consideration in developing appropriate density and other development control provisions for this area has been the desire to create variety in section sizes to encourage the provision of a range of housing typologies (HNSMAO6).</p>	<p>Objective ISCO3 seeks to achieve matters outlined in Section 7(b), (c) and (f) (the efficient use and development of natural and physical resources, the maintenance and enhancement of amenity values and the maintenance and enhancement of the quality of the environment) by promoting a specific set of development control provisions, tailored to each individual neighbourhood, that enable use of the land in an efficient manner while seeking to maintain and enhance amenity values (through the protection of special character features) and creating a high quality environment (through the 12ha of reserve provision). Within each neighbourhood there are differences in the provisions and these reflect the changing density of development within each neighbourhood and the need and desire to protect amenity values of existing residential and rural residential areas that adjoin this new urban development area.</p> <p>This objective is also consistent with Sec 5(2)(c) – avoiding, remedying or</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

				mitigating effects of activities on the environment - in that the set of development control provisions created for the new Zone will seek to achieve this matter and thereby create a high quality residential environment.
<p>OBJECTIVE ISCO4</p> <p>To protect people, property and infrastructure from the adverse effects of stormwater runoff.</p>		<p>OBJECTIVE HNSMAO5</p> <p>RESIDENTIAL ENVIRONMENT - Adequate infrastructure will be in place before intensification of housing occurs.</p>	<p>Objective ISCO4 is consistent with HNSMAO5 in that it requires infrastructure solutions to be put in place to ensure people and property are protected against the adverse effects of stormwater runoff.</p>	<p>Objective ISCO4 promotes the purpose and principles of the Act in that it enables development to occur while ensuring that the adverse effects of an increase in housing (specifically in respect to stormwater runoff) on the environment (which includes people and property) are avoided, remedied or mitigated (Sec5(2)(c)). This objective also achieves a matter of national importance outlined in Section 6(h) – the management of significant risks from natural hazards in that any stormwater solution for the area must ensure stormwater neutrality and mitigate potential downstream flooding effects.</p>
<p>OBJECTIVE ISCO5</p> <p>To ensure that the Zone provides a defensible urban boundary for the north eastern and southwestern edge of the Havelock North residential area.</p>	<p>OBJECTIVE UDO4</p> <p>To retain and protect the versatile land resource that is the lifeblood of the local economy from ad hoc urban development</p>	<p>NEW OBJECTIVE HNSMAO7</p> <p>To contain development within the Havelock SMA urban boundaries.</p>	<p>ISCO5 is consistent with objective UDO4 and HNSMAO7 in that it ensures that the boundaries of the lona new urban development area are clear and defined to protect against urban creep and that these do not breach existing SMA boundaries.</p>	<p>Objective ISCO5 and HNSMAO7 are consistent with Section 5(2)(b) in that it will assist in safeguarding the life-supporting capacity of the versatile soils of the Heretaunga Plains by ensuring that urban development is undertaken in a planned manner in accordance with</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

			<p>These objectives thereby enable the protection of the valuable versatile land resource and reduce the potential for development to sprawl in an adhoc manner and seeks to give effect to the Hawkes Bay Regional Policy Statement which is the higher order policy document.</p>	<p>the objectives and policies of the Hawkes Bay Regional Policy Statement and that new urban development areas provide clear natural boundaries or create greenbelts to establish a defined urban edge reducing the potential for inefficient sprawling urban development.</p>
<p>OBJECTIVE ISCO6</p> <p>Non-residential activities are provided for within the zone where these are appropriate and in a manner that avoids, remedies or mitigates adverse effects of such activities on the Zone.</p>		<p>OBJECTIVE HNSMAO2</p> <p>To have an environment that provides for a variety of activities, promotes good quality urban design and promotes sustainable development practices.</p>	<p>Providing for a variety of appropriate activities enables an area to evolve over time to the meet the needs of the local community. Close proximity to facilities that support residential activities assists in creating a more sustainable urban form – in terms of reducing travel distance, fuel usage and emissions. ISCO6 therefore seeks to achieve the intent of HNSMAO2 in providing for appropriate non-residential activities in a manner that ensures adverse effects are avoided, remedied or mitigated.</p>	<p>This objective meets Part 2 of the Act by allowing people and communities to provide for their social, economic and cultural well-being in developing and operating non-residential activities within the Zone in a manner that avoids, remedies or mitigate the adverse effects of such activities (Section 5(2)(c)) and ensures the retention of special character which maintains amenity values and the quality of the environment (Sec7(c) and (f)).</p>
	<p>OBJECTIVE UDO5</p> <p>To promote the redevelopment of existing residential areas.</p>		<p>Variation 4 gives effect to this higher order objective in the respect that the rezoning of the Breadalbane Avenue area which will allow for the redevelopment of this existing residential area using land in a more</p>	<p>Objective HNRO9 seeks to provide for greater intensification of the Breadalbane Ave neighbourhood, while recognizing that there is a need to protect existing characteristics, such as the road layout, existing vegetation and open character. Therefore this</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

			<p>efficient manner. The relevant new objective for Breadalbane Avenue is HNRO9 which states:</p> <p><i>'Provide for intensification of the Breadalbane Special Character Area while ensuring that its unique characteristics, history and high level of amenity is maintained'.</i></p>	<p>objective promotes the sustainable management of the natural and physical resources associated with this area in line with the principles outlined in Section 5(2).</p> <p>This objective also seeks to achieve the efficient use of natural and physical resource, the maintenance and enhancement of amenity values and the maintenance and enhancement of the quality of the environment and is thereby consistent with the matters outlined in section 7(b), (c), and (f).</p>
--	--	--	--	---

Conclusion:

The objectives of Variation 4 seek to enable integrated development in accordance with the RPS while protecting and maintaining the natural landscape features of the area that the community value. The objectives seek to provide a sustainable supply of land for current and future housing needs in a manner that protects existing amenity values and provides opportunities for enhancement. In combination the objectives of the SMA, the new Iona Special Character Zone and the Breadalbane Avenue Special Character Area provide a strong and sustainable direction for this new urban development area that is based on the framework of the RMA along with the Regional Policy Statement and higher order objectives of the Proposed District Plan. Taking into account the above, Council considers that the objectives of Variation 4 are the most appropriate to achieve the purpose of the Act.

8.1.1.1 NEW HAVELOCK NORTH STRATEGIC MANAGEMENT AREA POLICIES

Objective to which the policy relates HNSMA07	
To contain development within the Havelock SMA urban boundaries.	
Policy most appropriate to achieve the objective	Benefits / costs/Efficiency / Effectiveness
<p>Policy HNSMAP10 <i>Minimise development pressure on the Heretaunga Plains by ensuring provisions for land use activity within the Havelock SMA are aligned with the Hawke’s Bay Regional Policy Statement and are appropriately implemented.</i></p>	<p>The Hawkes Bay Regional Policy Statement (RPS) leads the direction for development growth in the District. The regional policy statement manages the built environment in a manner that protects the versatile soils of the Heretaunga Plains to ensure the future wellbeing of our District. One of the challenges arising from this objective is that urban development and growth must be contained within current urban limits. Therefore, District Plan provisions need to be aligned with this position and be able to appropriately accommodate urban growth. Ad hoc development must be avoided. This policy is essential in assuring that District Plan provisions in all environments are in accordance with the objectives and policies of section 2.4 of the PDP and with the RPS above that. This policy is necessary to ensure the implementation of the objectives and policies of the RPS. The costs of this policy include the restriction over where development can occur within the Havelock North SMA area and the regulatory costs involved in extending the SMA boundaries if and when this is required to ensure a sustainable supply of land to meet future needs. The policy is efficient as the benefits of an integrated and planned approach to development along with the protection of the finite versatile soil resource outweigh the policy development costs associated with changing the RPS and SMA boundaries to facilitate a greater area for development.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Objective to which the policy relates HNSMA08	
The Iona Growth Area will provide a place that adds value to Havelock North providing an opportunity to create innovative land development responses to this unique environment.	
Policy most appropriate to achieve the objective	Benefits / costs/Efficiency / Effectiveness
<p>Policy HNSMAP11 <i>The Iona Growth Area will provide an attractive residential development which will cater for a range of property sizes and building types. Development will be lower in density as the typography increases in height and prominence.</i></p>	<p>The Iona Growth Area contains around 55 hectares of land which stretches from the lower slopes of the Havelock Hills to the upper catchment. It also contains an existing ridgeline and gully which lends itself to a high quality nature reserve with native trees, birdlife and recreational tracks. The natural topography of the growth area lends itself to being able to create higher density development on the lower slopes, while decreasing density, and allowing for greater levels of openness on the upper catchment where the landforms and gradients make higher density developments less practical. The benefits of this policy include the encouragement of variety in site sizes and building / development type to ensure residential development creates a new development character and does not become uniform. The transition of development to become lower in density as the topography changes and increases in height and visibility seeks to ensure that the special character and amenity values of this environment and the existing neighbouring environments are retained. Thus contributing to creating a unique residential area. The costs of this policy include the policy development and regulatory costs of ensuring land development is appropriate and does not compromise the special character and values of the Iona Growth Area. The benefits of creating high quality residential areas that specifically relate to their environment and retain character amenity outweigh the regulatory and policy development costs associated with this policy. The policy will be effective in achieving Objective HNSMA08.</p>
<p>Policy HNSMAP12 <i>Promote a high quality urban environment, where environmental and amenity values are protected.</i></p>	<p>The Council is a signatory to the New Zealand Urban Design Protocol and has a responsibility to ensure that all development is aligned with best practice urban design. The New Zealand Urban Design Protocol released by the Ministry for the Environment (MfE) in March 2005 defines urban design as the design of “the buildings, places, spaces and networks that make up our towns and cities, and the way people use them”. Urban design is also an important method to achieve many higher order, Resource Management Act-based objectives and policies, including the Sustainable Management Strategies of the District Plan (contained in Part A) and translates into urban design focused standards and assessment criteria. Furthermore, the Havelock North SMA identifies areas with particular character and heritage values. These areas are the subject of special character zones, areas and/or development controls designed to protect</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>and maintain their particular qualities. Differences in character and amenity are identified when classifying zones or areas for higher density residential development. The benefits of this policy will be evident in the creation of residential neighbourhoods that combine to provide high amenity living environments with high quality recreational reserves. The costs of this policy include the regulatory mechanisms required to ensure such an environment is created including District Plan provisions but also reserve acquisition, development and maintenance. The benefits of this policy not only to the developer (who will have a high quality residential product to market) but also to the residents of the new residential area as well as existing residents of Havelock North and the District (with access to two different recreational opportunities) will outweigh the costs associated with the implementation of this policy.</p>
--	---

8.1.1.2 IONA SPECIAL CHARACTER ZONE POLICIES

Objective to which the policy relates ISCO1	
To create a unique residential environment that retains the special character and amenity values of the Iona Special Character Zone	
Policy most appropriate to achieve the objective	Benefits / costs/Efficiency / Effectiveness
<p>Policy ISCP1 <i>Identify and protect the features which make up the special character of the Iona Special Character Zone.</i></p>	<p>The attributes that distinguish the Zone from the surrounding District are: The Bull Hill landform, the ridge landforms to the south of Iona Road with valley areas of ponds and planted areas that create wildlife habitat and corridors and the existing mature trees within the Bull Hill neighbourhood particularly those planted in an avenue along an existing driveway. Existing mature tree plantings are encouraged to be retained through the provision of greater development density in key locations within the Zone.</p> <p>This policy seeks to ensure that these particular special features are protected from inappropriate subdivision and development. This policy is a fundamental aspect of achieving the appropriate residential development of this area, with the benefits of protecting the special character and amenity that these landscape features provide for future generations to enjoy. The retention of these features are key to the creation of a unique and special residential environment. The open space reserve areas (that encompass many of these features) will also provide recreational benefits for the local community not just those residing within the development area.</p> <p>The costs of this policy are that in retaining these special features, land available for development is reduced and in some neighbourhoods – such as the Iona Plateau – density of development is significantly restricted to ensure these landscape values are retained.</p> <p>This policy will be effective as it ensures that the features which contribute to the special character of the area are protected and as such will contribute to the creation of a unique residential environment. The policy is efficient as the benefits of retaining character outweigh the costs of a reduction in yield in certain parts of the growth area.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<p>Policy ISCP2 <i>Identify distinct neighbourhoods within which appropriate subdivision and development will maintain the special character and amenity of the area while creating a range of high quality living environments.</i></p>	<p>The topography of the area as well as the protection mechanisms (the open space reserve areas) that retain the unique ridgeline features which give the zone its special character have created three distinctive neighbourhood areas. Each neighbourhood requires a different response to development in order to retain the special character and amenity values that are highly valued by the community as this area transitions to an urban residential area. The three neighbourhood areas comprise:</p> <ul style="list-style-type: none">• The Bull Hill neighbourhood• The Iona Terraces neighbourhood• The Iona Plateau neighbourhood <p>The Iona Special Character Zone (and Bull Hill neighbourhood overlay) adjoins the existing Havelock North suburban area at its northeastern end. The Bull Hill neighbourhood encompasses the flat triangle shaped land and the Bull Hill feature. This neighbourhood rises gently to the Iona Terraces neighbourhood on the southern side of Iona Road and at its south-western end adjoins the proposed public open space area and beyond that the Havelock North Rural Residential Zone.</p> <p>Stapleford Park (an existing development of 8 dwellings) is located on the Middle Road edge of the Bull Hill neighbourhood.</p> <p>The Bull Hill and avenue of existing mature trees are the central features of this area and provide its special character. The Bull Hill will form a central open space area for this neighbourhood providing a green space for play and recreation as well as stormwater detention.</p> <p>The provisions of the Bull Hill neighbourhood seek to allow a range of section sizes to suit different household types and recognise the character of the adjacent zones on Iona and Middle Road. Given its generally flat topography and that it is contiguous with the existing suburban area of Havelock North, this neighbourhood provides for development at higher densities relative to the other neighbourhoods within the Zone.</p>
---	--

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>The Iona Terrace neighbourhood area coincides with the change in topography as the land rises up the hill from Iona Road. One of the important features of this area is the prominent ridge that runs south east from Iona Road towards Lane Road. The retention of the ridge as an area of open space provides a good transition between the more intensive Bull Hill neighbourhood and the lower density Iona Plateau. The provisions associated with the Iona Terraces neighbourhood recognise this transition and also the adjoining Rural Residential Zone on Lane Road with its high levels of amenity.</p> <p>The Iona Plateau Neighbourhood is located at the highest elevation within the Iona Special Character Zone. This neighbourhood provides another residential low density living opportunity within the defined urban growth boundaries. It serves as a transition between higher density residential areas and the established Havelock North Rural Residential Zone.</p> <p>In this neighbourhood, a masterplan has been prepared and will be implemented through rules in the District Plan. The plan results in a fixed lot layout and building platforms with a maximum of twenty residential properties, single storey building restrictions for some lots; earthworks restricted to forming building platforms and the spine road, extensive planting at subdivision (if not prior) and the inclusion of vegetation control and 'no build' areas. The purpose of the Masterplan for this area is to limit development to ensure that any potential adverse effects that may occur in this higher and visually sensitive part of the Zone can be appropriately managed.</p> <p>The benefits of this policy include the ability to impose development controls that ensure the appropriate development of each individual neighbourhood and enable a range of approaches – a more flexible approach in the Bull Hill neighbourhood through to a much more prescriptive approach in the Iona Plateau, which is the most visually sensitive environment. The variety of approaches that are enabled by splitting the zone into 3 neighbourhoods promotes innovation in subdivision design and ensures that the residential environment that results is the antithesis of a cookie-cutter approach (a matter which the community wished to avoid in new urban development areas in the future).</p> <p>The costs of this policy include additional consent and consultant costs for subdivision development as a result of a more complex Zone arrangement. However, this is reduced somewhat when you</p>
--	---

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

consider that the Masterplan for the Iona Plateau is in effect the subdivision and development plan for this area. Development of the Iona Plateau is locked in as a consequence of this masterplan which on one hand provides certainty and on the other means that any changes required to this plan need to be approval through a consent application creating time and cost delays. However, this area contributes only a small portion of the overall yield of the urban growth area (some 5%) reducing the impact of these additional costs.

This policy is considered to be effective in creating variety and special character and therefore will enable ISCO1 to be met. The benefits of this policy outweigh the potential additional costs and time delays for processing consent applications for subdivision as the resulting residential environment will create a special place to live. Thus making this policy efficient.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Objective to which the policy relates ISCO2	
To provide for and encourage new and innovative forms of residential development that respond to this unique environment and will add value to the surrounding existing residential area creating a high quality residential environment for all residents	
Policy most appropriate to achieve the objective	Benefits / costs/Efficiency / Effectiveness
<p>Policy ISCP3 <i>Provide for a range of development options within the Zone including comprehensive residential development, in appropriate locations, to ensure there is variation in house types and section sizes.</i></p>	<p>Variation in site size allows for greater variation in the size and types of houses being built. Different house types appeal to a range of households creating a more diverse community. Comprehensive Residential Development (integrated development of 3 or more dwellings on sites between 250m² – 500m²) is provided for and encouraged in the Bull Hill neighbourhood where it is most appropriate and the effects of such higher density housing can be internalized.</p> <p>Allowing a finite number of smaller sites within Areas A, B and C of the Iona Terraces neighbourhood also promotes different housing typologies and seeks to create character rather than a uniform street of single detached homes.</p> <p>This policy works together with Policy ISCP2 to allow different minimum site size rules in each neighbourhood based on its specific ability to accommodate density and the need to manage effects on the environment and in particular on the amenity of the adjoining rural residential and Plains zones .</p> <p>The benefits of this policy include the encouragement of development to be respectful of the environment in which it is located and respond to its special character, promoting variety to create a distinctive new urban development residential character that is different to that of previous new urban development areas.</p> <p>The costs of the policy are that such development may require consent applications which could reduce the incentive for innovative development occurring. However there needs to be a balance between providing the encouragement and flexibility to undertake innovative and creative development while providing certainty of achieving and maintaining a high quality residential environment.</p> <p>It is considered that this policy is an effective and efficient means of achieving ISCO2.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<p>Policy ISCP4 <i>Ensure District Plan standards and assessment criteria are reflective of urban design principles and seek to encourage development that meets the 7 C's in the NZ urban design protocol in order to create and maintain a high quality residential environment.</i></p>	<p>Encouraging new forms of development mean that the principles of urban design are tested to ensure greater yield. These fundamentals need to be assessed in order to ensure quality living environments result. As the size of sites get smaller the minutiae of development becomes more important.</p> <p>Fences, driveways and how a house addresses the street frontage and impacts on privacy are aspects that contribute to the creation a high quality residential environment. These elements can be addressed through District Plan standards and/or design guidelines outlining best practice options (such as the residential fencing guide). Urban design assessment at subdivision stage is also valuable in determining whether the subdivision layout proposed is appropriate and whether this will assist in achieving urban design principles particularly in respect of smaller sites.</p> <p>The benefits of this policy include the promotion of a high quality baseline level for residential living environments which is responsive to the special character and landscape values of each of the individual neighbourhoods.</p> <p>The costs of the policy are that if these baseline standards and principles are not met consent will be required or proposals will need to be modified to meet these standards. Costs and time delays will occur as a result.</p> <p>The policy is both effective and efficient in achieving ISCO2 in that a baseline standard for residential living within each of the specific neighbourhood areas will be met with minimal costs providing certainty of that a high quality residential environment will be created and maintained.</p>
<p>Objective to which the policy relates ISCO3</p>	
<p>To ensure that the development provisions that shape the Iona Special Character Zone seek to use land efficiently while creating a high quality residential community.</p>	
<p>Policy most appropriate to achieve the objective</p>	<p>Benefits / costs/Efficiency / Effectiveness</p>
<p>Policy ISCP5 <i>Identify development densities that reflect and enable the retention of the special character and amenity of each</i></p>	<p>There is a need to achieve a balance between retaining special character and amenity values of an area or neighbourhood with the need to use land as efficiently as possible in accordance with the Hawkes Bay Regional Policy Statement. However, it is noted that in the Iona Plateau and Iona</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<p><i>particular neighbourhood while striving, across the zone, to achieve land use efficiency and the targets set under the Heretaunga Plains Urban Development strategy and Hawkes Bay Regional Policy Statement. At the same time meeting total capacity target for the Iona Structure Plan area in order to fulfil the requirements set by the Minister for the Environment as part of the Streamlined Planning Process.</i></p>	<p>Terraces neighbourhoods there is a specific policy direction that elevates amenity and landscape considerations over land use efficiency and as such it is acknowledged that these targets will not be met individually in these particular neighbourhoods. The benefits of this policy are that land is developed and utilized as efficiently as the particular special character and amenity considerations of each neighbourhood area allow and thereby will create 3 distinct but high quality and unique residential environments relative to these.</p> <p>The costs of this policy are that neither special character and amenity nor land use efficiency predominate over the entire area – it is a finely balanced equation that results in a continuum of development – from greater yields and flexibility in the Bull Hill neighbourhood (where the primary special character features are protected through a reserve and an existing tree lined driveway) to lower yields and a fixed development plan in the Iona Plateau in order to protect and maintain character.</p> <p>This policy in combination with policies ISCP1, 2 and 3 is considered to be effective in achieving an appropriate balance of land use efficiency and protection of character and amenity to create a high quality residential environment as outlined in objective ISCO3. This policy is considered efficient in that the benefits outlined above outweigh the costs.</p>
--	--

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Objective to which the policy relates ISCO4	
To protect people, property and infrastructure from the adverse effects of stormwater runoff.	
Policy most appropriate to achieve the objective	Benefits / costs/Efficiency / Effectiveness
<p>Policy ISCP6 <i>Ensure that all stormwater runoff that has the potential to create ponding or flooding effects beyond predevelopment levels will be attenuated on site.</i></p>	<p>New development increases the area of a site that is covered by impervious surfaces and decreases soakage and infiltration of rainwater. This increases the rate of stormwater runoff. The Council's stormwater system is only designed to accommodate a certain rate of stormwater runoff and if this is exceeded, flooding may occur in local streams or on downstream properties. On site attenuation slows the rate of discharge to the Council stormwater system and therefore reduces the potential for flooding or ponding. This policy of achieving stormwater neutrality for the Iona Special Character Zone will ensure that there are no adverse effects on downstream properties and that the stormwater infrastructure is designed to accommodate the level of development proposed. The policy places the onus on the developer of the land to ensure that any adverse effects of such development are sufficiently mitigated. The costs of this policy include the engineering consultant costs as well as land costs and construction costs of stormwater detention ponds and other infrastructure needed to ensure the management of stormwater meets this policy. This policy is effective in achieving objective ISCO4 and the need to protect people, property and infrastructure from the adverse effects of flooding as it will require any additional stormwater generated by the development of the site to be attenuated and slowly released meaning that the level of stormwater runoff from the site will remain the same as it is pre-development. This is an efficient policy to achieve objective ISCO4 as the benefits of protecting people and property outweigh the costs of achieving attenuation.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Objective to which the policy relates ISCO5	
To ensure that the Zone provides a defensible urban boundary for the north eastern and south western edge of the Havelock North residential area.	
Policy most appropriate to achieve the objective	Benefits / costs/Efficiency / Effectiveness
<p>Policy ISCP7 <i>Ensure that the physical boundaries of the Iona Special Character Zone clearly mark the edge of the urban area and provide a robust defense against applications for urban subdivision and development outside these boundaries that are not identified within the Hawkes Bay Regional Policy Statement for greenfield urban development.</i></p>	<p>Middle Road and the public open space area provide definitive boundaries to the urban area along the north-west and southern boundaries of the Zone. The north-eastern boundary of the Zone abuts the Havelock North Rural Residential Zone with Lane Road. While this area was included in the Hawkes Bay Regional Policy Statement (RPS) as an appropriate greenfield area, it has not been included in the rezoning area as the special character of this area, particularly the entrance to Lane Road, would be significantly eroded if further subdivision and development were able to occur. This policy seeks to ensure an integrated and planned approach to urban development that results in a compact urban settlement pattern that protects the versatile soils of the Heretaunga Plains in line with the objectives and policies of the RPS. The costs of this policy include policy development and regulatory costs to enable areas not identified in the RPS to be considered for subdivision and development in the future. A rigorous process is required to include any new area outside the RPS. The policy is efficient as the benefits of an integrated and planned approach to development along with the protection of the finite versatile soil resources outweigh the policy development costs associated with changing the RPS.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Objective to which the policy relates ISCO6	
Non-residential activities are provided for within the zone where these are appropriate and in a manner that avoids, remedies or mitigates adverse effects of such activities on the Zone.	
Policy most appropriate to achieve the objective	Benefits / costs/Efficiency / Effectiveness
<p>Policy ISCP8 <i>Limit the type, scale and intensity of non-residential activities as appropriate within each neighbourhood to ensure that adverse effects can be managed such that the special characteristics of the zone are not adversely affected.</i></p>	<p>Non-residential activities have the potential to impact on the residential amenity and special character of the zone. Limiting the type and scale of activities is important to ensure the zone becomes a desirable residential area with high amenity and recreational values. This policy along with ISCP2 enables a tailored approach to non-residential activities within each neighbourhood area meaning that opportunities are afforded in the Bull Hill neighbourhood which has some scope to accommodate small scale activities provided their design and location do not impact adversely on the special character features and high amenity values that are sought to be created within the neighbourhood. The Iona Terraces and Iona Plateau neighbourhoods have significantly less scope to accommodate non-residential activities because these environments are much more sensitive and visible without the ability to internalize any adverse effects. The costs of this policy include regulatory costs associated with consenting to ensure that activities are appropriate and their effects are suitably managed to ensure the special character and amenity of the Zone is not adversely affected. This policy is an effective and efficient means of achieving objective ISCO6 in that it allows development to be appropriately managed with respect to the specific environments in which they are proposed to be located.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

8.1.1.3 BULL HILL OBJECTIVES: HOW THEY MEET PART II OF THE RESOURCE MANAGEMENT ACT 1991

OBJECTIVES	PART II OF THE RESOURCE MANAGEMENT ACT
<p>OBJECTIVE BHO1</p> <p>To ensure that new development retains and enhances the existing special character features of the Bull Hill neighbourhood and that the level of amenity created within this new neighbourhood is complementary to the existing adjoining suburban residential and rural residential areas</p>	<p>Objective BHO1 achieves the purpose of the Act by promoting the sustainable management of the natural resource of the Bull Hill Neighbourhood (Section 5(1)). Sustainable management is promoted by supporting the use and development of this land resource in a way which enables the community to provide for their social, economic and cultural wellbeing (Section 5(2)), which is consistent with the higher order statutory planning document the Regional Policy Statement. This is achieved through the protection of the special features (primarily the bull hill and avenue of mature trees) of the neighbourhood while allowing development to occur in the remainder of the area. Existing amenity levels are proposed to be maintained through the provision of development at the same scale and intensity as the existing Havelock North Character Residential Zone where sites in the development area are created adjoining or opposite existing lower density zones. Where sites created are internal to the new Zone, greater flexibility is provided to encourage innovation and variety in development type and form and where the impacts of higher density developments can be internalized and mitigated.</p> <p>In terms of the remaining matters under Part 2 there are no matters of national importance under Section 6, but the objective will also help to achieve the following matters to be given particular regard to under Section 7(c) <i>“the maintenance and enhancement of amenity values”</i> and (f) <i>“maintenance and enhancement of the quality of the environment”</i> of the Act. The density of development and rules that are intended to be applied to this neighbourhood are based the desire to ensure new development is compatible with and maintains the amenity values of existing suburban, rural residential and plains areas surrounding the Bull Hill neighbourhood. The provisions also seek to create an environment that establishes a new character and benchmark for new urban development areas - one that utilizes the special features and natural attributes of the existing area and incorporates these into the development, thereby retaining and enhancing the quality of the environment.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<p>OBJECTIVE BHO2</p> <p>To promote the efficient use of the residential land resource to ensure that the capacity for development set for the Iona Structure Plan Area by the Minister for the Environment within the Streamlined Planning Process can be met.</p>	<p>Objective BHO2 achieves the purpose of the Act by promoting the sustainable management of the Bull Hill environment (Sec 5(1)). This objective promotes the efficient development of the land for residential housing and hence enables the owners of this land to provide for their economic wellbeing while ensuring that future generations will benefit from the retention of the special features such as the Bull Hill recreation reserve established as part of the development of the land (Sec5(2)(a)).</p> <p>This objective is consistent with Section 5(2)(b) in that it will assist in safeguarding the life-supporting capacity of the versatile soils of the Heretaunga Plains by ensuring that urban development of the land resource is undertaken in an efficient manner relative to the special character and amenity of the neighbourhood. This objective assists in achieving the objectives and policies of the Hawkes Bay Regional Policy Statement and the National Policy Statement on Urban Development.</p> <p>In terms of the remaining matters under Part 2 there are no matters of national importance under Section 6, but the objective will also help to achieve the following matters to be given particular regard to under Section 7 (b) “the efficient use and development of natural and physical resources”.</p>
<p>OBJECTIVE BHO3</p> <p>To provide for appropriate non-residential activities that will service the new residential area and help to create a sense of place while maintaining the area’s special character and residential amenity values.</p>	<p>This objective meets part 2 of the Act by allowing people and communities to provide for their social, economic and cultural well-being in developing and operating non-residential activities within the Bull Hill neighbourhood in a manner that avoids, remedies or mitigate the adverse effects of such activities (Section 5(2)(c)) and ensures the retention of special character which maintains amenity values and the quality of the environment (Sec7(c) and (f)).</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

8.1.1.4 Bull Hill Policies

Objective to which Policy Relates – BHO1

To ensure that new development retains and enhances the existing special character features of the Bull Hill neighbourhood and that the level of amenity created within this new neighbourhood is complementary to the existing adjoining suburban residential and rural residential areas.

Policies most appropriate to achieve the objectives

Benefits /Costs / Efficiency / Effectiveness

POLICY BHP1

Identify areas where site sizes should be similar to adjoining existing development to provide certainty of the maintenance of existing amenity values for residents.

Where new sites adjoin or are located opposite sites zoned Plains Production, Havelock North Rural Residential Zone or the Havelock North Character Residential Zone, minimum site sizes of 700m² will be required to complement existing site sizes of these lower density zones. The benefits of this policy include the provision of certainty to neighbouring landowners in lower density zones that site sizes will be of a certain size and that reflects the minimum of the adjoining Havelock North Character Residential Zone. Providing certainty in respect of site size is a key component of maintaining existing amenity levels for residents. However as a consequence of this policy the development yield achievable along the edge of the Bull Hill neighbourhood is reduced, meaning that within the remaining areas of the Bull Hill neighbourhood development density will need be higher to achieve the minimum density in policy BHP4. This policy is effective in retaining existing amenity values of surrounding zones, the benefits of which outweigh the costs.

POLICY BHP2

Identify existing amenity tree plantings that are to be retained in order to maintain the special character and amenity values of this area

Existing avenues or stands of mature trees have been identified on the Structure Plan (Appendix 13A Figure 2) as a key component of the existing character of this area. Any development should be designed around these features to ensure their continued growth and retention. Significant consultation and discussion with the local community has identified the features of this neighbourhood that contribute to its special character. Mature trees provide an area with an established character and will significantly contribute to enhancing the amenity values of the Bull Hill neighbourhood as development occurs. The costs of this policy include the need to design the layout of new roads and associated land subdivision around the existing avenue of trees which may create inefficiencies in land use (a reduction in section yield) or unusually shaped sections. However, the flexibility that is afforded to development in this area in respect of how the overall density levels are achieved (BHP4 and BHP5) will offset any potential reduction in section yield that may result from the retention of the avenue of trees.

The policy may also have additional costs associated with ensuring the trees are retained and protected during bulk earthwork operations, additional surveying costs in developing subdivision options that incorporate the treed venue and potential regulatory costs associated with implementation of the policy. While there are a number of costs, these are

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>outweighed by the primary objective of the Zone to retain existing features that contribute to the special character of each particular neighbourhood and to ensure that existing amenity values of the surrounding area are maintained. It is considered that this policy is an efficient and effects means of achieving objective BHO1.</p>
<p>POLICY BHP3 <i>Ensure that District Plan provisions control overall site development in order to create a high quality living environment to maintain the existing amenity values of the surrounding area</i></p>	<p>The purpose of the combined bulk and location controls is to ensure a high quality living environment for residents within the new urban development area and also to maintain existing amenity levels of those sites located in other Zones that adjoin the new area. The cumulative effects of development control infringements have the potential to erode the amenity values of residential areas and can impact on people’s quality of life. Therefore it is important to have a group of controls (height, building setback (yards), and site coverage) that set the benchmark for attaining an appropriate level of residential amenity. This policy provides significant benefits in giving landowners certainty in respect of the amenity levels sought to be achieved in this area. Site coverage is also an important control in terms of stormwater considerations and will assist in achieving the stormwater neutrality objective for the development area.</p> <p>The costs of this policy include limiting the design and location of dwellings on sites and potentially contributing to limiting the overall section yield. This policy is an effective means of maintaining amenity and therefore achieving objective BHO1. It is efficient in that the benefits of development control provisions clearly outweigh the costs.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Objective to which Policy Relates – BHO2	
To promote the efficient use of the residential land resource to ensure that the capacity for development set for the Iona Structure Plan Area by the Minister for the Environment within the Streamlined Planning Process can be met.	
Policies most appropriate to achieve the objectives	Benefits /Costs / Efficiency / Effectiveness
<p>POLICY BHP4 <i>Require a minimum residential density to be met within the Bull Hill Neighbourhood area. Require a minimum residential density to be met within the Bull Hill Neighbourhood area.</i></p>	<p>Setting a minimum residential density to be achieved across the whole Bull Hill neighbourhood will ensure that the majority of development within the Iona Special Character Zone occurs within this area taking advantage of land that is contiguous with the existing residential area, is of relatively flat topography and land that can internalise the impacts of greater density levels. This policy also ensures consistency with the RPS density targets for greenfield growth areas. The ability of the Bull Hill neighbourhood to accommodate greater levels of density relative to other areas within the Iona Urban Growth Area and in particular the Iona Special Character Zone is a key component of ensuring that the capacity for development set by Minister can be achieved. This policy also ensures an efficient use of the residential land resource. The costs of setting a minimum density level include the impacts on the amenity values of the adjoining lower density zones (Havelock North Character Residential, Rural Residential and Plains Residential) – although this is addressed in the provisions to ensure site sizes adjoining or opposite these zones are a minimum of 700m². Other costs include the potential perception that higher density equals lower amenity, costs associated with the need for greater infrastructure requirements to accommodate a greater density level including stormwater runoff. This policy also has potential to impact on the community desire to create a spaciousness within the Bull Hill neighbourhood. This Policy will be effective in achieving objective BHO2 in that it will ensure an efficient use of the land resource by requiring a minimum density across the neighbourhood as a whole. It is considered to be an efficient policy as some of the costs associated with the policy can be alleviated through other district plan controls (ensuring greater density is located internal to the development area, retaining existing mature trees where possible and provisions to assist in the achievement of high levels of amenity). The benefits of accommodating density in an area that has an easy topography for development and that can mitigate the adverse effects of greater density levels outweigh the costs of the policy.</p>
<p>POLICY BHP5 <i>Allow for flexibility in how the density of development is achieved in the Bull Hill Neighbourhood Area while setting a maximum residential density requirement to be met.</i></p>	<p>Allowing flexibility in achieving density creates opportunities for innovation and variety. While a maximum density requirement provides certainty that development density will not become inappropriate. The benefits of this policy include the ability to achieve greater density in different parts of the Bull Hill neighbourhood where smaller site sizes can be offset by the close proximity of the reserve areas or gain additional amenity from being located within the existing avenue of mature trees. This flexibility also seeks to achieve variety in subdivision design rather than a uniform and segregated approach to density. Another benefit of setting a maximum density level across the whole neighbourhood is achieving</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>certainty that density will not become inappropriate and have adverse impacts on the amenity of the new residential area or surrounding residential areas. The costs associated with this policy include that there is less certainty of exactly where within the neighbourhood greater density will be accommodated (however assessment criteria will highlight appropriate locations within the neighbourhood). The provision of flexibility in achieving density reduces certainty for the community in how density will be designed and accommodated. However the maximum density requirement across the neighbourhood does ensure that on a neighbourhood basis any increased infrastructure capacity can be planned for. It is considered that the benefits of a more flexible approach to the achievement of density (innovation and creativity in subdivision and development design, resulting in variety in section size and housing type) will assist in creating a new residential character for new urban development areas while ensuring that the overall density of development is appropriate and maintains the special character of the area and the amenity values of adjoining zones. As such the benefits of the policy ensure that it is efficient and effective in achieving objective BHO2. Ensuring that the regulatory framework allows for and encourages this type of development provides for</p>
<p>POLICY BHP6 <i>Provide opportunities for Comprehensive Residential Developments in appropriate locations within the Bull Hill neighbourhood.</i></p>	<p>Vacant greenfield land provides a unique opportunity to develop land for compact house types without the constraints that exist within an existing residential suburb or area. In order to change the perception of higher density living, there is a need to provide opportunities to showcase high quality compact housing that is designed comprehensively and desirably located. In this neighbourhood, appropriate locations include those that are opposite amenity tree plantings or public open space areas in order to provide these developments with an additional source of amenity and recreational space to offset their smaller section sizes. There is also potential to further offset the high density of any such development with the retention of existing mature trees beyond those identified on the Structure Plan. The benefits of this policy also include the encouragement of this development type as a means of achieving an efficient use of the land resource within this neighbourhood and thereby achieving objective BHO2. The costs of this policy include costs of additional infrastructure to accommodate developments that achieve greater densities, and regulatory costs associated with providing for such developments (although this is in effect a means of ensuring amenity values are maintained). There is also the potential that the opportunity to undertake these type of developments will not be taken up by landowners and developers. As a consequence the urban design and land use efficiency benefits of an integrated approach to the development of smaller site sizes may not be realized. However, the benefits of enabling this development type to occur are considered to outweigh the costs particularly in respect of achieving land use efficiency.</p>
<p>POLICY BHP7 <i>Ensure comprehensive residential developments demonstrate good urban design principles and positively contribute to the creation of a high quality</i></p>	<p>Provision of an urban design assessment will be a requirement for comprehensive residential developments to ensure that the design of such developments will create a high quality living environment and contribute to the overall pleasantness and character of the Bull Hill neighbourhood. This is a key component in changing perceptions of the amenity values associated with higher density living and will be essential in encouraging landowners and developers to undertake this</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

living environment within the Bull Hill neighbourhood by requiring an assessment of such proposals by qualified urban design specialists as part of the resource consent process.

development type in infill development situations within existing urban areas as the Council transitions to meet the intensification targets set within the RPS. The costs of this policy include the actual cost of the assessment by a qualified urban design specialist and the additional time requirements that this places on the regulatory application process for any subdivision and/or development. This policy is effective and efficient in achieving Objective BHO2 as it assists in providing high quality residential environments that use land in an efficient manner. It also provides certainty to landowners, and the community in general that the development capacity can be achieved while ensuring the creation of a high quality residential environment.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Objective to which Policy Relates – BHO3	
<p>To provide for appropriate non-residential activities that will service the new residential area and help to create a sense of place while maintaining the area’s special character and residential amenity values.</p>	
Policies most appropriate to achieve the objectives	Benefits /Costs / Efficiency / Effectiveness
<p>POLICY BHP8 <i>Provide for a small-scale café and/or dairy activity in a specific location within the Bull Hill Neighbourhood and identified as a commercial node on the Iona Structure Plan.</i></p>	<p>A site of 400m² located opposite the Bull Hill Open Space area has been identified specifically for a small-scale dairy and/or café activity. The convenience of a small dairy or café / food store opposite this open space reserve and proposed playground is considered a desirable addition for this new residential area. Such an activity would complement the residential nature of the area and provide for a greater sense of community in conjunction with recreation activities on the reserve opposite. The benefits of this policy include providing certainty around the location, nature and scale of the café/dairy activity. It also provides a clear statutory direction for any potential resource consent applicants.</p> <p>The costs associated with the policy include the potential yield reduction of 1 residential section to accommodate such an activity (however the option to develop this land for residential purposes is also retained within the provisions). There are also costs associated with a perception that such an activity would impact on the existing amenity values of the neighbouring rural residential area as a result of an increase in traffic from people out of the area visiting the café or dairy activity. Traffic travelling from outside the area may be generated as a result of the recreational use of the reserves and playground in the area and people may consequentially use the dairy / café activity. However, the small scale of the activity (50m² gross floor area plus 50m² of outside dining area) will ensure any traffic or other effects arising from the activity can be managed. Given the small scale of the activity and the proximity of the Havelock North Village Centre to the majority of residential properties in Havelock North as well as the far greater amenities that this commercial area offers, it is considered that a small café/food store in this location would not draw a significant amount of traffic to and through the area.</p> <p>The costs associated with a reduction in yield in this area can be off-set through the flexibility of the density provisions across the Bull Hill neighbourhood and that any adverse effects of such an activity can be managed through conditions of consent to ensure the amenity of the surrounding existing zones can be maintained. As such it is considered that this policy appropriately gives effect to objective BHO3 in an efficient manner. The policy is an efficient means of achieving objective BHO1 as the benefits of providing a small scale dairy or café in terms creating a sense of character for this new residential area that contributes to achieving a high quality residential environment are greater than the potential costs which can be effectively managed through a regulatory process.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<p>POLICY BHP9 <i>Control the type, scale, and intensity of commercial activity able to establish within the commercial node through District Plan provisions that ensure activities are sensitive to the existing special character features and residential amenity values sought to be achieved within the neighbourhood and Zone as a whole.</i></p>	<p>Compliance with a set of specific standards will ensure that any café or dairy activity is of a suitable size and scale. The requirement for a resource consent process to consider the design and external appearance of any proposed commercial building in this location assists in maintaining a residential scale and appearance to any commercial development within the area. This policy will ensure that site development of the commercial node is complimentary to adjoining residential activities and sympathetic to the character and amenity of this new residential area. The costs of this policy include placing limitations on the design and external appearance of proposed commercial buildings and the nature and scale of commercial activities, and the financial costs associated with applications for resource consent to establish commercial activity.</p> <p>This policy will be effective in managing the impact and scale of commercial activity in this location such that the special character and residential amenity of the zone and neighbourhood will be upheld.</p>
<p>POLICY BHP10 <i>Require resource consent for other non-residential activities such as early childcare centres, homes for the aged, and places of assembly, health care centres, and emergency services facilities. Applications for these activities shall be considered on a case by case basis taking into account the special characteristics of the neighbourhood and its primary purpose in the supply of residential land to meet the current needs of the District.</i></p>	<p>This policy provides benefits in setting a strong regulatory position for the consideration of any resource consent applications for non-residential activities in the Bull Hill neighbourhood. It ensures that applications to establish any of these non-residential activities are assessed in terms of their proposed scale, intensity, site size, and location and will also ensure that any cumulative effects within the neighbourhood can be appropriately managed such that activities will not undermine the special character or high quality residential environment sought to be achieved. The costs include those financial costs associated with the preparation of applications for resource consent and the time and costs associated with the processing of any resource consent applications. Other costs include the potential for land earmarked for residential purposes to be taken up by activities that are not residential in nature, reducing the residential land supply available. The policy is effective in achieving objective BHO3 as it provides for non-residential activities to be established as long as there is sufficient justification for their location within a residential area and their effects do not detract from the special character or amenity values of the neighbourhood.</p>

8.1.1.5 Iona Terraces Objectives

<p>The table below provides an evaluation of the Iona Terraces Neighbourhood Objectives and how they meet Part 2 of the Resource Management Act</p>	<p>PART II OF THE RESOURCE MANAGEMENT ACT</p>
<p>OBJECTIVE ITO1 To ensure that the level of amenity associated with the Iona Terraces Neighbourhood is complementary to the adjoining Havelock North Rural Residential Zone.</p>	<p>Objective ITO1 achieves the purpose of the Act by promoting the sustainable management of the natural resource of the Havelock North Hills. It also achieves sustainable management by supporting the use and development of this land resource in a way which enables the community to provide for their social, economic and cultural wellbeing through the provision of new building sites while mitigating the adverse effects of the development on the environment, including the adjoining rural residential zone.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>In terms of the remaining matters under Part 2 there are no matters of national importance under Section 6 but the objective will also help to achieve the following matters to be given particular regard to under section 7 of the Act:</p> <p><i>(c) the maintenance and enhancement of amenity values</i> – the densities and rules that have been applied to the proposed development are those that will maintain amenity and be complementary to those of the adjoining rural residential zone.</p> <p><i>(f) maintenance and enhancement of the quality of the environment.</i></p>
<p>OBJECTIVE ITO2</p> <p>To enable a diverse range of house types and section sizes that respect the landscape values.</p>	<p>Objective ITO2 achieves the purpose of the Resource Management Act by managing the use and development of the Iona land resource in such a way that a range of housing and section sizes is enabled. This assists in meeting the social and economic wellbeing of the community as it is an ageing community which requires a greater range of section and housing types.</p> <p>There are no matters of national importance that are required to be achieved but the objective will assist in achieving the following matters under section 7 of the Act:</p> <p><i>(b) the efficient use and development of natural and physical resources</i> – the land is located off the versatile soils of the Heretaunga Plains and works toward meeting density level targets set under the Heretaunga Plains Urban Development Strategy while recognising landscape values.</p> <p><i>(c) the maintenance and enhancement of amenity values</i> – the densities and rules that have been applied to the proposed development, and especially the decreasing density of the development as it progresses up the hill, are those that recognise the landscape values of the area.</p>
<p>OBJECTIVE ITO3</p> <p>The existing landscape character and amenity values of the adjoining Rural Residential Zone are retained and maintained.</p>	<p>Objective ITO3 achieves the purpose of the Act by promoting the sustainable management of the landscape resource. A significant portion of the Proposed Iona Terraces development area is located within the Rural Landscape Character Area, which recognises landscape values associated with the rural backdrop to the Te Mata hills and the higher landscape values that apply to the adjoining area. While the Rural Landscape Character overlay will be lifted from the Iona Residential Character zone as part of the variation it will remain over the adjoining rural residential zone and remains relevant as an effect to be considered on the properties within that zone.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>There are no matters of national importance that are required to be achieved but the objective will assist in achieving the following matters under section 7 of the Act:</p> <p>(c) <i>the maintenance and enhancement of amenity values</i> – the density, minimum site sizes and setback rules for the Iona Terraces neighbourhood recognise the special landscape values of the adjoin rural residential zone.</p> <p>(f) <i>maintenance and enhancement of the quality of the environment.</i></p>
<p>Conclusion: The objectives for the Iona Terraces Neighbourhood seek to provide for much needed new housing sites within Havelock North while recognising the current landscape values that are associated with the Terraces neighbourhood and the adjoining Rural Residential Zone. Part of the land is located within the Rural Landscape Character Area. This landscape overlay has associative values with the Significant Landscape Character area, which in turn is supportive of the values associated with the Outstanding Landscapes of Te Mata Peak and Mt Erin. While the Rural Landscape Character overlay will removed as part of the rezoning process, the relationship of the proposed development to the landscape and amenity values of the adjoining zone is therefore important in achieving the purpose and principles of the RMA.</p>	

8.1.1.6 Iona Terraces Policies

OBJECTIVE TO WHICH POLICY RELATES - ITO1	
To ensure that the level of amenity associated with the Iona Terraces Neighbourhood is complementary to the adjoining Havelock North Rural Residential Zone	
Policies most appropriate to achieve the objectives	Benefits/Costs/Efficiency/Effectiveness
<p>Policy ITP1</p> <p><i>Provide a transition in lot sizes and densities between the Bull Hill neighbourhood and the Iona Plateau neighbourhood.</i></p>	<p>The proposed rezoning has unique characteristics in that it is sited on a variety of landforms ranging from a relatively flat landscape through slightly elevated land to hill country typical of the land surrounding the Heretaunga Plains.</p> <p>The benefit of this policy is that it provides clear regulatory direction that the lots sizes within the development should reflect the change in topography that takes place within the</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>development. The transition in lot sizes recognises both the existing landscape values and also those of the adjoining neighbourhoods within the development, and of the adjoining zone.</p> <p>The cost associated with this policy is the reduced number of lots that is able to be achieved by the developer.</p> <p>The policy is effective and efficient in achieving the objective as transitioning allows for greater densities closer to Iona Road where the amenity values are those associated with the Bull Hill development, with densities decreasing as the development adjoins both the Upper Plateau and the Rural Residential Zone. This maintains the visual and landscape amenity of these areas. The benefits outweigh the costs.</p>
<p>Policy ITP3</p> <p><i>Maintain and enhance the lower density residential character of this neighbourhood by controlling the height of buildings, site coverage and boundary setbacks.</i></p>	<p>The benefits of this policy is that it recognises the high level of amenity of the Havelock Hills environment and helps to meet Council's landscape guidelines set out in <i>"The Guide – Good Practice Landscape Guidelines for Subdivision and Development in the Hastings District 2005"</i>.</p> <p>Site coverage is an important aspect of the stormwater considerations of the site and will assist in achieving the stormwater neutrality objective for the site.</p> <p>The costs, include a reduction in the number of lots that may be achieved, and the limitations imposed on the design and location of the dwellings.</p> <p>This policy is efficient and effective in achieving the objective as the density of development is controlled by a number of factors. Section size is one method but controls over site coverage and building setbacks and height also assist in lowering density levels and achieving the transition between the higher densities in the lower sections of the development and lower density of the upper plateau.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<p>Policy ITP4</p> <p><i>Recognise the level of amenity of neighbouring rural residential sites through implementing larger minimum lot sizes for those lots immediately adjoining the Havelock North Rural Residential zone.</i></p>	<p>The benefits of this policy are those associated with reducing reverse sensitivity issues that are associated with the introduction of new zones. The adjoining lifestyle zone has high levels of amenity and this policy has the benefits of assisting to maintain that amenity.</p> <p>The costs associated with this policy are those associated with a reduced number of lots being able to be achieved from the development of the land.</p> <p>This policy is efficient and effective in meeting the objective as it will ensure that the amenity values of the adjoining rural residential zone are maintained by site sizes on adjoining properties being larger with greater building setbacks. The large lot sizes result in the sites achieving higher levels of amenity than those in other parts of the development.</p>
<p>Policy ITP5</p> <p><i>Provide pedestrian linkages between the residential lots and the reserve that incorporates the central ridgeline.</i></p>	<p>The benefits that accrue from this policy are the ability of the property owners to readily access the significant reserve that runs through the development. An active community and well utilised reserves are aims of the Council.</p> <p>The cost of this policy is the additional financial cost to the developer in providing the linkages.</p> <p>This policy is effective and efficient in meeting the objective as the central ridgeline reserve is an important amenity component of the proposed development and one that the Iona Working Group identified early in the structure plan process as being vital to retain. Connectivity is one of the principal design outcomes for the Urban Design Protocol of which the Council is a signatory and as such the policy is highly effective in meeting this outcome.</p>
<p>Policy ITP6</p> <p><i>Mitigate any potential significant adverse effects of buildings and activities on the community and the environment, with particular emphasis on</i></p>	<p>The benefits of this policy are that it gives clear direction that the scale of the development occurring on the Iona Terraces will be considered in the context of the high amenity values</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<p><i>maintaining the character and amenity of the adjoining established Havelock North Rural Residential Zone.</i></p>	<p>adjoining Iona Plateau neighbourhood and the Havelock Rural Residential Zone.</p> <p>The costs associated with the policy are the lack of flexibility in land use and placing a regulatory requirement for resource consent for activities of a scale incompatible with the adjoining neighbourhood/zone. This is considered justifiable to ensure that the amenity of adjoining properties and landscape values are maintained.</p> <p>The policy is effective and efficient in meeting the objective as achieving a scale of development within the Iona Terraces neighbourhood that is complementary and appropriate to the landscape and the adjoining Rural Residential Zone is a primary objective for the development.</p>
<p>OBJECTIVE TO WHICH POLICY RELATES - ITO2</p>	
<p>To enable a diverse range of house types and section sizes that respect the landscape values.</p>	
<p>Policies most appropriate to achieve the objectives</p>	<p>Benefits/Costs/Efficiency/Effectiveness</p>
<p>Policy ITP7</p> <p><i>Provide for residential development that is innovative in its response to sloping topography and contributes positively to landscape values.</i></p>	<p>The benefits of this policy are that it responds directly to the changes in the topography of the site, allowing for densities that are higher at the lower (northern) end of the development then decrease to reflect the increasing slope and visibility of the development. It assists in maintaining the open space character of the Havelock Hills and the landscape values recognised in the Proposed District Plan.</p> <p>The costs of the Policy are those relating to the costs of development in providing for innovative design.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>The policy is effective and efficient in meeting the objective for a diverse range of house types and sections sizes as it links development to the topography, which is itself diverse.</p>
<p>Policy ITP8</p> <p><i>Provide for a range of lot sizes to ensure that there is flexibility in the creation of lot sizes to enable landscape values to be recognised.</i></p>	<p>The Iona Terraces overlay comprises 4 different areas with different average lot sizes that recognise the transition between the Bull Hill Neighbourhood and the Plateau Neighbourhood.</p> <p>The benefits of this policy are that the landscape values of the Havelock Hills are recognised and maintained and that a range of lot sizes are created to cater for the demands of the differing age cohorts in the community.</p> <p>The costs associated with this policy are the financial costs to the developer associated with creating diversity within the development.</p> <p>The policy is efficient and effective in meeting the objective as the four separate areas recognise the landscape values while also providing for the most efficient use of the land through a transitioning of average lot sizes as the topography changes.</p>
<p>OBJECTIVE TO WHICH POLICY RELATES - ITO3</p>	
<p>The existing landscape character and amenity values of the adjoining Rural Residential Zone are retained and maintained.</p>	
<p>Policies most appropriate to achieve the objectives</p>	<p>Benefits/Costs/Efficiency/Effectiveness</p>
<p>Policy ITP9</p> <p><i>Mitigate any potential significant adverse effects of buildings and activities on the community and the environment, with particular emphasis on maintaining the character and amenity of the adjoining established Rural Residential Zone.</i></p>	<p>This policy has benefits in setting a strong regulatory position for the consideration of any resource consent applications applied for in the Iona Terraces Neighbourhood. The landscape values of the Havelock Hills are strongly guarded by the local community. The character and amenity of the adjoining Rural Residential Zone is an important baseline for the consideration of the effects of activities requiring resource consent within the Iona Terraces neighbourhood. Reverse</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>sensitivity is an important component in the application of this policy.</p> <p>The cost of the policy is the financial cost of mitigating the effects of activities to maintain the character and amenity.</p> <p>The policy is efficient and effective in meeting the objective as the benefits will outweigh the costs and will meet the outcomes sought by the wider community.</p>
<p>Policy ITP10</p> <p><i>Ensure that the physical boundaries of the Iona Terraces neighbourhood clearly mark the edge of the urban area, and maintains the special character of Lane Road and provides a robust defence against applications for urban subdivision and development outside these boundaries that are not identified within HPUDS for greenfield urban development.</i></p>	<p>One of the important issues arising through the urban design process for the Iona Structure Plan was maintaining the landscape character of the Lane Road and the Rural Residential zone and particularly the entrance to Lane Road that acts as a gateway to the Rural Residential Zone.</p> <p>This benefits of this policy is that it gives certainty to landowners within the Rural Residential Zone and clear statutory direction for any potential resource consent applicants.</p> <p>The costs associated with this policy relate to flexibility of land use.</p> <p>The policy is effective and efficient in meeting the objective as it provides certainty to land owners as to the boundaries of the Iona Terraces.</p>

8.1.1.7 Iona Plateau Objectives

The table below provides an evaluation of the Iona Plateau Neighbourhood Objectives and how they meet Part II of the Resource Management Act 1991:

OBJECTIVES	PART II OF THE RESOURCE MANAGEMENT ACT
------------	--

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<p>OBJECTIVE IPO1</p> <p><i>A high standard of residential amenity within the Iona Plateau Neighbourhood.</i></p>	<p>Objective IPO1 achieves the purpose of the Act by promoting the sustainable management of the natural resource of the Iona Plateau Neighbourhood (Section 5(1), part of the lower Havelock North hills environment. Sustainable management is promoted by supporting the use and development of this land resource in a way which enables the community to provide for their social, economic and cultural wellbeing (Section 5(2)), which is consistent with the higher order statutory planning document the Regional Policy Statement. This is achieved through the provision of a restricted number of new lots, which are landscape responsive, while mitigating the adverse effects of the development on the environment.</p> <p>In terms of the remaining matters under Part 2 there are no matters of national importance under Section 6, but the objective will also help to achieve the following matters to be given particular regard to under Section 7(c) <i>“the maintenance and enhancement of amenity values”</i> and (f) <i>“maintenance and enhancement of the quality of the environment”</i> of the Act. The density of development and rules that are intended to be applied to this neighbourhood are based on the sympathetic placement or location of building platforms and reducing the visual impact of buildings on the landscape.</p>
<p>OBJECTIVE IPO2</p> <p><i>The existing landscape character and amenity values of the adjoining Rural Residential Zone are retained and maintained.</i></p>	<p>Those Rural Residential zoned properties that adjoin the site have high amenity values with low density housing, which contributes to its sense of openness and lifestyle choice of the residents. Maintaining landscape character and amenity values for these existing properties has been a significant consideration in the work undertaken by the Iona Working Group. Objective IPO3 achieves the purpose of the Act by avoiding, remedying or mitigating adverse effects of activities on the environment, created through the rezoning of this land for more intensive residential purposes.</p> <p>There are no matters of national importance under Section 6, but the objective will also help to achieve the following matters to be given particular regard to under Section 7(c):</p> <p><i>(c) the maintenance and enhancement of amenity values; and</i></p> <p><i>(f) maintenance and enhancement of the quality of the environment.</i></p>
<p>OBJECTIVE IPO3</p> <p><i>Ensure the predominant land uses are residential and where appropriate commercial activities, to protect the character and amenity of residential environs.</i></p>	<p>Objective IPO3 achieves the purpose of the Act, as non-residential activities have the potential to impact on the residential amenity and special character of the zone. Limiting the type and scale of activities is important to ensure the zone becomes a desirable residential area with high amenity values.</p> <p>There are no matters of national importance under Section 6, but the objective will also help to achieve the following matters to be given particular regard to under Section 7(c):</p> <p><i>(c) the maintenance and enhancement of amenity values; and</i></p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

(f) maintenance and enhancement of the quality of the environment.

Conclusion: The objectives for the Iona Plateau Neighbourhood (an overlay of the Iona Special Character Zone), ensure that any resultant development is sympathetic to the landscape qualities of this environment, including on those adjoining established Rural Residential properties. Taking into account the above, Council considers that the objectives for this neighbourhood are the most appropriate to achieve the purpose of the Act.

8.1.1.8 Iona Plateau Policies

Objective to which Policy Relates – IPO1

A high standard of residential amenity within the Iona Plateau Neighbourhood.

Policies most appropriate to achieve the objectives

Benefits /Costs / Efficiency / Effectiveness

POLICY IPP1

Maintain landscape qualities, character and amenity through the adoption and implementation of a masterplan for the Iona Plateau Neighbourhood by setting lot configuration, minimum density, building location and landscaping standards so that open space, natural and rural residential qualities are not reduced.

The benefit of this policy is that it requires future development and management of the area to be undertaken in accordance with a masterplan. A masterplan has been prepared for the Iona Plateau neighbourhood which takes into account the topography and shape of the landform and allows for building platform placement that is complementary to the surrounding environment. The plan results in a fixed lot layout and building platforms with a maximum of twenty residential properties, single storey building restrictions for some lots; development placement which results in reduced volumes of earthworks, extensive planting at subdivision (ideally prior) and the inclusion of no build, earthworks and planting area. While allowing the effects to be appropriately managed, it has the added benefit of adjoining property owners being able to envisage the location of development on this part of the rezoning area. This all ensures the creation of a high amenity area with very low density housing, so effects are appropriately managed and the unique values associated with the area are respected and maintained.

The cost associated with this policy approach is that it will limit the development opportunities of further residential lots, however it is considered that this could detract from the area and environmental effects result. Such costs are however considered to be justified and appropriate in achieving the objectives which in turn achieve the purpose of the RMA as demonstrated above.

This policy is therefore considered appropriate and the most efficient and effective way of meeting the above objective as the benefits will outweigh the costs.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<p>POLICY IPP2 <i>Manage residential character and high amenity values by avoiding further subdivision of the Iona Plateau Neighbourhood.</i></p>	<p>Standards are included in the District Plan which ensure subdivision is in accordance with the Iona Plateau Masterplan. Subdivision creates the legal mechanism for which land use occurs, creating a causal link with the adverse effects of development and resource use. As mentioned above, development layout has been determined in response to urban character and amenity considerations. The lots, the smallest of which is 1863m² assists in providing a transition to the adjoining Rural Residential zone. For this reason, It is considered that additional subdivision and associated development, beyond the 20 lots is not appropriate in this location, if the effects are to be appropriately managed.</p> <p>The cost associated with this policy approach is that it will limit the development opportunities of further residential lots, however it is considered that this could detract from the area and environmental effects result. Such costs are however considered to be justified and appropriate in achieving the objective which in turn achieve the purpose of the RMA as demonstrated above.</p> <p>This policy is therefore considered appropriate and the most efficient and effective way of meeting the above objective as the benefits will outweigh the costs.</p>
<p>POLICY IP3 <i>Restrict residential dwelling units and accessory buildings provided for as of right in the Iona Plateau Neighbourhood and contain their placement to the nominated areas within each lot.</i></p>	<p>Development within the Iona Plateau Neighbourhood is to be managed to ensure any buildings are sympathetic to the underlying landform and surrounding visual and landscape patterns. For this reason building placement is constrained.</p> <p>It is intended that there should not be a situation where multiple buildings occur on the site. A principal dwelling plus accessory building, a supplementary residential building and visitor accommodation building is permitted on each site. A gross floor area limitation along with other amenity based standards, exist to reduce the visual impact of buildings on the landscape. These provisions do not prevent development from being undertaken, but it does seek to ensure that any development avoids adverse effects on the environment.</p> <p>The cost associated with this policy approach is that it will limit the development opportunities of further residential lots, however it is considered that this could detract from the area and environmental effects result. Such costs are however considered to be justified and appropriate in achieving the objective which in turn achieve the purpose of the RMA as demonstrated above.</p> <p>This policy is therefore considered appropriate and the most efficient and effective way of meeting the above objective as the benefits will outweigh the costs.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

Objective to which Policy Relates – IPO2	
The existing landscape character and amenity values of the adjoining Rural Residential Zone are retained and maintained.	
Policies most appropriate to achieve the objectives	Benefits /Costs / Efficiency / Effectiveness
<p>POLICY IPP4 <i>Mitigate any potential significant adverse effects of buildings and activities on the community and the environment, with particular emphasis on maintaining the character and amenity of the adjoining established Rural Residential Zone.</i></p>	<p>Those Rural Residential zoned properties that adjoin the site have high amenity values with low density housing, which contributes to its sense of openness and lifestyle choice of the residents. Maintaining landscape character and amenity values for these existing properties has been a significant consideration in the work undertaken by the Iona Working Group. The benefit of this policy is that respects and maintains the values of the area so as to achieve the protection of these values as sought by IPO2.</p> <p>The cost associated with this policy approach is that it will limit the development opportunities of further residential lots, however it is considered that this could detract from the area and environmental effects result. Such costs are however considered to be justified and appropriate in achieving the objective which in turn achieve the purpose of the RMA as demonstrated above.</p> <p>This policy is therefore considered appropriate and the most efficient and effective way of meeting the above objective as the benefits will outweigh the costs.</p>
Objective to which Policy Relates – IPO3	
Ensure the predominant land uses are residential and where appropriate commercial activities, to protect the character and amenity of residential environs.	
Policies most appropriate to achieve the objectives.	
<p>POLICY IPP5 <i>Restrict scale and type of Commercial Activities and prevent Industrial Activities in the Iona Plateau Neighbourhood, whilst providing for compatible small scale commercial activities in the form of home occupations and visitor accommodation.</i></p>	<p>This policy allow people in the Zone to have some flexibility to use their land in ways that enable them to fulfil their lifestyle choice and at the same time keeps non-residential activities at a scale that will be generally compatible with the amenity values sought by residents.</p> <p>This does not prevent development from being undertaken, but it does seek to ensure that any development avoids adverse effects on the environment. Limitations on the scale of non-residential activity may disadvantage those landowners who</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>wish to provide the non-residential activity at a greater scale than is permitted. Costs and uncertainty associated with resource consenting to allow the non-residential activity at a greater scale than is permissible.</p> <p>This policy expresses that there needs to be a balance between providing for some flexibility to users of the land whilst maintaining amenity and suitability of use of the land resource to the benefit of the environment and residents of the zone. This policy is an effective and efficient means of achieving objective IPO3.</p>
<p>POLICY IPP6 Limit the establishment of Places of Assembly in the Upper Plateau Neighbourhood.</p>	<p>The quiet lifestyle and high amenity values associated with the Rural Residential Zone will be maintained by having limitations on Places of Assembly, that by nature are gathering places for community groups, bringing with them numbers of people, traffic generation, and moreover a level of activity that is not generally well-aligned with the lifestyle expectations associated with the area and adjoining Rural Residential Zone.</p> <p>The ability to establish a Place of Assembly will be more difficult as it is not a permitted activity and will need resource consent.</p> <p>It will limit the locations available within the District for Places of Assembly to establish as permitted activities.</p> <p>This policy clearly states the Plans resource management position on Places of Assembly within the Plateau Neighbourhood. This policy is considered an effective and efficient means of realising Objective IPO3.</p>

8.1.1.9 Breadalbane Avenue Special Character Area Objective

The table below provides an evaluation of the Breadalbane Avenue Special Character Objective and how it meets Part 2 of the Resource Management Act:

OBJECTIVES	PART II OF THE RESOURCE MANAGEMENT ACT
<p>OBJECTIVE HNRO9</p> <p>Provide for intensification of the Breadalbane Special Character Area while ensuring that its unique characteristics, history and high level of amenity is maintained</p>	<ol style="list-style-type: none"> 1) The development of Breadalbane Avenue has been identified within HPUDs as having potential for future residential intensification due to its location on the existing urban fringe of Havelock North. However the existing Breadalbane Avenue are has unique characteristics and feel which has been deemed to be worth protecting where possible. This Objective seeks to provide for greater intensification of the Breadalbane neighbourhood, while recognizing that there is a need to protect existing characteristics, such as the road layout, existing vegetation and open character. 2) The objective will contribute to the achievement of Sections 5 and 7 of the Act as follows: <ul style="list-style-type: none"> • 5 Sustainable Management • 5(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

- 6(f) the protection of historic heritage from inappropriate subdivision, use, and development
 - 7(b) the efficient use and development of natural and physical resources.
- 7(c) the maintenance and enhancement of amenity values.

8.1.1.10 Breadalbane Avenue Special Character Area Policies

Objectives to which policies relates - HNRO9			
Provide for intensification of the Breadalbane Special Character Area while ensuring that its unique characteristics, history and high level of amenity is maintained			
Policies most appropriate to achieve the objectives	Benefits	Costs	Efficiency and Effectiveness
POLICY HNRP14 <i>Maintain character and amenity such as the open and spacious feel through minimum allotment sizes which are large enough to accommodate development while protecting existing neighbourhood characteristics.</i>	<p>Ensures that the existing neighbourhood characteristics, such as the open, rural type feel is retained where possible. Allows for the intensification of the neighbourhood while encouraging the retention of the aspects of the area which make it unique.</p>	<p>The larger minimum allotments and setbacks encouraged by Policy HNRP14 will result in a reduction of site numbers and the size and amount of dwellings that can be established in the neighbourhood.</p>	<p>This policy expresses that there needs to be a balance between providing for some flexibility to users of the land to undertake intensification, while still retaining existing characteristics, which will ensure a high quality development, with retention of much of the existing amenity. This Policy is efficient and effective in achieving HNRO9.</p>
POLICY HNRP15 <i>Encouragement of protection of existing mature trees through requiring larger sites, low building coverage and by allowing minor flexibility in minimum site sizes provided the average site size is no lower than 1000m2.</i>	<p>One of the defining characteristics of Breadalbane Avenue neighbourhood is the number of existing mature trees in the environment. The benefits of this policy is that it promotes the protection of existing trees which protects the unique landscape characteristics of the Breadalbane Special Character Area.</p>	<p>Potential that only having Policy protection does not go far enough to protect existing trees. This would not require specific standards to ensure trees are protected, rather only encouraging flexible Lot design if trees have potential to be removed.</p>	<p>This policy will provide efficiency by not creating additional restrictions for Lot development and allowing flexibility of site design. It would have some effectiveness in encouraging higher levels of amenity, but losses some effectiveness in that it does not enforce the retention of existing trees.</p>
POLICY HNRP16 <i>Ensure that the existing road corridor and its rural character are maintained through the preservation of a narrow carriageway with a wide berm area, which will have rural berm treatments such as swales and</i>	<p>The kinking, rural nature of Breadalbane Avenue is another key characteristic worth protecting. The benefits of this Policy is that it ensures the roads existing alignment</p>	<p>There will be some reduction in flexibility for the development of the area, as the current road alignment may not be the most efficient layout in terms of site design.</p>	<p>This policy is efficient and effective in achieving HNRO9, given that the existing road is a key characteristic of the Breadalbane Neighbourhood, and the retention of its current alignment is a low cost method in protecting existing character.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

<p><i>reduced levels footpaths and street lighting, as well as lower fence heights to maintain a rural feel.</i></p>	<p>is retained, and the rural style wide berms are also encouraged to be retained where possible.</p>		
<p>POLICY HNRP17 <i>Encouragement of the retention of existing heritage features and the existing haphazard building and lot design within the Breadalbane Avenue Special Character Area.</i></p>	<p>This Policy encourages the retention of the existing characteristics relating to the haphazard building design, particularly how existing dwellings do not front Breadalbane Avenue in a uniform nature. It also encourages the protection of existing heritage features, which includes a John Scott designed dwelling, which is important to the character and history of the area.</p>	<p>Reduction in flexibility in that retaining the existing John Scott designed dwelling, it will reduce the ability to get maximum yield out of 71 Breadalbane Avenue. Further reductions in efficiency, as discouraging uniform setbacks will not allow for buildings to be established in the most efficient manner.</p>	<p>This policy will ensure the protection of existing heritage characteristics of the Breadalbane Special Character Area. It has potential to reduce some of the efficiency in achieving maximum yield, but will ensure that the existing characteristics are retained where possible.</p>

8.2 Are the Provisions the Most Appropriate Way to Achieve the Purpose of the Proposal?

As outlined in section 2.1 of this report, the second part of the evaluation is:

Whether the provisions to be introduced or amended by Variation 4 are the most appropriate way to achieve the objectives of Variation 4 and those objectives in Sections 2.4, 8.1, and 8.2 as relevant.

The objectives of Variation 4 are set out in section 8.1 of this report, where they were assessed as to whether they were the most appropriate way to achieve the purpose of the Act.

The relevant objectives in Sections 2.4, 8.1 and 8.2 are considered to be:

- Section 2.4:
 - OBJECTIVE UDO1 - To reduce the impact of urban development on the resources of the Heretaunga Plains in accordance with the recommendations of the adopted Heretaunga Plains Urban Development Strategy (HPUDS).
 - OBJECTIVE UDO2 - To ensure that new urban development is planned for and undertaken in a manner that is consistent with the matters outlined in the Hawke's Bay Regional Policy Statement.
 - OBJECTIVE UDO3 - To establish an effective and sustainable supply of residential and business land to meet the current and future demands of the Hastings District Community.
 - OBJECTIVE UDO4 - To retain and protect the versatile land resource that is the lifeblood of the local economy from ad hoc urban development
 - OBJECTIVE UDO5 - To promote the redevelopment of existing residential areas.

 - Section 8.1:
 - OBJECTIVE HNSMAO1 - To ensure that the characteristics which make the Havelock North environment distinctive and memorable are identified, retained and enhanced.
 - OBJECTIVE HNSMAO2 - To have an environment that provides for a variety of activities, promotes good quality urban design and promotes sustainable development practices.
 - OBJECTIVE HNSMAO5 - RESIDENTIAL ENVIRONMENT - Adequate infrastructure will be in place before intensification of housing occurs.
 - OBJECTIVE HNSMAO6 - The diverse range of housing demands, preferences and lifestyles in Havelock North are met and residential use is compatible with the surrounding environment.

 - Section 8.2
 - OBJECTIVE HNRO1 – New development will be of a design, scale, layout and intensity that is consistent and compatible with the existing residential areas of Havelock North.
-

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

- OBJECTIVE HNRO2 – New non-residential activities will be of a scale and design that is compatible with the surrounding residential environment.
- OBJECTIVE HNRO3 – To maintain and enhance residential amenity by ensuring adverse noise effects are avoided and mitigated.
- OBJECTIVE HNRO5 – To protect people, property and infrastructure of the community from flooding and ponding effects associated with stormwater runoff

The following evaluation examines whether the provisions in the proposal are the most appropriate way in which to achieve the objectives of Variation 4, and those listed above, in terms of their efficiency and effectiveness (s32(1)(b)). The matters considered are:

- The type of zoning;
- The extent of the zoning;
- The content of the zone (noting that the analysis of the proposed objectives identified the appropriateness of differentiating between Bull Hill Neighbourhood, Iona Terraces Neighbourhood, Iona Plateau Neighbourhood and Breadalbane Avenue).

To date, section 32 case law has interpreted ‘most appropriate’ to mean “suitable, but not necessarily superior”³¹. Therefore, the most appropriate option does not need to be the most optimal or best option, but must demonstrate that it will meet the objectives in an efficient and effective way.

8.2.1 Zoning Provisions

8.2.1.1 Options

Options are:

1. **Retain existing zoning that currently applies to the land** – this option would involve retaining the current zoning and corresponding provisions that apply to the subject land without making any specific provision for urban growth in this location;
2. **Adopt existing Havelock North General Residential Zone provisions** – this option involves rezoning the area to Havelock North General Residential Zone; or
3. **Adopt existing Havelock North Character Residential Zone provisions** – this option involves rezoning the area to Havelock North Character Residential Zone; or
4. **Adopt customized residential zone provisions incorporating the Iona Structure Plan** – this option involves inserting a new residential zone into the District Plan for the area, including the drafting of a tailored set of residential zone provisions;

³¹ Rational Transport Soc Inc v New Zealand Transport Agency HC Wellington CIV-2011-485-2259, 15 December 2011.

8.2.1.2 Evaluation

Table 1: Zoning Provisions Iona Structure Plan Area: Option Evaluation:

	OPTION 1: RETAIN EXISTING ZONING AND PROVISIONS	OPTION 2: ADOPT EXISTING GENERAL RESIDENTIAL ZONE PROVISIONS & IONA STRUCTURE PLAN	OPTION 3: ADOPT EXISTING CHARACTER RESIDENTIAL ZONE PROVISIONS AND IONA STRUCTURE PLAN	OPTION 4 DEVELOP A CUSTOMISED RESIDENTIAL ZONE INCORPORATING THE IONA STRUCTURE PLAN
<p>EFFECTIVENESS</p> <p>In achieving:</p> <ul style="list-style-type: none"> - the objectives of the proposal ; and - existing relevant objectives of the District Plan. 	<p>The subject land is zoned partly deferred Havelock North General Residential Zone, and Havelock North Rural Residential Zone. A vacant portion of the subject land, currently used for lifestyle purposes and located nearest the existing residential area, is zoned Havelock North Character Residential Zone.</p> <p>The purpose of the Deferred Havelock North General Residential zone is to identify land that is to be rezoned for future urban growth. In the meantime this zone allows the continuation of Plains Production Zone activities to occur. The Havelock North Character Residential Zone provides for urban development that retains the existing landscape and garden character of the spacious older areas of Havelock North (this zoning does not seem appropriately applied to the vacant lifestyle land mentioned above). The focus of the Havelock North Rural Residential Zone is on the provision of low density rural residential housing and associated lifestyle activities. The land resource within this zone is of a lower versatility and is less productive nature.</p> <p>A specific anticipated outcome of the Havelock North Rural Residential Zone is that: “The potential for future residential activity as outlined in HPUDS will be maintained”.</p> <p>Comprehensive urban residential development of the subject land, however, would not be able to occur under the current Deferred General Residential Zone. Nor would it be able to occur under the Rural Residential Zone at the densities proposed. Any development would need to be authorised by way of resource consent, which would not achieve a number of relevant existing objectives such as ensuring new urban development is planned for and undertaken consistent with HPUDS (UDO2); ensuring retention and enhancement of characteristics that make the Havelock North environment distinctive (HNSMAO1); promoting good quality urban design (HNSMAO2). Importantly, retaining the existing zoning would not meet Objective UDO3 which requires that an effective and sustainable supply of residential land to meet the</p>	<p>The Havelock North General Residential Zone provides for urban residential development under the umbrella of the Havelock North Residential Strategic Management Area (SMA). Residential activities are specifically provided for and anticipated at a density of 350m² per site.</p> <p>Objectives, policies and rules are included in this zone, and throughout the Plan, that address amenity effects and urban design principles, as well as reverse sensitivity issues and the ‘right to farm’. These provisions have been developed and adopted through the recent District Plan Review, and therefore have undergone considerable recent scrutiny.</p> <p>The Iona Structure Plan ensures development occurs with provision for appropriate servicing, and incorporates outcomes and standards that address specific environmental effects.</p> <p>The density of urban residential development anticipated for new greenfield growth areas would be able to occur relatively easily under this zoning, and therefore adopting the Havelock North General Residential zoning and the proposed Iona Structure Plan and associated provisions, would be effective in achieving the purpose of this proposal and the existing relevant objectives of the District Plan for this zone and the Havelock North SMA.</p>	<p>The Havelock North Character Residential Zone (HNCZRZ) provides for urban development that retains the existing landscape and garden character of the spacious older areas of Havelock North. Typically these areas are located within the foothills of Te Mata Peak and have an undulating and at times relatively steep topography. Site size and shape varies however the special feature that is consistent within the zone is the predominance of landscaping over built form when sites are viewed from the street.</p> <p>Urban development in this Zone is anticipated at a lower density with rules requiring a minimum of 700m² per site.</p> <p>The HNCZRZ does not sit comfortably over what is predominantly vacant pastoral land or land used for lifestyle block purposes. It has quite a different character to the older residential areas of Havelock North, albeit that there are some large mature trees and stands of trees that contribute to the special character of the area.</p> <p>Adopting the HNCZRZ, a zoning density that stems from the original subdivision pattern and development of the older areas of Havelock North is not appropriate for this greenfield land. Such a zoning would lead to an inefficient use of this urban growth area, would reduce opportunities for innovative comprehensive residential developments and would not enable diversity in subdivision layout and design that provides a range house types and section sizes to create a mixed community.</p> <p>Applying the HNCZRZ would not achieve existing or proposed objectives that support these outcomes.</p> <p>Applying the HNCZRZ would not effectively meet Objective UDO3 which requires that an effective and sustainable supply of residential land to meet the current and future demands of the Hastings District Community.</p> <p>Adopting the Havelock North Character Residential zoning and the proposed Iona Structure Plan and associated provisions would be ineffective in</p>	<p>This option involves a specific Residential Zone to provide for urban residential development that is specific to the area, under the umbrella of the Havelock North Residential Strategic Management Area (SMA).</p> <p>The zone includes its own Objectives, policies and rules, to deliver a residential environment that addresses the community’s desired amenity values; and specific urban design principles for the area, as well as incorporating the Iona Structure Plan. This options allows for differentiations between different neighbourhoods, which was identified as appropriate through the analysis of the objectives of Variation 4.</p> <p>The design and density of urban residential development anticipated for new greenfield growth areas would be able to be facilitated under this approach.</p> <p>In particular the objectives developed by the Iona Working Group that include:</p> <p><i>“to create a place that adds value to Havelock North, to create innovative land development responses to this unique environment, and to use land efficiently while creating a high quality residential environment”</i> would be enabled through the adoption of a customised residential zone that incorporates the Iona Structure Plan.</p> <p>That outcome is consistent with relevant existing objectives of the PDP such as HNSMAO1 and HNSMAO2.</p> <p>A special zone also directly implements the proposed objectives for the Iona Special Character Zone.</p> <p>A specific residential zoning would therefore be highly effective in achieving the objectives of this proposal and the existing relevant objectives of the District Plan for the Hastings SMA.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	OPTION 1: RETAIN EXISTING ZONING AND PROVISIONS	OPTION 2: ADOPT EXISTING GENERAL RESIDENTIAL ZONE PROVISIONS & IONA STRUCTURE PLAN	OPTION 3: ADOPT EXISTING CHARACTER RESIDENTIAL ZONE PROVISIONS AND IONA STRUCTURE PLAN	OPTION 4 DEVELOP A CUSTOMISED RESIDENTIAL ZONE INCORPORATING THE IONA STRUCTURE PLAN
	<p>current and future demands of the Hastings District Community.</p> <p>Retaining the existing zoning would also clearly not achieve the proposed objectives of the Iona Special Character Zone (i.e. there would be no provisions implementing these objectives).</p> <p>Retaining the existing zoning structure over the subject land would therefore be ineffective in achieving the purpose of this proposal, and would be contrary to the existing relevant objectives of the District Plan and those objectives developed by the Working Party for the Iona Urban Growth area.</p> <p>Furthermore, retention of the existing zones would conflict with the Hawkes Bay Regional Policy Statement (the higher order planning document) and affect the implementation of the Districts Regional Growth Strategy. Growth intervention is seen as necessary to recognise the actual or potential effects that urban growth can have on people, communities and the natural environment. The National Policy Statement Urban Development Capacity requires Council as a medium growth area to provide sufficient land capacity to meet its growth demands.</p> <p>It would also fail to meet optimal site yield intensification objectives, resulting in an inefficient use of the identified land resource. Noting that this needs to be balanced against the maximum natural capacity within the constraints that exist, which is discussed in more detail below.</p>		<p>achieving the purpose of this proposal and the existing relevant objectives of the District Plan for this zone and the Havelock North SMA.</p>	
<p>COSTS</p> <p>Effects anticipated from implementation, including:</p> <ul style="list-style-type: none"> - Environmental - Economic (incl. on economic growth & employment) - Social - Cultural 	<p>Economic – any residential development would require non-complying resource consent approval which is costly and has a risk of failure under a Deferred or Rural Residential zoning. Lack of sufficient provision for new housing for Havelock North could put pressure on existing housing affordability, create pressure for development in less desired locations within the District, such as the Plains Production Zone, or direct development elsewhere in the future.</p> <p>Undermines the current policy framework put in place by HPU DS and the Regional Policy Statement to ensure an integrated and ordered approach to addressing urban growth needs.</p>	<p>Environmental – the General Residential Zone planning provisions would not encourage the retention of the special characteristics and features of this area that are highly valued by residents and the community in general.</p> <p>Social / cultural – conventional subdivision patterns are likely to result from these planning provisions and as such uniform development of single family houses on a site would most likely follow. The objective of creating a mixed community with a variety of section sizes and house types would not be met under these zoning provisions.</p>	<p>Environmental – The Character Residential Zone provisions with a minimum site size of 700m² would be an inefficient use of the land resource and would not maximise the ability to design a development that suits its undulating landscape.</p> <p>Social / Cultural – The Character Residential Zone provisions would provide no opportunities to showcase innovative comprehensive residential developments. The Character Residential Zone provisions would not encourage inventive subdivision layouts and designs that provide for the range house types and section sizes needed in order to create a mixed community.</p>	<p>Economic –additional policy development costs to draft new zone provisions.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	OPTION 1: RETAIN EXISTING ZONING AND PROVISIONS	OPTION 2: ADOPT EXISTING GENERAL RESIDENTIAL ZONE PROVISIONS & IONA STRUCTURE PLAN	OPTION 3: ADOPT EXISTING CHARACTER RESIDENTIAL ZONE PROVISIONS AND IONA STRUCTURE PLAN	OPTION 4 DEVELOP A CUSTOMISED RESIDENTIAL ZONE INCORPORATING THE IONA STRUCTURE PLAN
	Pressure from urban expansion onto versatile soils for which dominance should be given to agricultural and horticultural land uses will continue. This results in short term financial incentives but results in fragmented planning and the loss of land which is regionally significant. Settlement patterns should result in compact development through the gradual restriction of urban boundaries to allow proper planning and design work to occur.			
BENEFITS Effects anticipated from implementation, including: - Environmental - Economic (incl. on economic growth & employment) - Social - Cultural	Environmental – retains versatile soils (although note that the existing zoning is not Plains Production and allows subdivision to a size not expected to provide for productive uses) Economic – <ul style="list-style-type: none"> No additional Council policy planning costs, or infrastructure costs to service the area; continuation of existing pastoral and rural residential / lifestyle activities taking place on the land concerned; A roll over of the operative provisions will be simple to administer and familiar to plan users; and Generally less prescriptive, with a more straight forward development process. 	Environmental - utilises the land resource in an efficient manner Economic – growth and employment potential for the development and building sectors; economic benefits for landowners that elect to develop; additional customer base for local suburban commercial shops and amenities;	Environmental – provides a level of certainty and comfort for existing residents adjoining or neighbouring the rezoning area in terms of the type of development to expect. More likely than the General Residential Zone provisions to retain some of the existing mature trees that are valued by the community because of the larger site sizes. Economic – growth and employment potential for the development and building sectors; economic benefits for landowners that elect to develop; additional customer base for local suburban commercial shops and amenities; although to a lesser extent than options allowing for smaller section sizes (and therefore more houses).	Economic – growth and employment potential for the development and building sectors; economic benefits for landowners that elect to develop; additional customer base for local suburban commercial shops and amenities; Social / Cultural – creation of a mixed community catering for a range of household types and life stages. Environmental – an efficient use of land showcasing desirable compact housing options; innovative subdivision design and layout that builds character and amenity by complementing the existing features of the area that are valued by the community.
EFFICIENCY In achieving: - the objectives of the Proposal; and - existing relevant objectives of the District Plan.	<u>Inefficient.</u> Does not achieve existing or proposed objectives. High opportunity cost and little benefit associated with this option. This option fails to give effect to the Hawkes Bay Regional Policy Statement, which identifies this land as needed to meet the growth needs of the District.	<u>Low efficiency</u> The potentially significant environment and social / cultural costs in respect of the loss of existing landscape character and amenity outweigh benefits associated with achieving the greatest level of residential yield.	<u>Low efficiency</u> The inefficient use of land even though this is likely to result in the retention of some mature trees and vegetation does not outweigh the significant costs environmental, social and cultural costs associated with these provisions. Fundamentally the objectives and purpose of this Zone and its provisions do not fit with the objectives and overall vision for the proposed Iona urban growth area.	<u>Highly efficient</u> This option has higher economic costs than Options 2 or 3 due to greater costs associated with policy development however the social, environmental, cultural and economic benefits that a tailor-made approach will achieve far outweigh these costs. This option gives effect to the Hawkes Bay Regional Policy Statement, which identifies this land as needed to meet the growth needs of the District.
OVERALL APPROPRIATENESS In achieving: - the objectives of the Proposal; and - existing relevant objectives of the District Plan.	Not Appropriate	Not Appropriate	Not Appropriate	Appropriate
RISK OF ACTING OR NOT ACTING	N/A (information is sufficient and certain).	N/A (information is sufficient and certain).	N/A (information is sufficient and certain).	N/A (information is sufficient and certain).

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	OPTION 1: RETAIN EXISTING ZONING AND PROVISIONS	OPTION 2: ADOPT EXISTING GENERAL RESIDENTIAL ZONE PROVISIONS & IONA STRUCTURE PLAN	OPTION 3: ADOPT EXISTING CHARACTER RESIDENTIAL ZONE PROVISIONS AND IONA STRUCTURE PLAN	OPTION 4 DEVELOP A CUSTOMISED RESIDENTIAL ZONE INCORPORATING THE IONA STRUCTURE PLAN
(if uncertain or insufficient information)				
<p>CONCLUSION:</p> <p>The evaluation demonstrates that developing a customised residential zone incorporating the Iona Structure Plan, will achieve the purpose of making additional land available for 'greenfield' housing development in the Iona or southwestern area of Havelock North, reflected in the objectives of Variation 4, in an efficient and effective way. It will also achieve those objectives of the Propose District Plan which are relevant and unchanged by the Variation.</p> <p>Option 4 is considered the most appropriate way to achieve the existing and proposed objectives.</p>				

Table 2: Zoning Provisions Breadalbane Avenue Area: Option Evaluation:

Zoning Provisions Breadalbane Avenue Option Evaluation

Preferred Option – 3

Option Method	Effectiveness rating	Reason for Effectiveness Rating	Costs	Benefits	Efficiency rating	Why Efficiency Rating?
1. GENERAL RESIDENTIAL ZONING	Low	<p>A General Residential Zoning would not be effective the purpose of the proposal as it would not protect the existing characteristics within the Breadalbane Ave neighbourhood. The proposal would not incentivise variation in building design nor would it encourage retention of existing vegetation.</p> <p>The option would not be effective in achieving Objective HNSMAO1 as General Residential provisions would not protect existing characteristics.</p>	<p>Environmental – Small side and front yard setbacks will create uniform development with little variation.</p> <p>Environmental – High building coverage on small sections is likely to lead to the removal of existing vegetation.</p> <p>Environmental – Potential for reverse sensitivity effects as there would be reduced setbacks to existing Lane Road Rural Residential area.</p> <p>Economic – Need for greater level of road upgrades and treatments for both Breadalbane Ave and the exiting Intersection onto Iona Road. This would also reduce open and rural feel.</p> <p>Social / cultural – encourages conventional subdivision patterns, such uniform development of single family houses on a site would follow. The objective of creating a mixed community with a variety of section sizes and house types would not be met under these zoning provisions.</p>	<p>Economic – Would allow for maximum efficiency of being able to put larger dwellings on properties, ensuring reduced land lost.</p> <p>Economic – Reduced restrictions with regards to fencing, setbacks etc meaning sites become more economically profitable.</p>	Low	While a General Residential zoning would allow landowners maximum flexibility on how they develop their site, and would reduce costs associated with restrictions of setbacks and design, the reduction in amenity, and removal of existing features would be detrimental to the character of the area and reduce the value of the overall development.
2 CHARACTER RESIDENTIAL ZONING	High	<p>A character residential Zoning would be highly effective in achieving the purpose of the proposal as it would allow for the intensification of the existing Breadalbane area while also protecting many of the existing characteristics.</p> <p>The option would be highly effective in achieving the relevant Objectives of the Plan particularly HNSMAO1 and HNSMAO6 as it would help retain existing characteristics while providing for diversity in housing and section options within Havelock North.</p>	<p>Social / Cultural – The Character Residential Zone provisions would provide no opportunities to showcase innovative comprehensive residential developments.</p> <p>Economic – An overlay would further reduce flexibility for development of the site, by introducing further restrictions on how the site can be developed.</p>	<p>Environmental –More likely to retain some of the existing mature trees that are valued by the community because of the larger site sizes.</p> <p>Environmental – Retention of some of the existing characteristics and amenity of the Breadalbane area.</p> <p>Economic – growth and employment potential for the development and building sectors; economic benefits for landowners that elect to develop; additional customer base for local suburban commercial shops and amenities; increased rating base.</p>	Medium	This option has a relatively high efficiency rating as it will encourage the retention of existing characteristics through standards requiring greater landscaping, setbacks and subdivision design. However there is some reduction in efficiency as there will be a resulting reduction in flexibility of site design.
3 CHARACTER RESIDENTIAL ZONING WITH SPECIAL CHARACTER OVERLAY	High	<p>A character residential Zoning with special character overlay would be highly effective in achieving the purpose of the proposal as it would allow for the intensification of the</p>	<p>Social / Cultural – The Character Residential Zone provisions would provide no opportunities to showcase innovative comprehensive residential developments.</p>	<p>Environmental – Allows for the provisions of specific policies and rules relating to the Breadalbane neighbourhood, allowing for additional provisions which encourage the protection of existing characteristics.</p>	Medium/High	This option is similar to option 2 as it has a high efficiency rating in that it will encourage the retention of existing characteristics through standards requiring greater landscaping, setbacks

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

		<p>existing Breadalbane area while providing greater levels of protection of the existing characteristics than other character Zones. Thus recognising the special character that should be retained for the Breadalbane Area.</p> <p>The option would be highly effective in achieving the relevant Objectives of the Plan particularly HNSMAO1 and HNSMAO6 as it would help retain existing characteristics while providing for diversity in housing and section options within Havelock North.</p>	<p>Economic – An overlay would further reduce flexibility for development of the site, by introducing further restrictions on how the site can be developed.</p> <p>Economic – Additional costs in developing site specific rules for the overlay, rather than using existing character rules.</p>	<p>Environmental – Allow flexibility in boundary and dwelling location when developing around mature trees and other plant life.</p> <p>Social/Cultural – Reduction in pressures on the existing Breadalbane Ave. Allowing some rural treatments to continue, and a live and play type atmosphere to be encouraged.</p> <p>Environmental – Ensures an open environment for residents with the opportunity to provide large boundary setbacks, and reducing domination of buildings on the environment. Also allows for larger setback to existing Rural Residential Zone to reduce reverse sensitivity.</p>	<p>and subdivision design. However it has further efficiency benefits through the ability to formulate specific rules relating to the Breadalbane Special Character Area. This ensures that the rules can be designed to reflect the unique character of the area. Some efficiency is lost through the loss of flexibility in lot design, and the additional complexity in rule development and usability.</p>
<p>CONCLUSION:</p> <p>While both Options 2 and 3 are both appropriate and reasonably efficient. It is considered that the opportunity to create specific rules and standards for the Breadalbane Special Character Area means that option 3 is more effective and efficient in allowing for additional development while still retaining the existing characteristics of the Breadalbane Avenue Neighbourhood.</p>					

Having determined that a customised residential zone is the most efficient and effective means of achieving the relevant objectives, the evaluation must now consider:

- The appropriate extent of the zone; and
- The appropriate content of the zone in terms of the policies and methods to apply to it

8.2.2 Zone Boundary Options

8.2.2.1 Options

Options are:

1. **HPUDS (2010) indicative boundary** – this option includes all properties identified in the HPUDS greenfield growth areas of Iona /Middle Road and Havelock Hills Lower area.;

Iona / Middle Road Block



Havelock Hills Lower Area

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan



2. Reduce HPUDS identified area but includes vacant land adjoining the existing residential suburb

Include existing vacant land (zoned but not serviced) adjoining the existing suburban area of Havelock North and reduce the HPUDS indicative area boundary so as to retain the rural residential character of Lane Road.

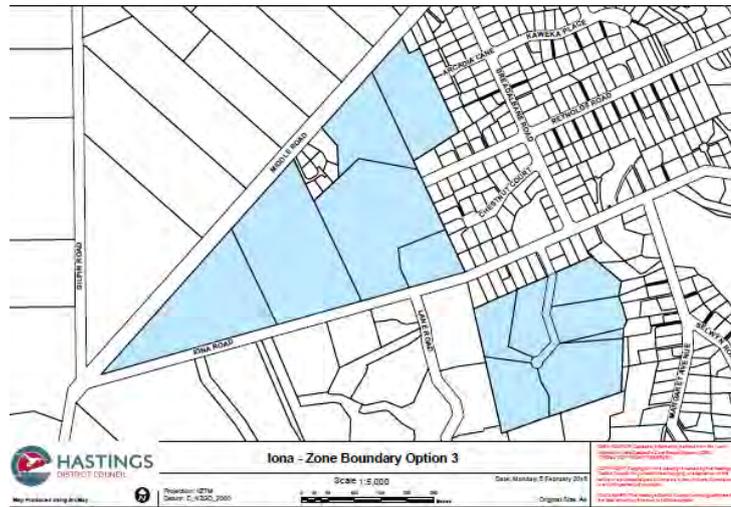
Realign the zone boundary so that it does not adjoin Lane Road and retain the rural residential zoning of properties fronting the entrance of this road and the entirety of Lane Road itself. The zone boundary would then follow the topography of the low ridge to the southeast of Lane Road. This option also excludes a property where the landowner has expressed a desire not to be included in the rezoning and also excludes the Margaret Avenue area (identified as part of the HPUDS Iona / Middle Block) to avoid the current significant flood risk associated with this land;



Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

3. Rezone the Iona Triangle Site and Breadalbane Avenue only

This involves rezoning only land immediately adjoining existing suburban residential areas; The triangle site and the Breadalbane Avenue areas of the HPUDS identified areas;



8.2.2.2 Evaluation

Table 2: Urban Development Area Boundary Option Evaluation:

	OPTION 1: HPUDS INDICATIVE BOUNDARY	OPTION 2: REDUCED HPUDS AREA BUT INCLUDE VACANT LAND ADJOINING EXISTING RESIDENTIAL AREA	OPTION 3: LIMIT URBAN DEVELOPMENT AREA BOUNDARY TO IONA TRIANGLE AND BREADALBANE AVE AREAS ONLY
<p>EFFECTIVENESS</p> <p>In achieving:</p> <ul style="list-style-type: none"> - The proposed objectives; and - existing relevant objectives of the District Plan. 	<p>Utilising the HPUDS indicative boundary would be effective in achieving the objectives of Variation 4, and the existing relevant objectives of the Proposed Plan.</p> <p>This option would meet the following existing urban strategy objectives of the PDP:</p> <p>UDO1 – the boundary would be in accordance with HPUDS boundaries;</p> <p>UDO2 – the boundary is consistent with the RPS;</p> <p>UDO3 – the boundary will provide sufficient land to enable a development capacity of 390 – 400 dwellings which will meet the current and future demands for housing in the District.</p> <p>UDO4 – retain and protect the versatile land resource – given that no land within the boundary is zoned Plains Production Zone it is considered that this option is consistent with the intent of this objective.</p> <p>UDO5 – the boundary includes the Breadalbane Avenue area and thereby promotes intensification within existing areas. This option will also achieve the proposed new Havelock North Strategic Management Area objective – HNSMA07 by containing new development within the SMA boundaries.</p> <p>This option also achieves new Zone objectives ISCO1 by including land encompassing the proposed reserve areas and unique ridgeline features and ISCO5 by ensuring the boundary of the urban development area are clear and defensible.</p> <p>This option is also consistent with HNRO9 as it enables the intensification of an existing residential area.</p> <p>The Havelock North strategic management area objectives HNSMA01 (special character), HNSMA06 (providing for a range of housing preferences and lifestyles) and HNSMA07</p>	<p>This option would provide for the retention of the special character of the Lane Road rural residential area (as it would remove this area from the rezoning proposal). As a consequence it would meet existing and new objectives – HNSMA01, and ISCO1. This option also removes an area adjoining Margaret Ave in order to avoid the significant natural hazard risk of flooding (thereby meeting RPS objective UD1(e)). These land area reductions are offset by including existing vacant land (already zoned but not serviced with infrastructure) in the proposal, ensuring that urban strategy objective UDO3 to provide a sufficient and sustainable supply of land to meet demand is achieved.</p> <p>This option primarily achieves urban strategy objectives UDO1 and UDO2 as the boundary proposed is predominantly in accordance with HPUDS and the RPS (only removing areas for reasons of significant natural hazard or to protect areas which contributes significantly to character and amenity values of the adjoining rural residential zone). Further objective UDO4 – to retain and protect the versatile land resource – given that no land within the boundary is zoned Plains Production Zone it is considered that this option is consistent with the intent of this objective.</p> <p>This option is also consistent with UDO5 and ISCO5 in that it will provide clear boundaries through the use of roads and reserves and in the case of the lane road boundary – uses changes in topography and cadastral boundaries to contain the urban development area. This option will also achieve the proposed new Havelock North Strategic Management Area objective – HNSMA07 by containing new development within the SMA boundaries.</p>	<p>This option would not provide for sufficient residential yield to meet Ministry for the Environment expectations for this area and hence would not meet UDO3. Nor would it be sufficient to cater for the range of residential demand in the medium - long term. It would not achieve HNSMA06 in terms of providing a range of housing preferences and lifestyles. Limiting the rezoning area in this manner will not resolve the appeal to the District Plan in respect of the Hill site on Iona Road. As such, this option does not achieve the retention of special character features to the same degree as options 1 or 2 and as a consequence of its non-inclusion, the development of hill land could occur under the current zoning which could potentially result in a loss of special character (of the ridgelines and pond and wetland areas).</p> <p>This option is not in accordance with the boundaries of HPUDS or the RPS and therefore does not meet UDO1 or 2.</p> <p>It does reduce the impact on versatile soils relative to options 1 and 2 and in that respect achieves UDO4 to a greater degree.</p> <p>It does achieve UDO5 to a degree in that the triangle area is contained within collector and arterial roads providing definitive boundaries.</p> <p>Restricting rezoning under this option would however be ineffective in achieving the objectives of this proposal, and the existing relevant objectives of the Proposed Plan.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>OPTION 1: HPUDS INDICATIVE BOUNDARY</p>	<p>OPTION 2: REDUCED HPUDS AREA BUT INCLUDE VACANT LAND ADJOINING EXISTING RESIDENTIAL AREA</p>	<p>OPTION 3: LIMIT URBAN DEVELOPMENT AREA BOUNDARY TO IONA TRIANGLE AND BREADALBANE AVE AREAS ONLY</p>
	<p>(contains development within the SMA boundaries) are also achieved.</p>	<p>This option is also consistent with HNRO9 as it enables the intensification of an existing residential area – Breadalbane Avenue.</p> <p>Reducing the HPUDS rezoning boundary would be more effective than Option 1, in achieving the objectives of this proposal, and the existing relevant objectives of the Proposed Plan as it would enable a sufficient development yield to be attained while also retaining more land that contributes to the special character and amenity values of this area and areas that are highly valued by the community and residents (thus meeting HNSMAO1 and ISCO1 to a greater degree than option 1). This option also retains choice in the residential housing market in this location (meeting objective HNSMA06 to provide for a range of housing preferences and lifestyles). Removing areas subject to natural hazard constraint also makes this option robust and more effective in terms of achieving the objectives of the District Plan (HNRO5, HNSMAO5 and ISCO4 that seek to protect people and property from the adverse effects of flooding and stormwater runoff). Furthermore this option will also enable the servicing and development of vacant land already zoned for residential purposes immediately adjoining the existing residential area.</p>	
<p>COSTS</p> <p>Effects anticipated from implementation, including:</p> <ul style="list-style-type: none"> - Environmental - Economic (incl. economic growth & employment) - Social - Cultural 	<p>Environmental – loss of versatile soils – approximately 66ha (although it is noted that the current Rural Residential zoned areas allow subdivision to a size not expected to provide for productive uses), loss of the rural residential land in Lane Road and the special character and amenity of this area that is highly valued by the community.</p> <p>Economic – significant costs to address the flooding issues associated with the Margaret Avenue area to enable development to occur and potential road upgrading costs on Lane Road.</p>	<p>Environmental – loss of versatile soils – approximately 56ha (although it is noted that no land within the proposed urban development area boundary has a Plains Production zoning and that the areas currently zoned rural residential are able to be subdivided to a size not expected to provide for productive purposes).</p> <p>Economic costs – reduction in rezoning land area may result in marginally higher servicing costs per site compared with option 1.</p>	<p>Environmental – loss of approximately 23ha of versatile soils (although substantially less than Option 1 or 2). Again it is noted that no land within this boundary is zoned Plains Production. While this option would in effect also retain the character of Lane Road by not including it in the rezoning area; the need to meet demand, as well as HPUDS and Ministry for the Environment target yields, may result in a much more compact form of development in the Triangle and Breadalbane Avenue locations. In respect of Breadalbane Avenue such compact development would not be compatible or sensitive to the existing character of the area. In respect of the Triangle site area, the</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>OPTION 1: HPUDS INDICATIVE BOUNDARY</p>	<p>OPTION 2: REDUCED HPUDS AREA BUT INCLUDE VACANT LAND ADJOINING EXISTING RESIDENTIAL AREA</p>	<p>OPTION 3: LIMIT URBAN DEVELOPMENT AREA BOUNDARY TO IONA TRIANGLE AND BREADALBANE AVE AREAS ONLY</p>
	<p>Inefficiencies and economic costs of not including the existing vacant land already zoned in any proposal to service land for residential development.</p>		<p>increased density is likely to adversely impact the existing amenity values enjoyed by suburban and rural residential properties adjoining and opposite this site.</p> <p>Economic – the reduced residential yield potential of this area could have economic costs in that it may be difficult to effectively cover the significant infrastructure upgrade costs (there is the potential for uneconomic servicing costs per site).</p> <p>Social – residential amenity for residents within the limited rezoning area could be compromised by reduced access to reserve space and walking / cycling connections compared to options 1 and 2.</p> <p>This option would not require changes to the road layout at the intersection of Iona / Gilpin / Middle roads which would reduce traffic safety benefits.</p>
<p>BENEFITS</p> <p>Effects anticipated from implementation, including:</p> <ul style="list-style-type: none"> - Environmental - Economic (incl. economic growth & employment) - Social - Cultural 	<p>Environmental – Primarily uses roads as boundaries which provide a buffer to Rural Residential, Plains or Rural zoned land. Roads provide a tidier and robust development edge boundary. Enables traffic safety concerns at the Iona / Gilpin / Middle Road intersection to be addressed.</p> <p>Economic – sufficient residential yield potential to spread significant infrastructure costs across</p> <p>Social - creates significant open space reserve areas for recreational activities. Efficiently uses these open space areas as buffers to rural residential land / activities.</p>	<p>Environmental – a reduction in land area to be rezoned results in a retention of versatile soil compared to Option 1. Retention of the amenity and landscape character of the Lane Road area. Enables traffic safety concerns at the Iona / Gilpin / Middle Road intersection to be addressed.</p> <p>Economic – allows infrastructure provision to unserviced but already zoned land which enables development to occur. Excluding land subject to significant flood hazard reduces costs and risk associated with mitigating such flood hazards. Sufficient residential yield potential to spread significant infrastructure costs.</p> <p>Provides for a defensible urban edge in terms of utilising roads where possible. The Lane Road boundary (northeastern boundary) follows the low ridge topography of the area but is also aligned to logical property boundaries to avoid confusion.</p> <p>Social – creates significant open space reserve areas for recreational activities. Efficiently uses these open space areas as buffers to rural residential land / activities.</p>	<p>Environmental – minimal loss of versatile soils compared to Options 1 & 2. A 30m buffer between urban and rural activities can be achieved via the Middle Road carriageway. For Breadalbane Avenue a buffer or setback to rural residential properties could be put in place to reduce reverse sensitivity effects.</p> <p>Landscape character and amenity of the Lane Road area will be retained.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	OPTION 1: HPUDS INDICATIVE BOUNDARY	OPTION 2: REDUCED HPUDS AREA BUT INCLUDE VACANT LAND ADJOINING EXISTING RESIDENTIAL AREA	OPTION 3: LIMIT URBAN DEVELOPMENT AREA BOUNDARY TO IONA TRIANGLE AND BREADALBANE AVE AREAS ONLY
<p>EFFICIENCY</p> <p>In achieving:</p> <ul style="list-style-type: none"> - the objectives of the Proposal; and - existing relevant objectives of the District Plan. 	<p><u>Efficient</u></p> <p>As discussed above, this option achieves the urban strategy objectives UDO1-3, UDO5, new zone objectives ISCO1 and ISCO5 and new Havelock North Residential Environment HNRO9. It is also consistent with existing and new SMA objectives HNSMA01, 06 and 07. However this option does not meet the RPS objective UD1(e) <i>“Establish a compact, and strongly connected urban form throughout the region that avoids or mitigates increasing the frequency or severity of risk to people and property from natural hazards”</i>. This option includes the Margaret Avenue area which is subject to significant flooding constraints the costs of which are likely be significant to resolve to enable development to occur.</p>	<p><u>Highly efficient</u></p> <p>Achieves the objectives as discussed above with the lowest total cost and greatest net benefit to society as a whole.</p> <p>Option 2 achieves the objectives HNSMA01 and ISCO1 to a greater degree than Option 1 and thereby protects the special character and features that make Havelock North a unique and memorable environment to live in. Option 2 is also consistent with RPS objective UD1 as it removes the Margaret Ave area subject to significant natural hazard. It is also generally consistent with the intent of UDO1 and UDO2 and meets UDO3 and UDO5. Overall it is considered that this option achieves the existing and new objectives to the greatest degree.</p>	<p><u>Inefficient</u></p> <p>Overall this option does not achieve urban strategy objectives UDO1-3. Nor does it achieve ISCO1 or HNSMA01 in respect of retaining special character to the same degree as option 2. It will not achieve a range of housing preferences (HNSMA06). It may also not allow the Council to meet the land capacity requirements set down in the NPS Urban Development.</p> <p>This option has a high cost with little benefit to society as a whole.</p>
<p>OVERALL APPROPRIATENESS</p> <p>In achieving:</p> <ul style="list-style-type: none"> - the objectives of the Proposal; and - existing relevant objectives of the District Plan. 	Appropriate	Appropriate	Not Appropriate
<p>RISK OF ACTING OR NOT ACTING</p> <p>(if uncertain or insufficient information)</p>	N/A (information is sufficient and certain).	N/A (information is sufficient and certain).	N/A (information is sufficient and certain).
<p>CONCLUSION:</p> <p>The above evaluation demonstrates that reducing the HPUDS boundaries in order to retain the amenity and character of the Lane Road Rural Residential area, and to remove the Margaret Avenue area that is subject to significant flood hazard while including an area already zoned for residential purposes (while not serviced with infrastructure), is an efficient and effective way to make additional land available for ‘greenfield’ housing development on the southern side of Havelock North thereby achieving the objectives of Variation 4. It is also concluded to be the most appropriate way to achieve relevant existing objectives of the PDP. ..</p> <p>Option 2 is considered the most appropriate zoning extent under s 32(1)(b)..</p>			

8.2.3 Specific Neighbourhood Provisions within the New Iona Special Character Residential Zone

8.2.3.1 Bull Hill Neighbourhood

METHODS: RULES FOR THE BULL HILL NEIGHBOURHOOD

The following rules form the regulatory basis of the Bull Hill Neighbourhood Overlay of the Iona Special Character Zone. These rules should be read in conjunction with the general and specific performance standards that apply to the Zone and Bull Hill Neighbourhood Overlay which set out the parameters within which the activities listed below are required to meet or operate within. The Bull Hill Neighbourhood primarily provides for residential development. The rules outlined below are the mechanisms that will implement the objectives and policies for this Zone.

The following table sets out the status of activities in the Bull Hill and Iona Terraces Neighbourhood overlays of the Iona Special Character Zone (refer Appendix 13A Figure 1 for the boundaries of the neighbourhood overlays). All activities listed below are subject to the relevant Standards and Terms of the District Plan.

RULE TABLE 8.3.3.1 IONA SPECIAL CHARACTER ZONE – BULL HILL AND IONA TERRACES NEIGHBOURHOOD OVERLAYS (REFER APPENDIX 13A FIGURE 1)		
RULE	LAND USE ACTIVITIES	ACTIVITY STATUS
ISC1	Residential Activities (except comprehensive residential development)	P
ISC2	Supplementary Residential Buildings	P
ISC3	Relocated buildings	P
ISC4	Home Occupation	P
ISC5	Show homes	P
ISC6	Temporary Military Training Activity	P
ISC7	Visitor accommodation	P
ISC8	Temporary events within the Bull Hill Neighbourhood	P
ISC9	Non-residential care facilities within the Bull Hill neighbourhood	P
ISC10	Comprehensive Residential Development on sites within the Bull Hill Neighbourhood identified in accordance with an approved subdivision consent and land use concept plans	C
ISC11	All other applications for Comprehensive Residential Development within the Bull Hill Neighbourhood	RDNN
ISC12	A dairy and/or café activity (including any ancillary residential activities) located on the commercial node site identified on the Iona Structure Plan (Appendix 13A Figure 2) and complying with the specific standards outlined in 8.3.6H	RDNN
ISC13	Any permitted activity not meeting one or more of the relevant general or specific performance standards and terms (except activities not complying with performance standard 8.3.5A and 8.3.5B Residential	RD

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	Density and 8.3.6G(a) minimum site size and (e) gross floor area standards for Supplementary Residential Buildings)	
ISC14	Supplementary Residential Buildings not meeting the minimum site size or gross floor area standards (8.3.6G(a) and (e))	D
ISC15	Residential Activities not meeting the density standards within the relevant neighbourhood (8.3.5A and 8.3.5B)	D
ISC16	Temporary Events in the Iona Terraces Neighbourhood	D
ISC17	Education facilities within the Bull Hill Neighbourhood	D
ISC18	Places of Assembly within the Bull Hill Neighbourhood	D
ISC19	Early Childhood Centres within the Bull Hill Neighbourhood	D
ISC20	Homes for the Aged within the Bull Hill Neighbourhood	D
ISC21	Health care centres within the Bull Hill neighbourhood	D
ISC22	Emergency Services Facilities within the Bull Hill Neighbourhood	D
ISC23	A dairy and/or café activity located on the commercial node site identified on the Iona Structure Plan (Appendix 13A Figure 2) that does not comply with one or more of the specific standards outlined in 8.3.6H	D
ISC24	Premises used for the sale of liquor (including those premises used for the sale of liquor for consumption off-site) on the Commercial node site within the Bull Hill Neighbourhood	NC
ISC25	Any activity not otherwise provided for as a permitted, restricted discretionary or discretionary activity.	NC

IDENTIFICATION OF ISSUES FOR THE BULL HILL NEIGHBOURHOOD

ISSUE	EXPLANATION
1). Achieving a high quality residential environment and high levels of amenity while using land efficiently and retaining special character	The RPS and HPUDS seek to encourage the efficient use of vacant greenfield land in order to protect the versatile soils of the District. Density and minimum site size provision need to balance this objective with the desire to create high quality residential environments that retain special features that the community value.
2). The suite of development controls used to maintain and create a high level of residential amenity	Submissions to the draft Iona Structure Plan sought the maintenance of existing residential amenity values for neighbouring suburban residential and rural residential areas. Submissions sought a great level of residential amenity than was achieved through the provisions associated with the Arataki urban growth area of Havelock North
3). Retention of existing vegetation which provides character to the area	Submissions to the draft structure plan sought the retention of existing mature trees and vegetation as much as possible – stating that retention of existing vegetation allowed for a new residential area to look established whereas planting new trees and landscaping would require more time to establish and mitigate the impacts of development.
4). The appropriate extent to which non-residential activities are provided for in new urban areas particularly commercial activity that services residential areas	Submissions to the draft Structure Plan queried the need to provide for small-scale commercial activities such as dairies.

ISSUE 1: Achieving a high quality residential environment while using land efficiently and retaining special character – Option 5 Recommended

Option	Method	Effectiveness Rating & Reasons	Costs	Benefits	Efficiency Rating & Reasons
1	Apply the minimum site size rule of 700m ² from the Havelock North Character Residential Zone.	Low Effectiveness Rating Applying the rules and performance standards from the Havelock North Character Zone would not be effective in that they would not use the land in the most efficient manner and therefore would not meet objective BHO2.	This option would have significant costs associated with the inefficient use of land meaning that additional land may need to be rezoned in the future to ensure a sustainable supply to meet demand resulting in the potential for impacts on the versatile land resource.	Provides for consistency of site size rules across the neighbourhood and where land adjoins the existing suburban area of Havelock North.	Low Efficiency rating The costs outweigh the benefits as the effects of an inefficient use of this new greenfield land would result in a more sprawling development pattern rather than the compact form that the RPS promotes. As such this option is not in accordance with the RPS or the urban strategy objectives of the PDP in terms of protecting the versatile land resource.
2	Apply the minimum site size rules from the Havelock North General Residential Zone – 350m ²	Low effectiveness rating. Apply a blanket low minimum site size not achieve the objectives of the zone or the Bull Hill neighbourhood – especially in terms of protecting the amenity and character of adjoining lower density zones (BHO1). Such a provision will also not achieve variety in section size and house type and would be inconsistent with ISCO2.	This option would have significant costs in terms of adverse effects on the amenity levels both within and adjoining the neighbourhood. It would also incur costs in respect of not promoting sufficient variety of section size to accommodate a range of house types. Such a rule structure would likely result in a uniform subdivision design which would have impacts on the character and amenity of the area, especially in respect of the special landscape features of the Bull Hill and treed Avenue.	The benefits of this option are that it would facilitate an efficient use of the land resource. It would provide a rule structure that is simple and consistent and well known to land development companies in the District.	Low efficiency rating The costs of this option particularly in respect of the resulting amenity levels within the neighbourhood and the impacts on the amenity values of those lower density zones surrounding outweigh the benefits of land use efficiency.
3	Edge of Bull Hill Neighbourhood - 700m ² minimum Remaining Area – 400m ² minimum Identified Comprehensive Residential Development (CRD) area – 250m ² minimum but optional could be developed at 400m ² if CRD option not taken up Additional subdivision standard minimum site frontage width of 25 metres	Moderate effectiveness rating This option will retain existing amenity levels of adjoining zones Provides for variety in site size by identifying a specific area for Comprehensive Residential Developments Provides for an efficient use of the land resource.	The costs of this option include that it segregates density by identifying specific areas which results in conventional subdivision patterns, and streets characterized by uniform site size. This option potentially identifies a relatively larger area specifically for comprehensive residential development. By identifying specific site sizes and where smaller site sizes will be located, there is the potential that these provisions will prevent the mixing of house types and lot sizes in the same street. The minimum frontage width rule would create wide	The benefits of this option include the certainty for adjoining residents and landowners and/or developers of where smaller site sizes can occur and that sites created around the outer edge of the neighbourhood would have a minimum size of 700m ² . Promotes an efficient use of land; Seeks to promote variety by encouraging comprehensive residential development.	Moderate efficiency rating The costs of this option mean that it is unlikely to achieve the objectives of the neighbourhood (BHO1) or zone (ISCO2) as a whole in terms of creating a new character for new urban development areas based on a mix of housing type and section size within a street.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

			frontages full of house (increasing building bulk) creating amenity impacts on neighbouring zones where the rationale for this provision aimed to reduce the number of houses / lots opposite rural residential zoned sites.		
4	600m ² average site size across the whole neighbourhood but with a reduced amount of CRD areas specifically identified (just fronting reserves) – minimum 250m ² . Within each subdivision application (excluding CRD identified areas) for every 15 lots proposed to be created, 1 lot to be identified for either a duplex development (min site size 500m ²) or a comprehensive residential development (min site size of 1000m ²).	Moderate Effectiveness rating This option is more likely to achieve variety in site size within a street through the use of an average site size and but not constraining comprehensive residential development to a certain area. However this option does not provide certainty that site sizes will be compatible with any adjoining lower density zones.	Under this option the maintenance of existing amenity values relies on the subdivision assessment criteria. Therefore the certainty of this occurring is reduced compared with other options. This criteria to achieve larger site sizes on the edge coupled with a 600m ² average across the neighbourhood may make achieving the required development capacity of 390-400 difficult	An average site size provides more flexibility for land developers and encourages variety. An average site size of 600m ² would achieve the RPS target for greenfield land (of 15 dph). Assessment criteria are used to ensure the existing amenity of adjoining zones is maintained.	Moderate Efficiency rating This option provides less certainty adjoining residents and the average site size across the whole neighbourhood could potentially result in difficulties achieving the development capacity required. However it is likely to achieve more variety in size and configuration within the development area.
5	700m ² minimum applying to sites adjoining or opposite the following zones PP, HNCR & HNRR. No minimum site size for the remainder of the Bull Hill area but a requirement to achieve an overall minimum density of 15 dwellings per hectare and an overall maximum density of 17 dwellings per hectare across the neighbourhood as a whole. A requirement for subdivision proposals including sites below 400m ² to provide a concept plan at subdivision stage to ensure proposed sites can comply with performance standards (bulk and location) given there is no minimum site size. A requirement for an urban design assessment provided with any application for subdivision that includes sites with a minimum net site area of less than 400m ² and/or those identified as forming a Comprehensive Residential Development site. A Restricted Discretionary (Non-notified) activity status for subdivision within this Zone	High Effectiveness rating The flexibility of this option promotes the retention of character features to a greater degree than other options, creates opportunities for innovation and variety while retaining certainty residents adjoining or opposite the new urban development area. Therefore it is considered that this option more effectively meets ISCO1, and 3 and BHO1 and 2.	Regulatory costs and time delays associated with the need for RDNN subdivision applications in the Bull Hill neighbourhood. Costs associated with the provision of concept plans and urban design assessments where applications include sections of less than 400m ² . Potential for greater stormwater impacts given increased potential for smaller site sizes across the Bull Hill area and therefore greater infrastructure costs (however infrastructure considerations to date have been based on a total yield of 390-400 dwellings across the whole urban development area).	Retains larger site sizes where adjoining or located opposite lower density zones. Provides flexible opportunities for smaller site sizes internal to the development area where effects can be internalized. Balances using the land efficiently while seeking to retain amenity and character – resulting in environmental benefits. Promotes variety in site sizes and seeks to create a mix of households and a greater sense of community – resulting in social and cultural benefits. Promotes innovation and creativity in subdivision design and options for different house types through the flexibility of the provisions – environmental, social and cultural benefits. The flexibility of the provisions should also encourage and promote the retention of mature trees within the Bull Hill neighbourhood providing additional environmental, social and cultural benefits. The flexibility of provisions means that the required development capacity target of 390-400 can be achieved.	High Efficiency rating This option provides for significant environmental, social and cultural benefits to the community which clearly outweigh the cost of subdivision applications. Furthermore, these benefits seek to ensure a high quality and characterful residential environment that is likely to be highly desirable in the current and future housing market, providing significant economic benefits that would offset the additional cost.
6	600m ² minimum site size applying along Iona and Middle Roads, or new roads where opposite different zonings and established residential areas – to be identified on Structure Plan. Remainder of the Bull Hill neighbourhood, 250m ² minimum site size Coupled with a controlled activity status for subdivision	Low / Moderate Effectiveness Rating. This option will achieve the objectives of the Zone and Bull Hill that relate to the efficient use of the land resource, the provision of innovation in subdivision design and variety in section size and house type. However this may be at the expense of urban design principles and objectives that seek to achieve a quality residential living environment. Certainty this option does not sufficiently seek to maintain the existing amenity values of adjoining landowners.	This option would not sufficiently achieve the maintenance of existing amenity values for adjoining zones as the proposed 600m ² minimum site size is lower than the Havelock North Character Residential Zone that adjoins the urban development area and significantly lower than the Rural Residential Zoned sites in the vicinity. A controlled activity status for subdivision proposals would not be appropriate or sufficient in order to assess and consider the design and layout of subdivision proposals, particularly with a	The 250m ² minimum would provide for an efficient use of land and is likely to more than achieve the yield required to meet the RPS greenfield target and Ministry for the Environment development capacity target of 390-400. The 250m ² would allow for innovation in subdivision design and promote variety in section sizes and housing types within a street. Such flexibility in site size provision could also provide incentives to protect existing mature trees although these may not be able to be managed as effectively under a controlled activity subdivision status.	Low/Moderate Efficiency Rating The option has a low/moderately efficient in that while it has a number of benefits, the costs of this option are matters of significance and are fundamental to purpose and objectives of the Zone.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

			blanket low minimum site size and therefore the potential for adverse effects on amenity and character of the urban development area and surrounding zones are more likely to occur.		
--	--	--	--	--	--

ISSUE 2: The suite of development controls used to maintain and create a high level of residential amenity – option 3 recommended

Option	Method	Effectiveness Rating & Reasons	Costs	Benefits	Efficiency Rating & Reasons
1	Apply the rules and performance standards from the Havelock North Character Residential Zone.	<p>Low Effectiveness Rating</p> <p>Applying the rules and performance standards from the Havelock North Character Zone would be ineffective in achieving the objectives of the Bull Hill neighbourhood in that they would not sufficiently provide for its efficient development. The rules and performance standards of this Zone are not appropriate for this area given that the area does not display the irregular subdivision pattern (that occurs as a result of the change in topography of the Havelock North foothills – the Bull Hill land is predominantly flat apart from the Bull Hill), nor does it display the established garden character and landscape values that characterize this Zone and which the provisions of the Zone seek to retain.</p>	<p>The rules and standards of the Havelock North Character Residential Zone were developed to protect and maintain the established garden character of Havelock North rather than to establish and retain amenity values of a greenfield urban development area. As a result it is likely that this option would have potential costs to the landowners who may wish to alter their dwellings and are unable to meet the performance standards thereby requiring them to lodge a resource consent application.</p> <p>The minimum site size rules evaluated for the Bull Hill neighbourhood are not likely to fit easily within the bulk and location controls of the Character Zone. These provisions are therefore unlikely to work together efficiently or to achieve the amenity outcomes desired by BHO1 and BHO2.</p>	<p>Provides for consistency and continuity with the zone rules of the existing residential area adjoining the Bull hill neighbourhood.</p>	<p>Low Efficiency rating</p> <p>The costs outweigh the benefits as the efficiencies in land development sought to be achieved within this neighbourhood would be undermined. Furthermore this option is not consistent with the placed based foundations of the Proposed District Plan.</p>
2	Apply the rules and performance standards from the Havelock North General Residential Zone.	<p>Moderate Effectiveness Rating</p> <p>While this option would achieve land development efficiency (BHO2) it does not take into account the special character values of the area or those surrounding the Bull Hill neighbourhood and as such would not achieve BHO1. Furthermore it is unlikely to assist in the achieving greater levels of privacy between dwellings and variation in the development of site frontages.</p>	<p>The costs of this option include that these provisions may result in adverse effects on the character and amenity values within or adjoining the neighbourhood. These development controls are likely to result in a uniform approach to development rather than to encourage variety and innovation in development design.</p>	<p>The benefits of this option include that the provisions encourage maximum use of the land</p> <p>There is consistency with these existing zones rules (which are also recommended to apply to the Stapleford Park development)</p>	<p>Low Efficiency Rating</p> <p>The costs of this option on character and amenity values have the potential to have significant impacts and as such this options gains a low rating.</p>
3	Apply rules and performance standards that are tailored to the Bull Hill environment.	<p>Highly Effective</p> <p>This is a true effects based approach that recognises the special character features, the existing topography of the area and the surrounding physical environment. This option encourages innovation and variety in development design and will be effective in achieving a high quality environment given the emphasis on achieving the principles of the NZ urban design protocol.</p> <p>This option is effective in achieving BHO1 and BHO2.</p>	<p>It reduces the flexibility of landowners in undertaking certain activities on their sites without the need for resource consent application.</p>	<p>This option provides the following benefits:</p> <ul style="list-style-type: none"> • recognition of the special character, and amenity values of the area. • certainty that the appropriate level of assessment will be undertaken for any activity that is out of character or scale with the physical environment. 	<p>Highly Efficient</p> <p>The benefits of this option outweigh the costs and this option provides an appropriate way to achieve the objectives of the zone.</p>

ISSUE 3: Retention of existing vegetation which provides character to the area – Option 2 is recommended

Option	Method	Effectiveness Rating & Reasons	Costs	Benefits	Efficiency Rating & Reasons
1	No specific rules or standards relating to the protection of trees	Low Effectiveness Rating This option would allow landowners and developers the ability to remove any and all existing trees within the neighbourhood and therefore would not be effective in retaining existing vegetation that provides character to the area.	This option would have environmental costs resulting from a reduced level of amenity within and surrounding the neighbourhood and a loss of character.	Provides benefits in terms of the flexibility to development sites without restrictions in respect of existing trees and vegetation. No additional costs incurred in respect of resource consent applications	Low Efficiency rating This option is not efficiency as the costs associated with a loss of character and amenity for the surrounding area outweigh the benefits of providing development flexibility.
2	Specifically identify significant stands or groups of trees on the Iona Structure Plan and include policy direction and standards in the specific neighbourhood provisions to retain these.	High Effectiveness Rating Specifically protects and retains the primary Avenue of trees that contributes most to the character of the area while encouraging retention of other mature trees through flexibility in site size and subdivision design.	Costs of consent applications to remove one or more trees identified within the Avenue including any costs associated with specialist reports required to assess significance of trees and the impact of their removal on the special character of the area	Provides certainty to the community that the most significant stand of trees which runs across the development area is retained. Environmental, social and cultural benefits of the retention of existing amenity values associated with the trees Economic benefits of providing this new development area with an already established level of amenity which makes it more attractive to prospective purchasers	High Efficiency Rating The benefits of this option include environmental, economic, social and cultural aspects which clearly outweigh the cost of consent to remove one or more of these trees. As such a high efficiency rating is achieved.
3	Standards and/or rules which ensure Resource Consent and assessment is required when removing trees of a certain size and/or age	High Effectiveness rating This option would be effective in maximizing the protection of existing mature trees however it would also constrain development to an extent that the targets for development yield and capacity set by the RPS and Environment Minister would not be achievable.	Does not promote land use efficiency and undermines achievement of development targets Constrains future site development of residential lots Costs of consent applications to remove trees and costs associated with any specialist reports required to assess significance of trees in terms of size and age	Maximises the protection of existing mature trees Provides certainty to the community that existing trees of a certain height or age will remain.	Low Efficiency Rating This option has a low level of efficiency as the costs associated with its implementation are significant particularly in terms of land use efficiency. These benefits of this option are not sufficient to outweigh the costs.

ISSUE 4: The appropriate provision of a small scale commercial activity that services the proposed residential area – option 3 is recommended

Option	Method	Effectiveness Rating & Reasons	Costs	Benefits	Efficiency Rating & Reasons
1	No specific rules or provision to provide for commercial activity at all	Low Effectiveness Rating This option does not achieve the intent of BHO3 as no residential amenities would be able to establish to help create a sense of community around the neighbourhood reserve area	The costs of this option include: No dairy or amenities would be provided within walking distance of this new urban development area (meaning the potential for a reduction vehicle trips would be lost as residents travel to the nearest amenities located at Palmerston Rd or the Village Centre) The open space reserve area would not benefit from the safety aspects of having an activity on its edge;	Certainty for residents that no commercial activities of any scale or nature would be able to establish.	Low Efficiency rating The costs outweigh the benefits making the efficiency of this option low.
2	Apply a Suburban Commercial Zoning to provide for commercial activities to service the new residential area	Low Effectiveness Rating This option would allow for a significantly greater level of development than option 3 and would therefore not be effective in achieving objectives BH01 or BH03.	The costs of this option include the significant adverse impacts on character and amenity of the neighbourhood and surrounding zones.	Less restrictions on the development of commercial activity No additional costs associated with consent applications	Low Efficiency Rating The costs associated with this option are considerable and would outweigh the benefits completely.
3	Apply a tailored set of rules and performance standards for a specific café / dairy activities of a scale and intensity that complements the character and amenity of the area	High Effectiveness Rating This option appropriately gives effect to objective BHO3. This option also achieves objective BHO1 as it helps to create a sense of character for this new	The costs associated with the policy include the potential yield reduction of 1 residential section to accommodate such an activity (however the option to develop this land for	The benefits of this policy include providing certainty around the location, nature and scale of the café/dairy activity. It also provides a clear statutory direction for any	High Efficiency Rating The costs associated with a reduction in yield in this area can be off-set through the flexibility of the density provisions across the Bull Hill

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

		residential area. It also assist in ensuring that the reserve area and surrounds are a safe environment, particularly after dark, contributing to achieving a high quality residential environment.	residential purposes is also retained within the provisions). There are also costs associated with a perception that such an activity would impact on the existing amenity values of the neighbouring rural residential area as a result of an increase in traffic from out of the area visiting the café or dairy activity. Costs associated with any resource consent application to establish such activities.	potential resource consent applicants. The provision for such an activity contributes to achieving a high quality residential environment in that it activates the edge of the open space reserve and enhances the safety of the area, particularly after dark while retaining the character and amenity of the open space area. Potentially assists in a reduction of vehicle trips given amenities are located within walking distance to the residential area	neighbourhood. In addition those perceived costs associated with the potential for adverse amenity effects of such an activity can be managed through conditions of consent to ensure the amenity of the surrounding existing zones can be maintained. In all aspects the benefits of this option outweigh the costs making it highly efficient.
--	--	---	--	--	--

CONCLUSION:

Taking into account the above analysis, it is considered that the policies, rules and other methods outlined in respect of the Bull Hill Neighbourhood of the Iona Special Character Zone are the most appropriate to achieve the objectives of the neighbourhood and new zone as well as the existing relevant objectives of the Proposed District Plan and the Hawkes Bay Regional Policy Statement.

8.2.3.2 Iona Terraces Neighbourhood

Methods: Rules for the Iona Terraces Neighbourhood

The following rules form the regulatory basis of the Iona Terraces Neighbourhood, although to be fully understood they need to be read in conjunction with the Zone performance standards which set thresholds and parameters which the activities listed below are required to meet. These rules are the mechanism that will implement the objectives and policies for this zone.

RULE TABLE 8.3.3.1 IONA SPECIAL CHARACTER ZONE –BULL HILL AND IONA TERRACES NEIGHBOURHOODS		
RULE	LAND USE ACTIVITIES	ACTIVITY STATUS
ISC1	Residential Activities (except comprehensive residential development.	P
ISC2	Supplementary Residential Buildings.	P
ISC3	Relocated Dwellings	P
ISC4	Home Occupations	P
ISC5	Show Homes	P
ISC6	Temporary Military Training Activity	P
ISC7	Visitor accommodation	P
ISC13	Relocated buildings not meeting one or more of the relevant general or specific performance standards and terms	RD
ISC14	Any permitted activity not meeting one or more of the relevant general or specific performance standards and terms (except activities not complying with performance standard 8.3.5A and 8.3.5B Residential Density and 8.3.6G(a) minimum site size and (e) gross floor area standards for Supplementary Residential Buildings)	RD
ISC15	Supplementary Residential Buildings not meeting the minimum site size or gross floor area standards (8.3.6G(a) and (e).	D
ISC16	Residential Activities not meeting the density standards within the relevant neighbourhood (8.3.5A and 8.3.5B)	D
ISC17	Temporary Events in the Iona Terraces Neighbourhood	D
ISC26	Any activity not otherwise provided for as a permitted, restricted discretionary or discretionary activity	NC

ISSUES

1) The most appropriate minimum site size rules for the Iona Terraces neighbourhood.

2) The development control rules and criteria that apply to the Iona Terraces neighbourhood that are inconsistent with the Bull Hill neighbourhood and the Havelock North Residential zone.

Should the activities provided for in the Iona Terraces neighbourhood have the same activity status as those in the other neighbourhoods in the development or the wider Havelock North Character or General Residential Zones?

3) The ability to create pockets of smaller size lots in the Terraces.

Should provision be made for a limited number of smaller lot sizes within the Terraces?

4) Defining the Iona Terraces boundaries.

Deciding what land to include in the Iona Terraces neighbourhood and what land to leave zoned Rural Residential. Submissions on the draft structure plan were made by a small number of landowners requesting that their land be included in the rezoning and one that it be excluded.

5) The special road reserve features adjacent to Lot 3 DP28810

Should additional setbacks from the road carriageway be provided adjacent to Lot 3 DP 28810?

Issue – Most appropriate minimum site size rules - Option 4 Recommended

Option	Method	Effectiveness Rating & Reasons	Costs	Benefits	Efficiency Rating & Reasons
1	Apply the minimum site size rule of 700m ² from the Havelock North Character Residential Zone.	<p>Low Effectiveness Rating</p> <p>Applying the rules and performance standards from the Havelock North Character Zone would not be effective in that they would not achieve a transition of density from the Bull Hill to the Iona Plateau or retain the special landscape character of the area (ITO1). This option would not achieve the maintenance of amenity values in the adjoining rural residential zones (ITO3) nor the desire for variety in site size and house type (ITO2)</p>	<p>This option would have significant costs associated with the amenity values of the adjoining rural residential zone, and the special character and level of amenity desired to be achieved within the Iona Terraces neighbourhood.</p>	<p>Provides for consistency of site size rules across the neighbourhood and Havelock North Residential Environment</p>	<p>Low Efficiency rating</p> <p>The costs outweigh the benefits as the effects on character and amenity values are likely to be significant given the use of a blanket minimum site size rule.</p>
2	<p>Use of minimum site sizes in specific areas or bands that gradually increase site size as you travel up the Spine Road. Area A – 600m², Area B – 700m², Area C – 900m² and Area D – 1000m².</p> <p>In addition, an allowance for: 1 section within area A shall be nominated for a duplex or comprehensive residential development, 2 sections within area B and 2 sections in</p>	<p>Low effectiveness rating</p> <p>This option will retain existing amenity levels of the adjoining Rural Residential zone through Area D and thereby achieve ITO3. However the segregation of density levels within the terraces neighbourhood may have adverse effects on the special landscape values of the area and create a uniformity to development this not meeting objective ITO1.</p>	<p>The costs of this option include that it segregates density by identifying specific density bands and therefore are unlikely to achieve variety of site size or house type within a street. As such the potential for more uniform subdivision patterns is promoted by these set density areas, even with additional allowance for CRD this is not considered to provide for sufficient variety.</p>	<p>The benefits of this option include:</p> <ul style="list-style-type: none"> Providing for a transition of site sizes as you travel up the main spine road; Encourages a little variety by providing for CRD sites in each area Promotes an efficient use of land; Retains amenity of the adjoining rural residential zone through Area D. 	<p>Moderate efficiency rating</p> <p>The benefits and costs of this option are evenly numbered however, the benefits of the option are not of a sufficient degree to outweigh the costs.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	area C. No comprehensive residential development options to be identified in area D.	While the option seeks to provide variety in house type this is not considered sufficient to provide a mix of lots sizes in any one lane. Therefore not meeting objective ITO2.			
3	Average of 900m ² areas A-C 1000m ² minimum for area D	Moderate Effectiveness rating This option will retain existing amenity levels of the adjoining Rural Residential zone through Area D and thereby achieve ITO3. However such a high average would not provide an efficient use of the land. This options may also not achieve sufficient variety given the high average site size and therefore may only achieve ITO2 to a low level. ITO1 would be achieved through providing for a transition in density.	An average site size of 900m ² would not achieve the efficient use of this land and would likely result in the development capacity for the area to fall short of the required 390-400 dwellings.	Using an average site size of 900m ² will provide a transition between the Bull Hill and Upper Plateau and would appropriate retain the landscape character of the area. An average site size provides more flexibility for land developers and encourages variety however the variety achieved may not be as great given such a high average. The option retains the amenity values of adjoining rural residential via the higher minimum site size of area D	Moderate Efficiency rating This options has significant benefits in terms of the retention of character and amenity levels both within the adjoining the neighbourhood. However the potential for inefficient use of land reduces its efficiency rating.
4	An average site size of 800m ² with a minimum of 600m ² in areas A-C Plus provision for a limited number of smaller sites (for variety) through additional subdivision rules (exceptions to minimum site size) – max 2	High Effectiveness rating This option will enable site size variety while ensuring that an appropriate transitional density is achieved between the Bull Hill and Upper Plateau neighbourhoods that retains character and amenity both within the neighbourhood and adjoining areas while using land efficiently. This option	Costs of this options include the time and cost required for a RDNN subdivision application to assess proposals and ensure site size variety is achieved.	The benefits of this option are that it provides for development at level that is efficient while also being sensitive to the landscape values of the neighbourhood and adjoining lower density Iona Plateau area and Rural Residential Zone. This option encourages variety through an 800m ² average. Variety is also	High Efficiency Rating This option has the greatest level of benefits by comparison with other options with few costs identified.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	<p>sites of between 350m² – 500m² in area A and a max of 3 sites between 350-500m² in each area B and C.</p> <p>An overall maximum total density of 13 dwellings per hectare across Areas A, B and C</p> <p>1000m² minimum for Area D.</p>	<p>assists in achieving the RPS and Ministry targets set for this area.</p> <p>This option is highly effective in achieving objectives ITO1, ITO2 and ITO3.</p>		<p>provided for through the additional provision of a fixed number of site sizes in each area below the 600m² minimum. Together these provisions seek to enable a greater flexibility to achieve variety within each street or lane than the other options.</p>	
5	<p>700m² average site size for identified areas A, B and C on the Iona Structure Plan) with an absolute minimum of 350m² and an allowance for a maximum of 3 sites of between 350m² and 500m² on each side street off the main collector road.</p>	<p>Low Effectiveness Rating.</p> <p>This option achieves ITO2 in terms of its provision for site size variety. However it is not effective in achieving ITO1 or ITO3 – which relate to the maintenance of amenity values and character of the neighbourhood and those lower density zones and areas that surround it.</p>	<p>This costs of this option include that it does not provide a transition area to the adjoining Rural Residential Zone and therefore does not sufficiently address amenity and character effects on this Zone.</p> <p>The 700m² average site size equates to an overall density of 14 dwellings per hectare which is not considered sufficiently different from the Bull Hill minimum of 15 dwellings to create a transition.</p> <p>The minimum site size of 350m² is not considered an appropriate size to maintain the landscape values of the Iona Terraces neighbourhood and would likely have</p>	<p>The benefits of this option are that it achieves variety by using an average site size coupled with the additional provision of a fixed number of smaller sites.</p>	<p>Low Efficiency Rating</p> <p>The costs of this option in terms of character and amenity effects are significant and have resulted in a low rating.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

			significant adverse impacts on the character of the area.		
--	--	--	---	--	--

Issue - Consistency of Development Control Rules- Option 2 Recommended

Option	Method	Effectiveness Rating & Reasons	Costs	Benefits	Efficiency Rating & Reasons
1	Apply the rules and performance standards from either the Bull Hill neighbourhood or the Havelock North Character Residential Zone.	Moderate Effectiveness Rating Applying the rules and performance standards from either the Bull Hill neighbourhood or the Havelock North Character Zone would not be effective in that they would not appropriately recognise the topography of the neighbourhood or the landscape values that are associated with it. Careful consideration should be given to the scale of development in this neighbourhood.	This option would have significant costs on the landscape values of the Iona Terraces. This neighbourhood is much more visible from the Plains and allowing for activities that are of scale unsuited to this environment would come at a high cost to the landscape values and the amenity values of adjoining rural residential properties.	Provides for consistency of rules across the development and/or the Havelock North residential environment	Low Efficiency rating The costs outweigh the benefits as the true effects of activities are not appropriately considered. It is against the placed based foundations of the Proposed District Plan.
2	Apply rules and performance standards that are tailored to the Iona Terraces environment.	Highly Effective This is a true effects based approach that recognises the different physical environments that comprise the area to be rezoned as Iona Residential.	It reduces the flexibility of landowners in undertaking certain activities on their sites without the need for resource consent application.	It provides recognition of the landscape and amenity values of the area. It provides certainty that the appropriate level of assessment will be undertaken for any activity that is out of character or	Highly Efficient The benefits outweigh the costs as this is an effects based approach and is an appropriate way to achieve the objectives of the zone.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

		This option is effective in achieving ITO1, and ITO3		scale with the physical environment.	
--	--	--	--	--------------------------------------	--

Issue - Smaller Lot Sizes within the Terraces- Option 1 Recommended

Option	Method	Effectiveness Rating & Reasons	Costs	Benefits	Efficiency Rating & Reasons
1	<p>Provide for some diversity in the minimum lot sizes throughout each section of the Terraces area of the development.</p> <p>This method introduces the ability to have up to two smaller lots within the centre of the Terraces section of the proposed development with the idea of providing variety in lot sizes and preventing a 'cookie cutter' approach to the subdivision layout.</p>	<p>Moderate/High Effectiveness Rating</p> <p>It is effective in that it will better assist in meeting the Objective ITO2 which is to provide for a diversity of lot sizes and house sizes. It is moderate to high as it could have a minor effect on the aim to transition from smaller to larger lots as the development proceeds up the hill.</p>	<p>The costs associated with this option are those associated with the effects on the amenity of through the visual effects of the cluster of smaller lots within the centre of the Terraces development.</p>	<p>This provision will provide benefit through creating a diverse residential environment by ensuring that lot sizes vary within the sections of the Terraces neighbourhood. It will provide greater choice in housing types.</p>	<p>High Efficiency Rating</p> <p>This method is highly efficient in that the benefits outweigh the costs. It will also assist in meeting the HPUDS density targets for greenfield development.</p>
2	<p>Provide for the same minimum lot sizes throughout each section of the Terraces area of the development.</p>	<p>Moderate/High Effectiveness Rating</p> <p>This option has the same effectiveness rating as Option 1 for reasons that are the opposite of that</p>	<p>The costs of this option are the loss of diversity in the layout and the loss of additional sites within the development</p>	<p>The benefits of this option are the reduction in density within the neighbourhood and the benefits that may accrue to the landscape and amenity values.</p>	<p>Moderate to High Efficiency Rating</p> <p>This option is not as efficient as Option 1 as it does not meet Objective ITO2 to the same degree as the level of diversity</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

		option ie it will better meet the objective of transitioning from smaller sites to larger sites as the development proceeds up the hill but it will not be as effective in meeting objective ITO2.			achieved is lower. The costs outweigh the benefits in this option.
--	--	--	--	--	--

Issue - Defining the Iona Terraces neighbourhood boundary- Option 3 Recommended

Option	Method	Effectiveness Rating & Reasons	Costs	Benefits	Efficiency Rating & Reasons
1	Retain neighbourhood boundary as shown in the Draft Structure Plan.	<p>High Effectiveness Rating</p> <p>This is an appropriate boundary as it is based on landscape advice for a logical boundary that follows the ridgeline and property boundaries. It allows for the development to be hidden from view on Lane Road thereby maintaining the rural residential amenity and</p>	<p>Potential cost to the economic well-being of those land owners who seek to have their properties within the zone.</p> <p>There is a potential cost to the social wellbeing of the landowner who is seeking to have their land excluded.</p> <p>Costs can also arise from the community perceiving that there is no logical</p>	<p>The benefits of this option are that it is a boundary based on strong landscape advice that follows a logical defendable boundary along the ridgeline and therefore will be readily accepted by the community.</p>	<p>Moderate/High Efficiency rating</p> <p>The option is highly efficient in meeting the landscape and amenity objectives. However this must be considered against the effects to the landowners who have made informal submissions on the draft structure plan.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

		landscape values of the Rural Residential zone.	reasoning behind the boundary.		
2	Amend the boundary by including those submitters on Lane Road who sought inclusion.	<p>Moderate/ High effectiveness Rating</p> <p>A number of submitters on Lane Road have sought that their properties or a portion of their properties be included in the new zone, thereby providing for additional development. The landowners have provided a landscape assessment that shows that the amended boundary will not have any adverse effect on the landscape values associated with Lane Road and the Rural Residential zone.</p> <p>This option is not effective in achieving the objective that the development should not access Lane Road.</p>	<p>Costs can arise from the community perceiving that there is no logical reasoning behind the boundary.</p> <p>There could be costs to the amenity of adjoining landowners due to the increased density of development and the greater level of traffic on Lane Road.</p>	Benefits accrue for the landowners and for additional sites able to be created although these are small in number.	<p>Moderate Efficiency Rating</p> <p>This option only provides for one additional site to the landowners involved and it is inefficient to have zone boundaries that cut across property boundaries.</p> <p>The costs of this option outweigh the benefits and therefore it is rated as being only moderately efficient in meeting the objectives.</p>
3	Amend the boundary by excluding the land of the	Moderate/High Effectiveness Rating	As for Option 2 costs can also arise from the community perceiving that	In his submission the Draft Structure Plan the landowner has stated that	High Efficiency Rating

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

	submitter at Lot 3 DP28810 who sought exclusion.	The exclusion of the land from the zone will not undermine the integrity of the zone. However there is a perception issue associated with the gap in the zoning and therefore this option can only be seen as being moderate to highly effective.	there is no logical reasoning behind the boundary. There will also be costs to the landowner in terms of loss of economic potential from his land.	the rezoning will have significant adverse effects on his enjoyment of his property and the amenity that he has created. The benefits will accrue to this landowner only.	The benefits to the landowner are real and the costs also largely fall on the landowner so these are neutral in terms of efficiency. The option is also highly efficient in meeting the landscape and amenity objectives.
--	--	---	---	---	--

Issue- Special setback provisions adjacent to Lot 3 DP 28810 – Option 1 Recommended

Option	Method	Effectiveness Rating & Reasons	Costs	Benefits	Efficiency Rating & Reasons
1	Provide additional road carriageway setbacks from Lot 3 DP 28810. The owner of Lot 3 DP28810 sought through the informal submission on the Draft Structure Plan to have his property excluded from the rezoning and for mitigation measures from the new access road to the Upper Plateau.	High Effectiveness Rating The owner of Lot 3 DP 28810 is undoubtedly the property owner most affected by the construction of the new spine road and the owner has sought to have his property remain in the Rural Residential zone.	There will be financial costs to the developer in setting aside a greater area of road reserve to be vested in the Council.	The benefits will principally accrue to the landowner of Lot 3 DP 28810 in providing higher level of amenity for the property. There will be benefits for the general amenity of the Terraces neighbourhood through the larger road reserve and the avenue of trees that is to be planted within it.	Moderate to High Efficiency Rating The benefits outweigh the costs in terms of meeting Objectives ITO1 and ITO3. However it does not fully meet Policy ITP2 as it goes beyond the standard for rural roads and therefore may not be considered an efficient use of the land. For

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

		The option is effective as it will provide a buffer for the extent of the boundary, will assist in protecting the trees planted on the property owners boundary and will reduce the potential glare from car lights.			this reason it is considered to be moderate to high in its efficiency.
2	Provide standard road reserve dimensions adjacent to Lot 3 DP28810	<p>Moderate Effectiveness Rating</p> <p>The standard rural road formation is not considered by the landowner of Lot 3 DP28810 to appropriately mitigate the effect of the residential development on the property boundary. The property owner has also sought that the zoning of the property remain in the Rural Residential zone. For this reason this option can only be considered as being moderately effective in meeting the objectives ITO1 and ITO3.</p>	The costs of this option will be related to the loss of amenity felt by the owner of Lot 3 DP28810.	The benefits of this option will be in the consistent application of the roading construction standards.	<p>Moderate to High Efficiency Rating</p> <p>This option would normally be highly efficient in meeting the Objectives ITO1 and ITO3 as the road standard adopted is the one that applies to a rural environment. However due to the alignment of the proposed road on the structure plan the landowner has submitted that the effects on his property will be more than minor. For this reason the efficiency is reduced to a moderate to high rating.</p>

8.2.4 SECTION 32 EVALUATION IONA PLATEAU NEIGHBOURHOOD

8.2.4.2 RULES FOR THE UPPER PLATEAU NEIGHBOURHOOD

The following rules form the regulatory basis of the Upper Plateau Neighbourhood (an overlay of the Iona Special Character Zone), although to be fully understood they need to be read in conjunction with the Zone performance standards which set thresholds and parameters which the activities listed below are required to meet. These rules are the mechanism that will implement the objectives and policies for this zone.

RULE TABLE 8.3.3.2 IONA SPECIAL CHARACTER ZONE –THE IONA PLATEAU NEIGHBOURHOOD OVERLAY (REFER APPENDIX 13A FIGURE 1 OF THE PDP)		
RULE	LAND USE ACTIVITIES	ACTIVITY STATUS
IPN1	Residential Activities within the identified building platform.	P
IPN2	Home Occupations within the identified building platform and within the Principal Residential Building	P
IPN3	Supplementary Residential Buildings within the identified building platform.	P
IPN4	Visitor accommodation within the identified building platform	P
IPN5	Relocated buildings within the identified building platform	P
IPN6	Temporary Military Training Activity	P
IPN7	Relocated buildings not meeting one or more of the relevant general or specific performance standards and terms	RD
IPN8	Any permitted activity not meeting one or more of the relevant general or specific performance standards and terms (except permitted activities under Rules IPN1,2,3 and 4 not complying with the following standards Height, Density, Identified Building platform and Total Building area)	D
IPN9	Temporary Events	D
IPN11	Permitted Activities under Rules IPN1, 2, 3 and 4 not complying with the following standards Height, Density, Identified Building Platform or Total Building Area.	NC
IPN12	Buildings Accessory to Supplementary Residential Buildings	NC
IPN13	Any activity not otherwise provided for as a permitted, restricted discretionary or discretionary activity	NC

8.3 ISSUES

ISSUE	EXPLANATION
The suite of development controls used to retain landscape character and compatibility with the adjoining Rural Residential Zone	<p>This area has previously been identified in the District Plan as a Rural Landscape Character Area (RLCA6). While no rules specifically apply to this area, it is intended that that a design guide (non-regulatory method) be used to inform development proposals. The design guideline illustrates possible design solutions for avoiding or mitigating adverse visual and landscape effects associated with buildings, earthworks and subdivision. The Plan identifies the following for RLCA6:</p> <ul style="list-style-type: none"> • <i>Retention of vegetation cover on the foothills particularly around the small valleys extending down the slopes; and</i> • <i>Management of built form, bulk, scale and colour that is in keeping with the natural patterns of the landscape³².</i> <p>While the area is no longer proposed to be rural in nature, and this method therefore no longer apply, it is considered that these qualities are still important. The desire to retain many of the existing landscape features that the local community identify with and value, has come through both strongly in the work undertaken by the Working Group and in community consultation. These landscape qualities are one of the reasons people choose to live in the adjoining Rural Residential Zone, which borders the plateau on three of its four boundaries. Utilisation of these features will contribute to a high amenity urban environment. There is therefore a need to balance development against the above.</p>

Issue 1: The suite of development controls used to retain landscape character and compatibility with the adjoining Rural Residential Zone						
Preferred Option: 3 (Adopt the Masterplan and new suite of provisions which are tailored to the Iona Plateau environment)						
Option	Method	Effectiveness Rating & Reasons	Reason for Effectiveness Ratings	Costs	Benefits	Efficiency Rating & Reasons
1	Status Quo – Retention of the existing Rural Residential Zone (RRZ) Provisions	Low	Retention of the RRZ would conflict with the Hawkes Bay Regional Policy Statement (the higher order planning document) and affect the implementation of the Districts Regional Growth Strategy. Growth intervention is seen as necessary to recognise the actual or potential effects that urban growth can have on people, communities and the natural environment. It would also fail to meet optimal site yield intensification objectives, resulting in an inefficient use of the identified land resource. Noting that this needs to be balanced against the maximum natural capacity within the constraints that exist, which is discussed in more detail below.	It will not result in optimal site yield intensification objectives for this RPS identified site. Not implementing, residential settlement patterns in accordance with the RPS, will result in piecemeal planning and incremental development occurring on the versatile soils of the Heretaunga Plains.	A roll over of the operative RRZ will be simple to administer and familiar to plan users.	Low Efficiency Rating The costs outweigh the benefits, as retaining the RRZ will be inconsistent with the RPS objective of seeking urban intensification within existing Rural Residential Zone boundaries.
2	Adopt the Provisions from the Adjoining Iona Terraces Neighbourhood	Low	Applying the rules and performance standards from the adjoining Iona Terraces Neighbourhood would not be effective in that they would not appropriately recognise the topography of the neighbourhood, the	This option would have significant costs on the landscape and amenity values of the Iona Plateau Neighbourhood This neighbourhood has a wide viewing	Provides for a consistency of rules with other neighbourhoods in the Iona Special Character Zone.	Low Efficiency Rating The costs of this option outweigh the benefits, as it does not recognise the physical environment.

³² Proposed Hastings District Plan, Appendix 45

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

			<p>landscape and amenity values that are associated with it or adjoining Rural Residential zoned properties.</p> <p>Careful consideration should be given to the scale of development in this neighbourhood, which is why the engagement of a landscape Architect was a key contributor to the work undertaken by the Iona Working Group.</p>	<p>audience and allowing for activities that are of scale unsuited to this environment would come at a high cost to the landscape values and the amenity values of adjoining rural residential properties. This option does not recognise the place based approach adopted in the review of the Proposed District Plan.</p>		
3	Adopt the Masterplan and new suite of provisions which are tailored to the Iona Plateau environment	High	<p>This is a true effects based approach that recognises the physical environment and landscape qualities, and meets Objective IPO1 and 2:</p> <p><i>Objective IPO1: A high standard of residential amenity within the Iona Plateau neighbourhood; and</i></p> <p><i>Objective IPO2: The existing landscape character and amenity values of the adjoining Rural Residential Zone are retained and maintained.</i></p>	<p>Landowners will be subject to more regulation and potentially greater consenting costs compared to some of the other alternatives.</p> <p>Developments will need to be carefully thought through to ensure it is in accordance with the objectives of the zone and meets the performance standards (could equally be seen as a benefit as results as higher quality developments).</p>	<ul style="list-style-type: none"> • Provides recognition of the landscape and amenity values of the area which has a wide viewing audience; • Provides the community with a diversity of housing choice; • Gives effect to the higher order District Plan Objectives and Policies; • Creation of a high quality residential development which has a high standard of residential amenity that takes into account values of existing adjoining property owners; • It provides certainty around the level of development that is appropriate and that any activity that is out of character or scale with the physical environment will be subject to resource consent; • Gives effect to the Regional Policy Statement. 	<p>High Efficiency Rating</p> <p>The benefits outweigh the costs, as it provides recognition of amenity and landscape values and is an appropriate way to achieve the objectives of the neighbourhood and zone.</p>
4	Total of twenty (20) lots which could occur anywhere within the Iona Plateau Neighbourhood plus adopt the new suite of provisions	Low to Moderate	<p>This option may not appropriately recognise the topography of the neighbourhood, the landscape and amenity values that are associated with it or adjoining Rural Residential zoned properties.</p> <p>It has been identified that careful consideration should be given to the scale of development in this neighbourhood, which is more difficult under this option.</p>	<p>Effects are more difficult to manage and do not give adjoining property owners within the adjoining Rural Residential Zone the same level of certainty around where development might occur in the plateau area.</p>	<ul style="list-style-type: none"> • May provide some recognition of the landscape and amenity values of the area which has a wide viewing audience; • Provides the community with a diversity of housing choice; and • Might give effect to the higher order District Plan Objectives and Policies. 	<p>Low to Moderate Efficiency Rating</p> <p>This option does not provide the best means of achieving recognition of amenity and landscape values and the objectives of the neighbourhood and zone.</p>

8.3.1 METHODS: RULES FOR THE BREADALBANE AVENUE SPECIAL CHARACTER AREA

The Breadalbane Special Character Area will be zoned Havelock North Character Residential Zone, with an overlay for the special character area. The following rules form the regulatory basis of the Havelock North Character Residential Zone, although to be fully understood they need to be read in conjunction with the Zone performance standards which set thresholds and parameters which the activities listed below are required to meet. These rules are the mechanism that will implement the objectives and policies for this zone.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

RULE TABLE 8.2.4.2 - HAVELOCK NORTH CHARACTER RESIDENTIAL ZONE		
RULE	LAND USE ACTIVITIES	ACTIVITY STATUS
HNCR1	Residential Activities (<u>EXCEPT</u> construction of new buildings in the Toop Street Special Character Area (in which case Rule HNCR8 shall apply) and Comprehensive Residential Development)	P
HNCR2	Home Occupations	P
HNCR3	Temporary Events	P
HNCR4	Scheduled Activities – any activity listed in Appendix 26 in respect of the stated site and which complies with all relevant District Wide Activity rules	P
HNCR5	Non-Residential Care Facilities	P
HNCR6	Visitor accommodation for up to 5 people	P
HNCR7	Recreation Activity that occurs on reserves vested the Reserves Act 1977.	P
HNCR8	Any building ancillary to a Recreation Activity on reserves vested under the Reserves Act 1977 with a maximum gross floor area of 50m ²	P
HNCR9	Existing Recreation Activity including extensions and alterations not exceeding 15% of the gross floor area, and / or not exceeding 15% of site, as at 12/09/2015	P
HNCR10	Relocated Buildings <u>EXCEPT</u> in the Toop Street Special Character Area (Appendix 37).	C
HNCR11	Construction of new buildings and additions that exceed 20m ² in area in the Toop Street Special Character Area (Appendix 37).	RDNN
HNRC12	Relocated Buildings in the Toop Street Special Character Area (Appendix 37)	RDNN
HNRC13	Any building ancillary to a Recreation Activity on reserves vested under the Reserves Act 1977 with a gross floor area greater than 50m ²	RDNN
HNRC14	The alteration of existing Recreation Activity exceeding 15% of the gross floor area, and / or exceeding 15% of the site, as at 12/09/2015	RD
HNCR15	Homes for the Aged	RD
HNCR16	Any Permitted or Controlled Activity not meeting one or more of the General Performance Standards and Terms in Section 8.2.5 <u>EXCEPT</u> activities not complying with General Performance Standard 8.2.5A (Density).	RD
HNCR17	Emergency Service Facilities	RD
HNCR13	Early Childhood Centres	D
HNCR18	Places of Assembly	D

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

RULE TABLE 8.2.4.2 - HAVELOCK NORTH CHARACTER RESIDENTIAL ZONE		
RULE	LAND USE ACTIVITIES	ACTIVITY STATUS
HNCR19	Educational Facilities (<u>EXCEPT</u> for those existing Educational Facilities listed in Appendix 26)	D
HNCR20	Health Care Services	D
HNCR21	Any Permitted or Controlled Activity not meeting one or more of the relevant Specific Performance Standards and Terms in Section 8.2.6 <u>EXCEPT</u> Supplementary residential buildings not complying with Specific Performance Standard 8.2.6D (b).	D
HNCR22	Residential Activities not meeting General Performance Standard 8.2.5A (Density).	D
HNCR23	Supplementary Residential Buildings not complying with Specific Performance Standard 8.2.6D (b).	NC
HNCR24	Any activity which is not provided for as a Permitted, Controlled, Restricted Discretionary, or Discretionary Activity	NC

8.3.1.1 Key Issues

From the consultation and information gathered from the issues and options paper, key issues were identified. They were:

1. Minimum Site Size
2. Heritage Protection of John Scott designed dwelling at 71 Breadalbane Avenue
3. Protection of existing mature trees

The explanations of these issues are as follows:

Key Issue	Explanation
1.	Through consultation, site size has been one of the significant issues that has been discussed with the landowners. There has been a range of thoughts with regards to minimum site size, with some landowners wanting greater yield, and others wanting greater levels of protection of amenity which could be achieved through less dense development. Another consideration with site size is the potential for reverse sensitivity effects from the surrounding rural residential sites, and whether there is a need to create a transition Zone into the Rural Residential.
2.	An original John Scott designed dwelling is located within the property of 71 Breadalbane Avenue. John Scott is a celebrated architect within the Hawkes Bay region, and investigations should be undertaken for protecting prominent examples of his unique architectural buildings when the opportunity arises. However due to the location of the dwelling in the centre of the site, protecting the dwelling will reduce the efficient use of the site for infill development. Therefore there is an issue surrounding whether the building should be protected from future removal and redevelopment versus the need to provide for additional dwellings in the Breadalbane Special Character Area.
3.	One of the key characteristics of the Breadalbane Avenue Neighbourhood is the presence of a number of existing large and mature trees, and the associated birdlife that is present. One of the issues when developing the Breadalbane Special Character Area related to the most efficient and effective ways to protect the existing Flora, while still allowing for reasonable flexibility for landowners developing their sites.

ISSUE 1 : Minimum Site Size

Preferred Option – 3

Option Method	Effectiveness rating	Reason for Effectiveness Rating	Costs	Benefits	Efficiency rating	Why Efficiency Rating?
<p>1 ADOPT MINIMUM RESIDENTIAL ALLOTMENTS OF 350M²</p>	<p>Medium</p>	<p>This minimum site size would have medium effectiveness the purpose of the proposal as it would allow for the greatest level of density within the Breadalbane area. There are concerns that this level density of development could be sustainably serviced. The proposal would be less effective in achieving the existing Objectives of the Havelock Residential Environment Section of the District Plan, particularly Objective HNRO1, which requires development to be consistent with other residential areas within Havelock North. While there are 350m² sites within the Havelock North Residential Area, the immediate surrounding property sizes are generally larger.</p>	<p>Environmental – a minimum site size of this small has the potential to severely impact the existing amenity of the Breadalbane Area. The existing Breadalbane Area is characterised as being haphazardly designed, with large open spaces and numerous trees. Having a small minimum site size, would likely mean the need to remove much of the existing Flora to achieve density. It would also likely result in a more uniformed nature of development, losing the haphazard feel.</p> <p>Environmental – the General Residential Zone planning provisions would not encourage the retention of the special characteristics and features of this area that are highly valued by residents and the community in general.</p> <p>Environmental – Potential for reverse sensitivity effects as there would be reduced setbacks to existing Lane Road Rural Residential area.</p> <p>Economic – Need for greater level of road upgrades and treatments for both Breadalbane Ave and the Intersection within Iona Road</p> <p>Economic – To achieve this density of development, there would not to be a high level of infrastructure required to service the site, particularly for stormwater and sewer. The cost of installing this level of service would be prohibitive to the development of the Breadalbane area.</p> <p>Social / cultural – conventional subdivision patterns are likely to result from these planning provisions and as such uniform development of single family houses on a site would follow. The objective of creating a mixed</p>	<p>Environmental – would ensure the maximum yield of allotments could be achieved for the Breadalbane. This is consistent with HPUDs requirements in achieving a high level of development when additional land is rezoned.</p> <p>Economic – Allow for landowners to realise a higher level of profitability from their sites by achieving greater levels of yield</p> <p>Economic – growth and employment potential for the development and building sectors; economic benefits for landowners that elect to develop; additional customer base for local suburban commercial shops and amenities; increased rating base.</p>	<p>Medium/Low</p>	<p>While maximum yield has some benefits, the loss of amenity and difficulty servicing small sites mean efficiency of development of this intensity is severely reduced.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

			community with a variety of section sizes and house types would not be met under these zoning provisions.			
2 ADOPT MINIMUM RESIDENTIAL ALLOTMENTS OF 700M ²	High	Minimum site sizes of 700m ² would be highly effective in achieving the purpose of the proposal as it would allow for the intensification of the existing Breadalbane area while also allowing for site sizes which can be appropriately serviced for stormwater. The proposal would be effective in being consistent with the relevant Objectives of the Plan as it is consistent with site sizes of the surrounding area and it can be appropriately serviced.	<p>Economic – Would reduce the yield achievable from the Breadalbane area which is not as efficient use of the land resource.</p> <p>Social / cultural – Without putting specific rules relating to the protection of existing mature trees, it is likely that a 700m² site size would still result in a number of the larger mature trees needing to be removed or modified to accommodate site boundary and building locations.</p> <p>Environmental – 700m² site sizes would limit the opportunity to create variation in setbacks for new dwellings, as developers would still be looking to achieve efficiency in site design, similar to what happens in other New Urban Development Areas.</p> <p>Economic – It has been indicated that 700m² site sizes would still be difficult to achieve appropriate stormwater servicing solutions. Smaller sites with larger amounts of hardstand will have difficulty retaining all stormwater onsite.</p> <p>Social/Cultural – Likely require some treatments to existing Breadalbane Ave roading as existing character would not be safe for a potential yield of between 50 and 60 dwellings.</p>	<p>Environmental – provides a level of certainty and comfort for existing residents adjoining or neighbouring the rezoning area in terms of the type of development to expect. More likely to retain some of the existing mature trees that are valued by the community because of the larger site sizes.</p> <p>Environmental – Retention of some of the existing characteristics and amenity of the Breadalbane area.</p> <p>Economic – growth and employment potential for the development and building sectors; economic benefits for landowners that elect to develop; additional customer base for local suburban commercial shops and amenities; increased rating base.</p>	Medium/High	Will not achieve the maximum opportunity of site yield, but will protect many of the existing characteristics, and will be more consistent with the surrounding area characteristics. There is still likely to be potential for removal of mature trees and servicing constraints for stormwater would still occur at this site size.
3 ADOPT 1000M ² MINIMUM SITE SIZE	High	A larger minimum allotment of 1000m ² would also be highly effective in achieving the purpose of the proposal as it will still allow for intensification while ensuring that amenity can be maintained. It will also ensure that sites can be appropriately serviced for water, stormwater and wastewater. It will also be highly effective in being consistent with the existing Objectives	<p>Economic – Put a greater reduction in yield for the Breadalbane area, reducing the amount of practicably attainable residential units to approximately 30 – 40 dwellings.</p> <p>Environmental – Would likely still be a need to remove some of the larger mature trees where they will be prohibitive to development.</p>	<p>Economic – A 1000m² site size would provide area onsite to provide for stormwater servicing solutions. It would also reduce the pressure on wastewater requirements on the network.</p> <p>Environmental – Provide for opportunity to protect existing flora through the provision of large site sizes, which will allow flexibility in boundary and dwelling</p>	Medium High	1000m ² minimum site sizes would further reduce the amount of additional sites that could be obtained from the Breadalbane area, but would help ensure that an open, spacious and less uniform development can be created, which can be appropriately serviced and existing Flora can be retained.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

		within the Plan as it will allow for development which is consistent with the surrounding properties, as well as allowing for a transition to the surrounding Rural Residential Zone.	Environmental – Potential that the character of the Breadalbane area will still be altered through the addition of approximately 30 additional dwellings within the area.	location when developing around mature trees and other plant life. Social/Cultural – Reduction in pressures on the existing Breadalbane Ave road. Allowing some rural treatments to continue, and a live and play type atmosphere to be encouraged. Environmental – Ensures an open environment for residents with the opportunity to provide large boundary setbacks, and reducing domination of buildings on the environment. Also allows for larger setback to existing Rural Residential Zone to reduce reverse sensitivity.		
4 LOW DENSITY RESIDENTIAL WITH MINIMUM SITE SIZE OF GREATER THAN 1000M ²	Low	A minimum site size of greater than 1000m ² would be less effective in achieving the purpose of the proposal, particularly the larger the sites become, as there will be less ‘yield’ to be gained and thus not achieving the opportunity for a reasonably number of new allotments from the rezoning. However, it would be able to be appropriately serviced, and maintain a high level of amenity. It would still be consistent in achieving the relevant objectives of the plan, as although it would less compatible with surrounding residential zones, it would still be consistent with the site sizes of the Rural Residential Area. It would also meet objectives around the maintenance of existing character and servicing.	Economic – Largely reduced number of sites able to be developed. Further reductions would also be created by the existing site sizes, as existing boundaries would restrict the ability to create multiple sites. Environmental – Would reduce future productivity of land without creating additional dwellings to meet market demand. Social/Cultural – Would not create meaningful levels of development to meet high residential demand in the District.	Economic – A 1000m ² site size would provide area onsite to provide for stormwater servicing solutions. It would also reduce the pressure on wastewater requirements on the network. Environmental – Provide for opportunity to protect existing flora through the provision of large site sizes, which will allow flexibility in boundary and dwelling location when developing around mature trees and other plant life. Social/Cultural – Reduction in pressures on the existing Breadalbane Ave road. Allowing some rural treatments to continue, and a live and play type atmosphere to be encouraged. Environmental – Ensures an open environment for residents with the opportunity to provide large boundary setbacks, and reducing domination of buildings on the environment. Also allows for larger setback to existing Rural Residential Zone to reduce reverse sensitivity.	Medium/Low	While a large, low density residential site size would result in a greater level of amenity and protection of existing characteristics of the area. It is not considered it would provide enough residential sites to meet HPUDs requirements, nor would it satisfactorily address residential demand within the District.

CONCLUSION:

While both Options 2 and 3 are both appropriate and reasonably efficient. It is considered that Option 3 provides greater balance in protecting the existing characteristics of the Breadalbane Special Character Area while also allowing for a reasonable level of development which would be in line with HPUDs when considering the remainder of the Iona development.

Preferred Option – 3

Option Method	Effectiveness rating	Reason for Effectiveness Rating	Costs	Benefits	Efficiency rating	Why Efficiency Rating?
1. DO NOTHING	Low/Medium	<p>By not protecting the existing dwelling it would allow for maximum flexibility for the property owner as to what they do on their land. The owners would have the ability to do internal and external alterations to the dwelling. There would also be the opportunity to demolish the dwelling if desired. There would be no requirement for outside input.</p> <p>This would be effective in achieving the overall purpose of the proposal as it would allow maximum opportunity for additional dwellings, but would be less effective in achieving Objectives HO1 and HO2 of the Proposed Plan, although this is mitigated by the fact that this building has not been deemed worthy of protection in the past.</p>	<p>Social/Cultural – Risk of not protecting the existing dwelling is that the existing owner or future developers may demolish the existing dwelling, in significantly alter the existing dwelling, thus loses its heritage value to the District. This risk is increased given the dwellings position on the existing site does increase difficulties in developing the site.</p> <p>Environmental – The location and design of existing buildings is one of the defining characteristics of the Breadalbane Ave neighbourhood. Furthermore, the John Scott building was located in the location of the original Chamber’s homestead. By continuing to not protect the John Scott building, there is potential that the most significant building within the environment may be removed.</p>	<p>Economic – Flexibility in developing existing site. Removal or relocation of existing dwelling will improve functionality of subdivision design.</p> <p>Environmental – Potential for a more comprehensive site design which could create better amenity outcomes if dwelling was removed or relocated.</p> <p>Social /Cultural – Greater flexibility for landowners wishing to undertaking alterations to existing dwelling.</p>	Medium	<p>Would allow maximum flexibility for owners wanting to further develop their site, but would create potential for a building with significant heritage value to the Hawkes Bay Region to be removed.</p>
2 CATEGORY I PROTECTION	Low	<p>Category I protection is essential for the most significant of Heritage buildings within the District. While the John Scott dwelling is considered to be of heritage value, it is not thought to be ‘places of special or outstanding historical or cultural heritage significance or value’. Therefore giving the dwelling Category I protection would not be effective in achieving the purpose of the proposal as it may limit the opportunity to develop land or achieve the relevant objectives of the Proposed Plan.</p>	<p>Social / Cultural – Existing and future owners will be severely restricted on what they could do with the property, including not being able to undertake internal or external renovations without consent.</p> <p>Economic – Reduced flexibility in developing 71 Breadalbane Avenue further as location of dwelling could not be altered, meaning site cannot be subdivided as efficiently.</p>	<p>Social/Cultural – Maximum protection of a building deemed to have heritage value</p> <p>Environmental – Will mean the site of the existing Homestead and subsequent John Scott building would be unlikely to be removed from the development area for a prolonged period of time.</p>	Low	<p>It is considered that protection of the heritage value of the building can still be attained through giving it a category II status, however this would reduce the restrictions that landowners can do within the property, which should not be impinged as a result of the overall rezoning.</p>
3 CHARACTER RESIDENTIAL ZONING WITH SPECIAL CHARACTER OVERLAY	Medium	<p>Category II protection is afforded to buildings which are ‘places of historical or cultural heritage significance or value’. It is considered that the John Scott dwelling would fall into this category. Category II protection would ensure consent would be required for many alterations, however Consent status is less restrictive than Category I protection. It is considered that</p>	<p>Economic – Reduced flexibility in developing 71 Breadalbane Avenue further as location of dwelling could not be altered, meaning site cannot be subdivided as efficiently.</p> <p>Social/Cultural – Restrictions in the ability to undertake external alterations on the dwelling as well as establishing new buildings within 50m of the Heritage building. Any alteration or new building would require a Resource Consent.</p>	<p>Social/Cultural – Protects from the removal or demolition of the John Scott dwelling.</p> <p>Economic – Allows for property owners to undertake internal alterations without Consent, allowing greater flexibility in use while still protecting the dwelling.</p>	Medium	<p>Protection of the John Scott dwelling at 71 Breadalbane Ave will create reduction of flexibility in the opportunity to create maximum yield from the site, particularly as the dwelling is in the centre of the site. However the protection of the dwelling will lead to the retention of some of the existing architectural characteristics and history of the Breadalbane area, which is a critical aspect of the development in this area.</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

		category II protection would be effective in achieving Objectives HO1 and HO2 in that it would protect a significant heritage building, but be less effective in achieving the purpose of the proposal, as it will restrict opportunity to develop the sites for additional dwellings				
--	--	---	--	--	--	--

CONCLUSION:
Options 1 and 3 have the same level of effectiveness and efficiency, however for different reasons (Option 1 promotes flexibility, Option 3 promotes amenity values). However it is considered that Outcome 3 is still most appropriate as it will result in the protection of a significant heritage building within the District, while still affording landowners flexibility for additional development of their site.

Preferred Option – 2

Option Method	Effectiveness rating	Reason for Effectiveness Rating	Costs	Benefits	Efficiency rating	Why Efficiency Rating?
1. No specific rules or standards relating to the protection of trees	Medium	<p>Would be effective in allowing for property owners to develop their sites without any restriction, but would provide no incentive for the retention of existing trees, which could dramatically alter the existing characteristics of the Breadalbane Special Character Area.</p> <p>This would be effective in achieving the overall purpose of the proposal as it would allow maximum opportunity for additional dwellings, but would be less effective in achieving Objective HNSMAO6 as it would not reflect the character of the area.</p>	<p>Social/Cultural – Reduced level of amenity by the removal of existing trees. Has potential to reduce liveability for the development</p> <p>Environmental – Potential in loss of existing character for the overall development. Potential for loss of birdlife with removal of trees.</p> <p>Economic – Potential for decreases in property values with loss of large and mature trees.</p>	<p>Economic – Flexibility in developing sites. Retention of existing trees will make site shape and building location difficult.</p> <p>Economic – Reduced cost in consenting requirements.</p>	Medium	<p>Would allow maximum flexibility for owners wanting to further develop their site, but would reduce the existing characteristic of the Breadalbane Special Character Area and has the potential to reduce the amenity values of the neighbourhood.</p>
2 No specific rules or standards, but Policy direction allowing for flexibility in boundary and building location if mature trees are retained.	Medium /High	<p>Encouragement of protection of existing trees, through the creation of Policy that allows for flexibility on lot development would be effective in allowing landowners to develop their sites, while still encouraging the retention of trees where they may become obtrusive to efficiency of design. However some of the effectiveness is lost in that property owners would not be enforced to retain trees, only given greater opportunity to do so.</p> <p>This would be effective in achieving the overall purpose of the proposal as it would allow maximum opportunity for additional dwellings, and would be effective in achieving Objective HNSMAO6 as it would not reflect the character of the area.</p>	<p>Social / Cultural – No specific rules protecting the existing trees may mean that there is a loss of amenity through the reduction of trees, though the potential of this happening will be reduced through flexibility of Policy direction.</p> <p>Environmental – Potential loss of Character through the removal of existing trees.</p> <p>Economic – Potential for decreases in property values with loss of large and mature trees.</p>	<p>Environmental – Encourages protection of existing mature trees by allowing landowners to develop sites around them, and which can incorporate them into the development.</p> <p>Economic – Allows for flexibility in site layout in design by allowing landowners to reduce site sizes when necessary to protect an existing trees, but also permits a tree to be removed when overly restrictive.</p> <p>Social/Cultural – Has potential to allow for a greater level of trees to be retained by allowing flexible site sizes where trees are obtrusive.</p>	High	<p>The inclusion of Policy direction allowing for flexibility of lot design and building location will mean that landowners are encouraged to retain existing trees, as it will allow for greater flexibility as to how they design their developments. Those will increase efficiency by allowing for a greater number of allotments, whilst not restricting how landowners develop their sites.</p>
3 Standards and/or rules which ensure Resource Consent and assessment is required when removing trees of a certain size and/or age	Medium	<p>This Option will be effective in ensuring that the existing character of the neighbourhood is retained through maximum protection of existing trees, but will not be effective in providing for additional residential sections, as some of the larger trees will dramatically affect the usability of</p>	<p>Economic – High potential that sites will be lost through the need to accommodate existing trees. Some of the driplines of trees cover over 100m² of ground area.</p> <p>Economic – Additional costs of consents when needing to undertake building or earthworks within the driplines of existing trees.</p>	<p>Economic – May increase property value as buyers will be ensured that the existing trees within the Breadalbane Special Character Area will be retained.</p> <p>Environment – Ensures that existing tree life and associated birdlife will be retained</p> <p>Social/Cultural – Retention of existing characteristics with in the Breadalbane</p>	Low	<p>While the protection of the existing characteristics and some of the existing amenity of the Breadalbane Special Character Area is considered vitally important to the viability of the zone, the potential reduction of the number of allotments that may be created through the protection of existing trees would be highly inefficient in achieving the purpose of the proposal of addition residential development. Furthermore there is likely</p>

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

		sites for subdivision and residential purposes.	Environmental – Difficulty in defining what is a mature or large tree, eg what should be protected and what should not. Potential to lead to issues regarding what is significant enough to be retained and what is not.	Special Character Area which ensures a high level of amenity will be retained.		to be complexity as to which trees deserve protection and which could be removed.
<p>CONCLUSION: Options 2 will provide for suitable levels of flexibility in ensuring the site development is not overly restricted, while also encouraging the retention of existing trees through Policy direction which allows for lot flexibility where developments retain existing trees.</p>						

8.4 Stapleford Park Development Rezoning – Option Evaluation

Issue - Defining the Zoning of the Stapleford Park Development - Option 3 Recommended

Option	Method	Effectiveness Rating & Reasons	Costs	Benefits	Efficiency Rating & Reasons
1	Retain Havelock North Character Residential zoning as shown in the Proposed District Plan	<p>Low Effectiveness Rating</p> <p>The Havelock North Character Residential Zone is characterised by a subdivision pattern which is less regular when compared with the General residential zone as a result of change in the topography on the Havelock North foothills. This creates a range of lot sizes and special landscape values. The rules and performance standards that sit with this zone recognise the generous sites sizes and protect the higher level of amenity that applies to the zone. Minimum site sizes are 700m² within the zone and the performance standards that apply to buildings such as density, coverage and building setbacks are more restrictive than those of the General residential zone.</p> <p>Stapleford Park was developed between 2005 and 2007 with the majority of the site sizes falling below 700m² in area. It is therefore not effective to apply a zoning that results in the existing development being non-complying with the rules.</p>	Potential cost to the landowners who may wish to alter their dwellings and are unable to meet the performance standards thereby requiring them to lodge a resource consent application.	The benefits of this option are that it provides continuity with the existing established zone.	<p>Low Efficiency rating</p> <p>This option has a low level of efficiency in meeting Objective HNRO7 as the Stapleford Park development does not have the special amenity and landscape values that apply elsewhere in the Havelock North Character Residential Zone.</p> <p>The costs outweigh the benefits in this option and therefore it is not efficient in meeting the objective.</p>
2	Amend the zoning to be consistent with that of the adjoining Bull Hill neighbourhood.	<p>Low Effectiveness Rating</p> <p>As set out above the Stapleford Park area is an established development that was based upon the rules of the General Residential Zone in the Operative District Plan.</p> <p>The Bull Hill zoning is a place based set of provisions that recognise the particular characteristics of the land and aim to achieve the objectives set by the Iona Working Group in its design led process. It also seeks to meet density levels set by the Heretaunga Plains Urban development Strategy and implemented by the RPS for new greenfield development. The option of adopting the Bull Hill neighbourhood zone would not therefore be effective in meeting the objectives of the Bull Hill neighbourhood.</p>	Costs could arise from the community perceiving that there is no logical reasoning for the zoning applying when there is not the ability to achieve the objectives or a number of the outcomes sought.	Consistency of rules with the adjoining area.	<p>Low Efficiency Rating</p> <p>The costs of this option outweigh the benefits and the objectives associated with the Bull Hill neighbourhood have been design led. This process did not take into account the Stapleford Park development therefore it is rated as having a low level of efficiency in meeting the objectives.</p>
3	Amend the Zoning to the Havelock North General Residential Zone	<p>High Effectiveness Rating</p> <p>As stated above the Development of Stapleford Park was based upon the provisions of the General Residential Zone in the Operative District Plan. Through the review process</p>	The costs will be lack of consistency with the zone provisions of the adjoining land.	The benefits of this option are those relating to having a set of district plan provisions that best align with the existing development and provide for future use in the most sustainable manner.	<p>High Efficiency Rating</p> <p>The benefits to the landowner are real and far outweigh any costs. The option is more efficient in achieving the objectives of the Havelock North Residential Environment as well as appropriate</p>

		<p>the Havelock North General Residential zone best reflects the objectives, policies and rules of the former General Residential Zone in the Operative District Plan.</p> <p>This option therefore will best align with the existing development and best allow for its future management in a sustainable manner. It will therefore be highly effective in meeting the objectives of the Havelock North Strategic Management area and particularly HNSMAO2.</p>			<p>environmental outcomes for this area as the other options are more likely to trigger resource consent requirements for the landowners within Stapleford Park.</p>
--	--	---	--	--	--

8.5 Risks of Acting or Not Acting

Section 32(2)(c) of the Resource Management Act requires that the assessment of the efficiency and effectiveness of the provisions in achieving the objectives must ‘assess the risks of acting or not acting if there is insufficient information about the subject matter of the provisions’.

The area of the land subject to Variation 4 has been identified in the Districts regional growth strategies; the Heretaunga Plains Urban Development Strategy and Regional Policy Statement (RPS) as required to meet residential growth needs for the period 2015-2045. Council is required in rezoning land for residential growth needs to give effect to the higher order planning document the RPS. As a medium growth authority Council must also take into account its obligations under the National Policy Statement Urban Development Capacity to provide sufficient land capacity to meet its housing demands.

In advancing this rezoning, substantial design and infrastructure planning work, along with broad community consultation has occurred. There is a desire to retain many of the existing landscape features that the local community identify with and value. As a result Council has prepared a more detailed Structure Plan than it has ever produced previously.

It is considered that the risk of not acting is significant, as it would result in the loss of 55 hectares of land which has been identified as being appropriate for development, and the potential loss of between 390 – 400 dwellings which could provide for housing demand within the Hastings District and Hawkes Bay Region. One of the reasons accepted by the Environment Minister in issuing a Streamlined Planning Process direction to Council for the rezoning of this area, was that there is a shortage of residential zone land and a significant community need.

Should the Iona Residential Rezoning not proceed, there is the risk of less sustainable ad hoc residential development occurring in a dispersed manner throughout the existing Plains Production Zone. This would be in direct response to a lack of supply of appropriately located residentially zoned land being available. Such development would contradict the existing strategic policy direction for land development within the Region.

It is considered that there is adequate information on which to make a decision, costs in not acting, and benefits in acting. Accordingly the proposed Variation should be proceeded, on the basis of the options favoured by the overall assessment.

9 Summary & Conclusions

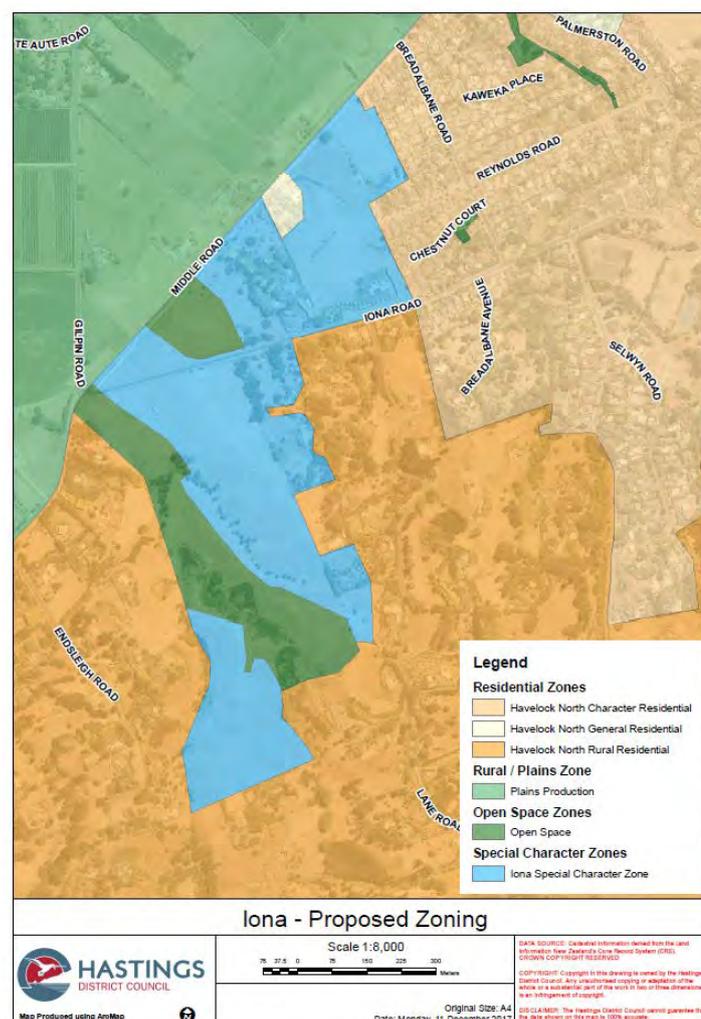
The Iona area is specifically identified in HPUDES as a greenfield growth area for Hastings City, and is similarly identified in the RPS as an appropriate greenfield growth area within the Heretaunga Plains sub-region, in Policy POL UD4.3.

This section 32 summary evaluation confirms the following:

- a) The Iona Urban Development Area represents a suitable greenfield growth area to meet the growth needs of the community.

Section 32 Evaluation: Proposed Variation 4 to the Proposed Hastings District Plan

- b) Whilst there are reservations about some of the specifics, there generally appears to be reserved support for rezoning of the Iona area greenfield growth area from affected landowners, the neighbouring community and other stakeholders.
- c) The Iona Structure Plan is confirmed as meeting the requirements for Structure Plans in the RPS (POL UD10.3 & 10.4).
- d) Comprehensive assessment of suitability, including against the matters contained in RPS Policies POL UD12 & POL UD10.4 and the relevant RPS Anticipated Environmental Outcomes AER UD1 – AER UD13, ultimately confirms that the Iona urban development area is suitable for urban residential development.
- e) The rezoning of the Iona area for residential development is confirmed as representing the most appropriate way to provide for the sustainable management of the District's resources – the purpose of the RMA.
- f) Adopting the map changes (depicted in the map below) and Iona Special Character Zone provisions along with the Structure Plan developed for the Iona area, is confirmed as efficient and effective, and deemed the most appropriate way to achieve the purpose of making additional land available for 'greenfield' housing development in the Iona Road area of Hastings City thereby meeting its obligations under the NPS Urban Development Capacity 2016.



Therefore, adoption of proposed Variation 4 to the Proposed Hastings District Plan is efficient, effective, and appropriate in terms of section 32 of the RMA.

Appendices

Appendix A – Map of Zoning Extent

Appendix B – Current Zoning Map

Appendix C – Residential Growth Area Background Information

Appendix D – Project Newsletters

Appendix E – HPUDS Map for the Iona Area

Appendix F – Consultation Log

Appendix G – Issues and Options Paper

Appendix H – Community Feedback on the Issues and Options Paper

Appendix I – Summary of Feedback Received on the Draft Iona Structure Plan

Appendix J – Structure Plan

Appendix K – Transport Assessment

Appendix L – Stormwater and Wastewater Assessment Servicing Assessment

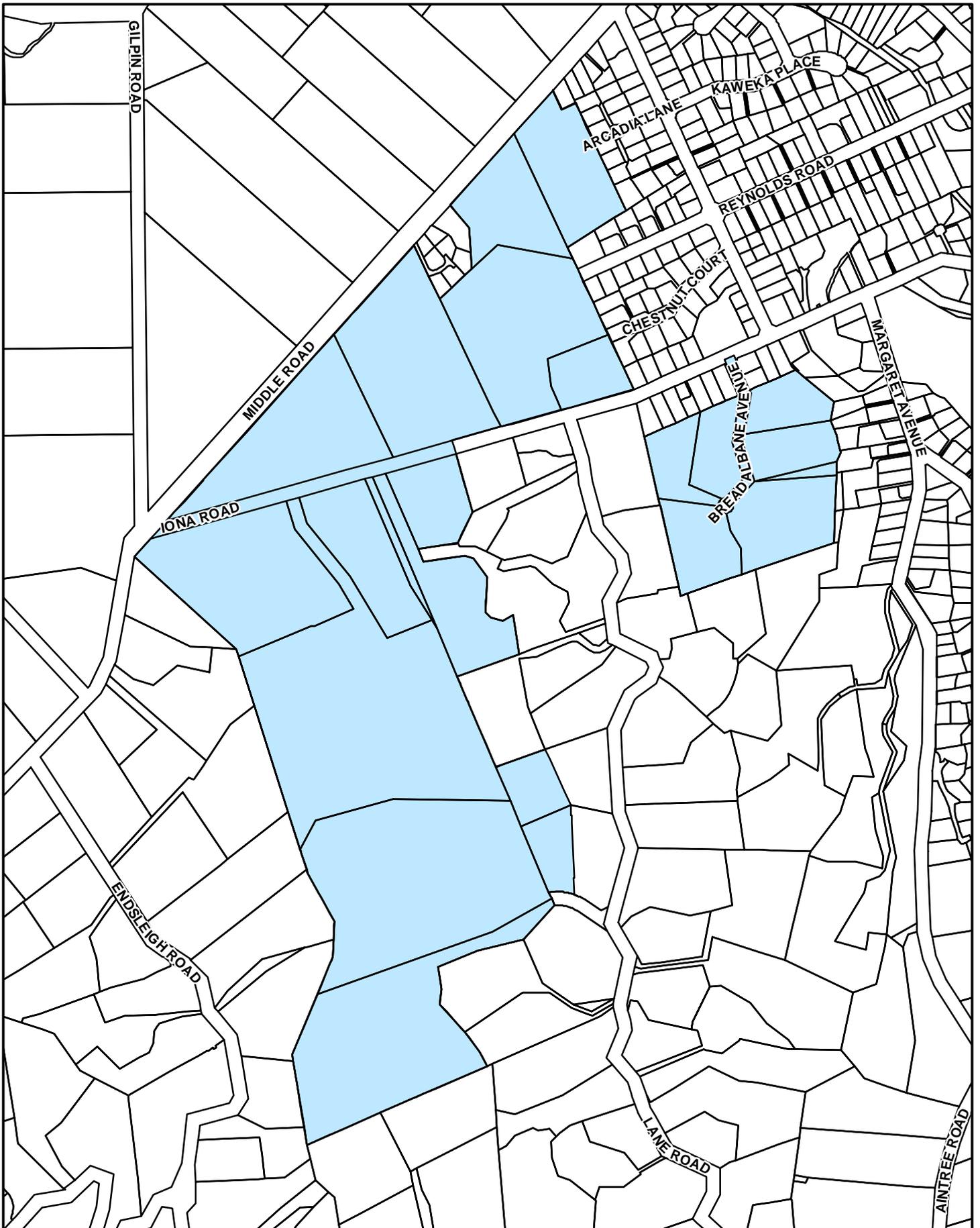
Appendix M – Wastewater Report

Appendix N- Summary Stormwater Assessment Summary

Appendix O - Landcare Soil Factsheets

Appendix P – Geotechnical Report – Triangle

Appendix Q – Geotechnical Report – Hill



Iona Development Area



Map Produced using ArcMap



Scale 1:7,500



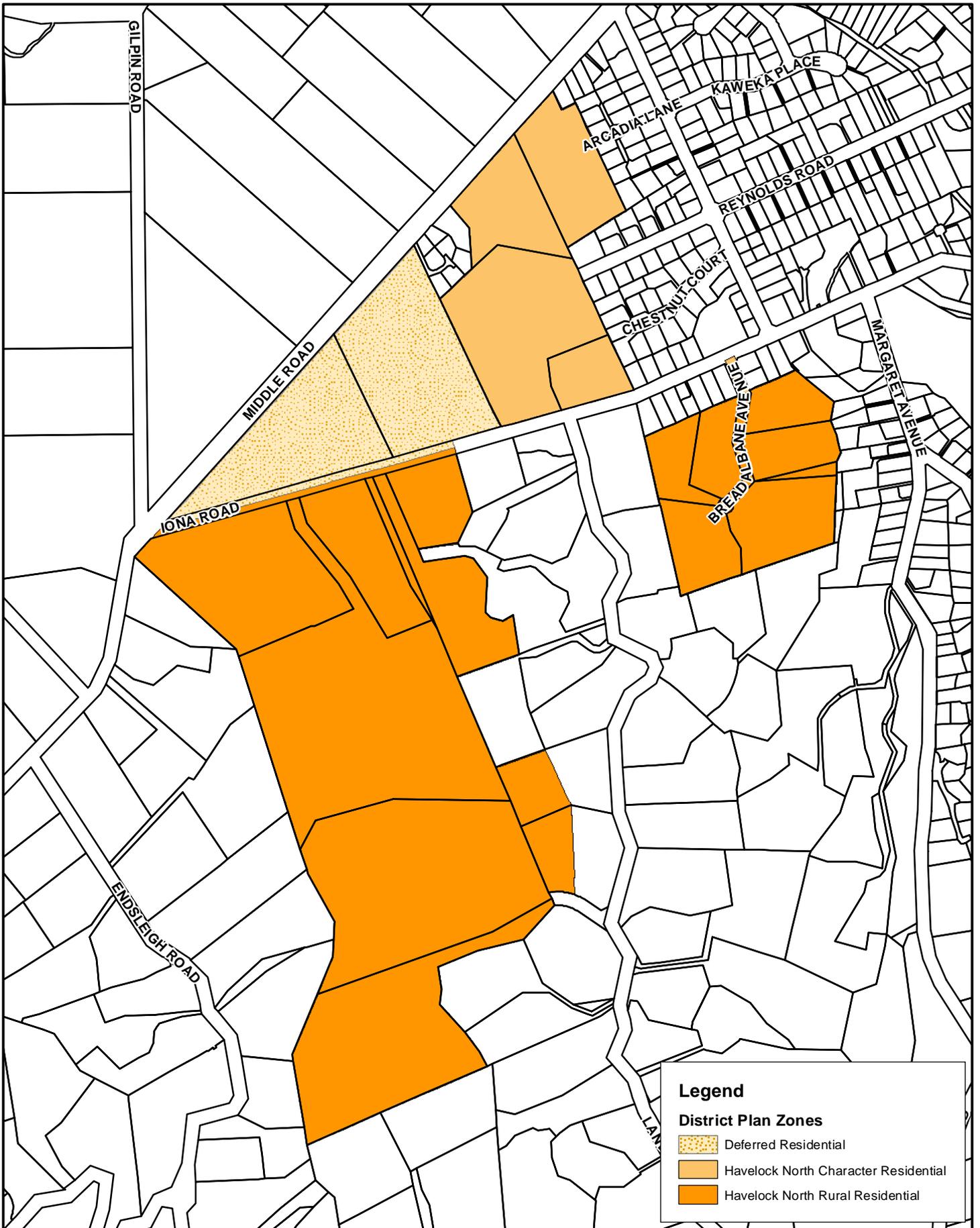
Projection: NZTM
Datum: D_NZGD_2000

Original Size: A4
Date: Wednesday, 4 April 2018

DATA SOURCE: Cadastral information derived from the Land Information New Zealand's Core Record System (CRS).
CROWN COPYRIGHT RESERVED

COPYRIGHT: Copyright in this drawing is owned by the Hastings District Council. Any unauthorised copying or adaptation of the whole or a substantial part of the work in two or three dimensions is an infringement of copyright.

DISCLAIMER: The Hastings District Council cannot guarantee that the data shown on this map is 100% accurate.



Legend

District Plan Zones

-  Deferred Residential
-  Havelock North Character Residential
-  Havelock North Rural Residential

Iona Development Area



HASTINGS
DISTRICT COUNCIL

Map Produced using ArcMap

Scale 1:7,500



Meters

Projection: NZTM
Datum: D_NZGD_2000

Original Size: A4
Date: Wednesday, 4 April 2018

DATA SOURCE: Cadastral information derived from the Land Information New Zealand's Core Record System (CRS).
CROWN COPYRIGHT RESERVED

COPYRIGHT: Copyright in this drawing is owned by the Hastings District Council. Any unauthorised copying or adaptation of the whole or a substantial part of the work in two or three dimensions is an infringement of copyright.

DISCLAIMER: The Hastings District Council cannot guarantee that the data shown on this map is 100% accurate.

Background to the Iona Urban Growth Area

History of Urban Growth in the Hastings District

Residential growth in the Hastings District has historically been achieved through the incremental expansion of the City's boundaries.

Prior to local government amalgamation in 1989 the urban growth directions for both Havelock North and Hastings relied in the first instance on approval from the Local Government Commission to annex land from the Hawke's Bay County Council, which was fiercely protective of the versatile and productive soils surrounding the city and parts of the Borough.

The need to protect the versatile land and soils of the Heretaunga Plains for productive use has shaped the continued urban development of the District and has been the central tenet of all urban growth studies carried out since this time.

Havelock North acts principally as a suburb of Hastings. The historical growth of this settlement has been by expansion onto peripheral areas of land surrounding the settlement. Over the last 20 years this has primarily occurred to the east of the Village centre. Historical studies were also mindful that the extent of the urban expansion in Havelock North needed to be balanced against maintaining the features which give the area its distinctive and attractive residential environment.

In the 1982 Hawkes Bay Planning Study, Havelock North was identified as a locality in which pressure for boundary extensions was likely to be felt earliest due to a combination of a strong demand for new sections and shortage of supply.

The 1982 study identified that it would be possible for Havelock North's population growth over the period 1982-1995 to be accommodated within the existing borough boundaries without too much difficulty. However beyond that time extensions would need to occur unless an active policy of encouraging consolidation within urban boundaries was pursued by local authorities.

By the mid 1980s, Havelock North continued to expand to the west and east and up into the hills on more difficult and expensive land.

Identification of land at Iona for urban growth

The Iona triangle block and hill areas to the south-east of Iona Road were some of the many areas investigated as potential growth options in the 1979 Hawkes Bay Planning Study (Refer to the area identified in red in figure 1 below).

- I WESTSHORE
- II AHURIRI
- III ONEKAWA
- IV - WEST (NTH)
- V - SOUTH
- VI MAREWA
- VII MARAENUI
- VIII NAPIER HILL
- IX - SOUTH
- X TAMATEA
- XI GREENMEADOWS
- XII TARADALE
- XIII - SOUTH
- XIV PIRIWEA
- XV NAPIER CENTRAL

- XVII MAHORA
- XVIII ST LEONARDS
- XIX FRIMLEY
- XX BAUREKA
- XXI MAYFAIR
- XXII PARKVALE
- XXIII CENTRAL HASTINGS
- XXIV AKINA
- XXV WOODLICH
- XXVI CAMBERLEY
- XXVII FLAXMERE EAST
- XXVIII - WEST
- XXIX HAVELOCK NORTH
- XXX ONEKAWA WEST (Sth.)
- XXXI BAYVIEW
- XXXII AIRPORT
- XXXIII WHARERANGI
- XXXIV PORAITI
- XXXV OMAHU
- XXXVI TARADALE EAST
- XXXVII MELANEE
- XXXVIII AWATOTO
- XXXIX PAKOWHAI
- XL CLIVE
- XLI HAUMONGA
- XLII TE AWANGA
- XLIII WHAKATU
- XLIV TOMOANA
- XLV TWYFORD
- XLVI IRONGATE
- XLVII FERNHILL
- XLVIII LONGLANDS WEST
- XLIX - EAST
- L HAVELOCK NORTH SOUTH
- LI HASTINGS SOUTHEAST
- LII PORT OF NAPIER
- LIII TE MATA PEAK



HAWKES BAY AREA PLANNING
STUDY ZONES

Figure 1 1979 Hawkes Bay Area Planning Study Zones

In September 1989, the Havelock North Borough District Scheme identified part of the Middle / Iona area as a future urban expansion area (refer figure 2A below).

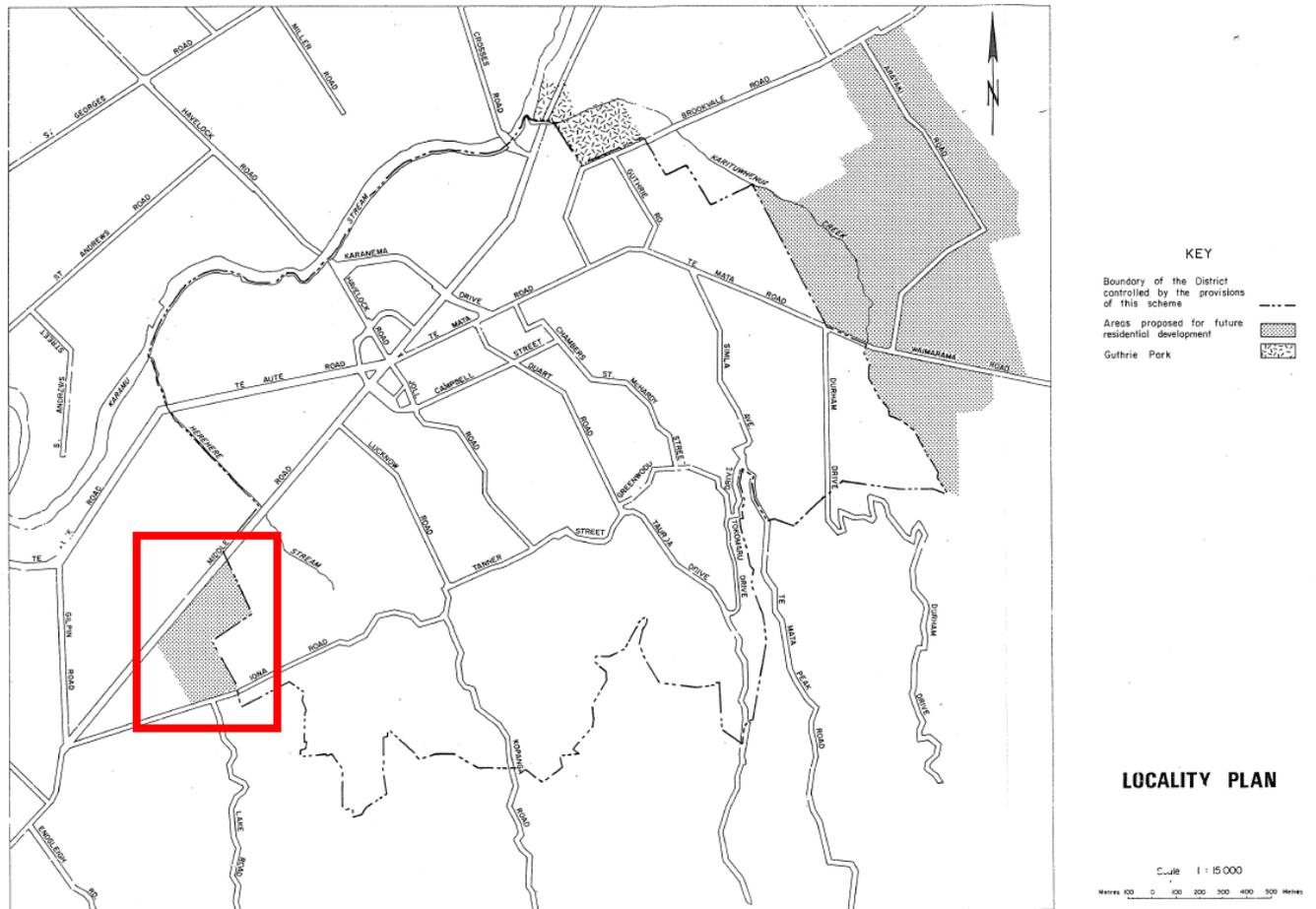


Figure 2A Havelock North Borough District Scheme September 1989 – Areas proposed for future residential development.

Following local government amalgamation in 1989, the Hastings District Council undertook an urban expansion review in 1990. At this time it was predicted that the District had a shortfall of approximately 150 sections (1990 Urban Expansion Review file number STR-4-1-11-32).

Further investigations into options for urban expansion identified a number of peripheral areas of both Hastings and Havelock North as suitable for immediate residential development. Engineering investigations confirmed that the Havelock North areas were more cost effective to service, hence the Council resolved to concentrate the entire short term release of land in the Havelock North area. The land between Middle and Iona Road was one such area identified (refer Area B Figure 2B below).

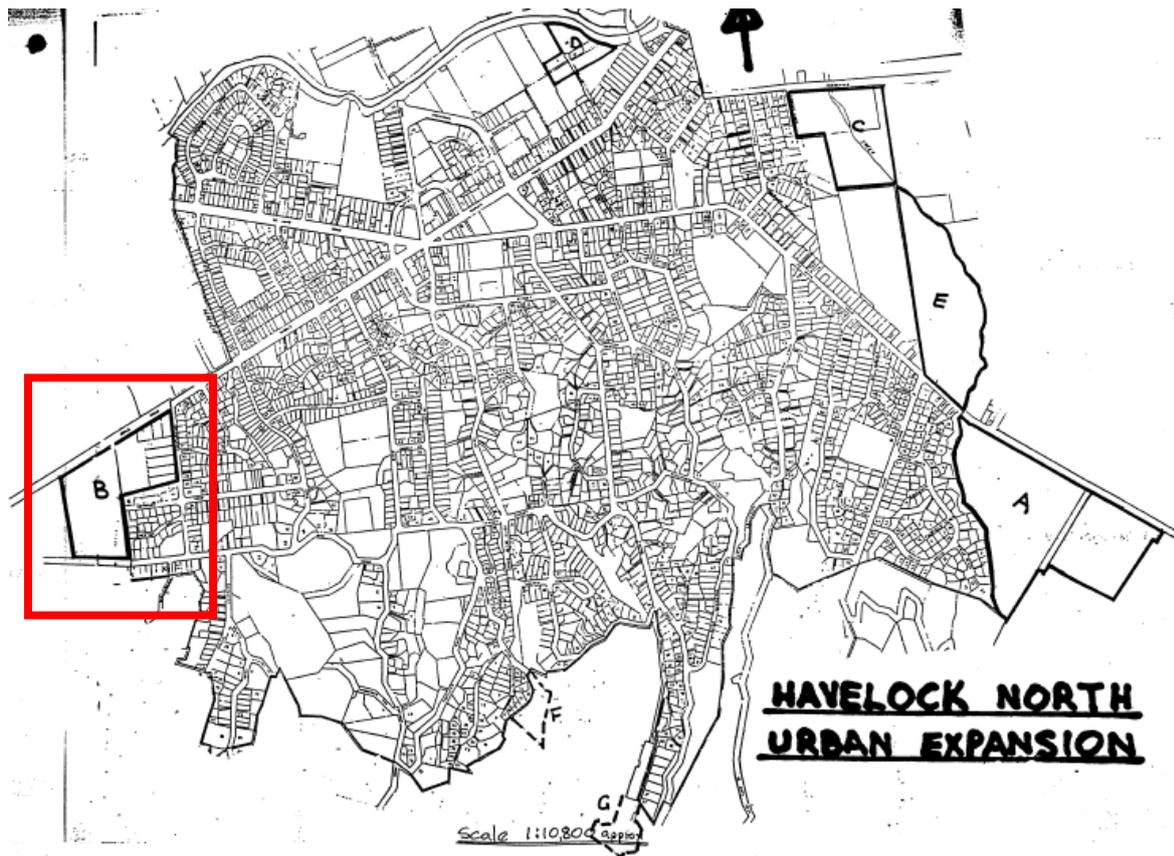


Figure 2B Areas Proposed for Residential Rezoning – Havelock North Urban Expansion 1990

Area B (land between Middle and Iona Roads) was rezoned along with 4 other areas as a result of the abovementioned urban expansion review following local government amalgamation. This rezoning was required to provide immediate additional supply to meet projected demand up until 1993.

Following rezoning, development of these 5 Havelock North areas proceeded and met with steady demand. The exception to this was that much of the Iona Middle Road rezoning area was purchased by one of the adjacent landowners and was not developed at that time nor since.

HUDES 1993

In 1993 Hastings District Council adopted an Urban Development Strategy for the District (referred to as HUDES 1993).

Figure 3 below outlines all the areas that were investigated for possible urban expansion in the HUDES 1993 study. The area identified in red illustrates that again the subject land (Middle Iona Triangle block and the hill land south-east of Iona Road) was included in the development investigation areas as Fringe Area 10 and Outer Investigation Area A.

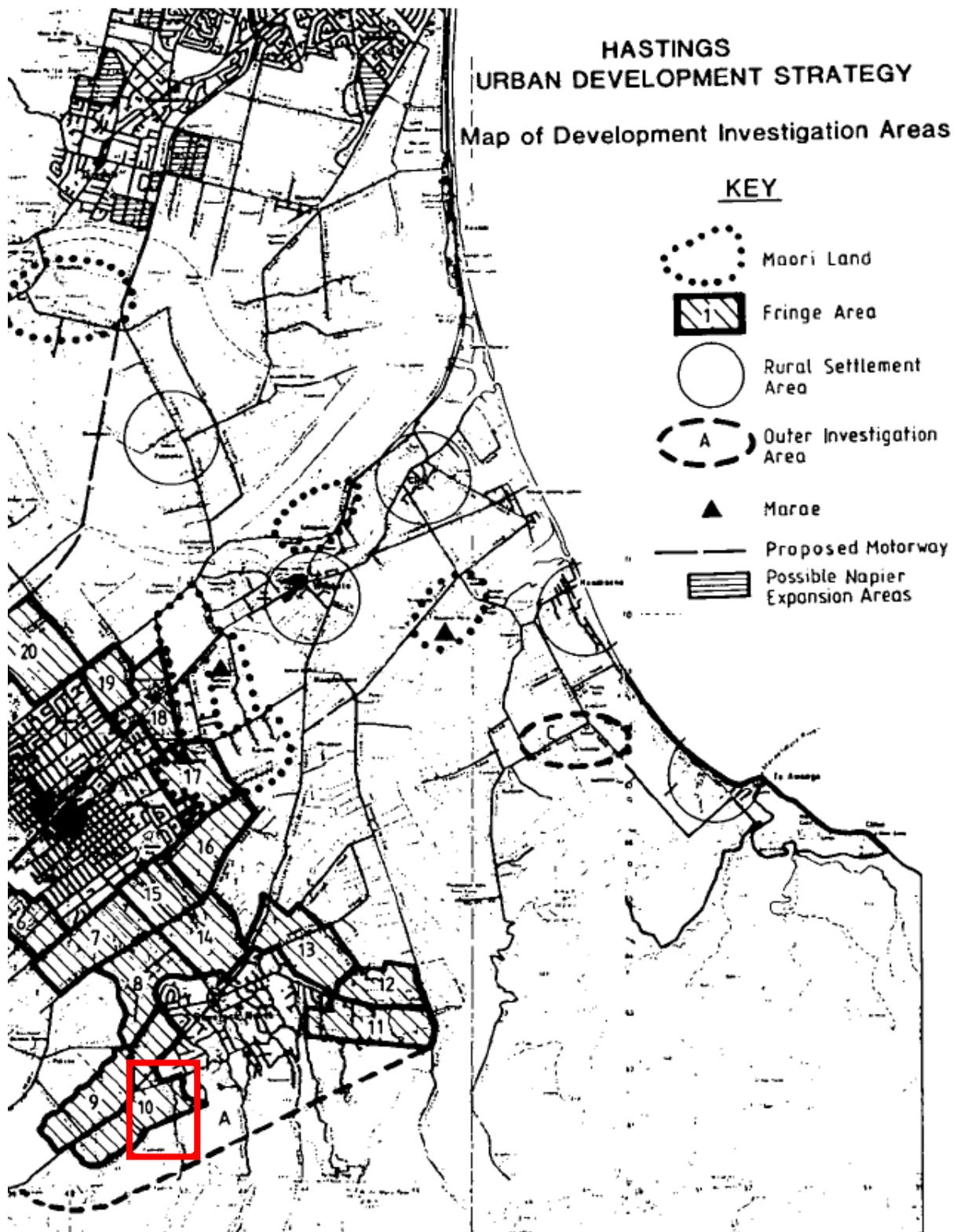


Figure 3 HUDS 1993 Investigation Areas (as they relate to Havelock North)

The HUDS 1993 strategy proposed new areas for residential development to meet the district's growth needs for the next 20 years to 2013. This study identified the preferred areas for the bulk of the residential greenfields development, with much of the projected growth to be accommodated in the Lyndhurst (Hastings market) and Brookvale / Arataki (Havelock North) areas.

In particular, the following diagram in Figure 4 and map in Figure 5 outline the 1993 identified residential development strategy as it related to Havelock North.

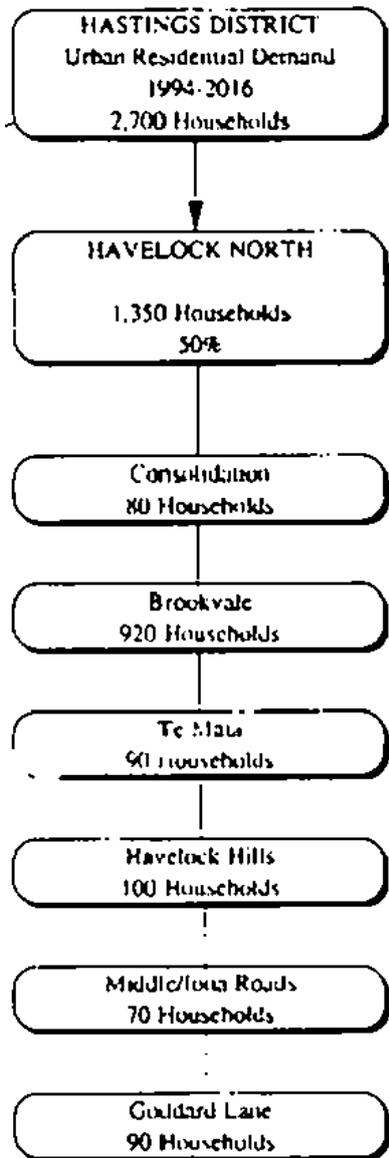


Figure 4 (above) Residential Development Strategy (Havelock North Component)

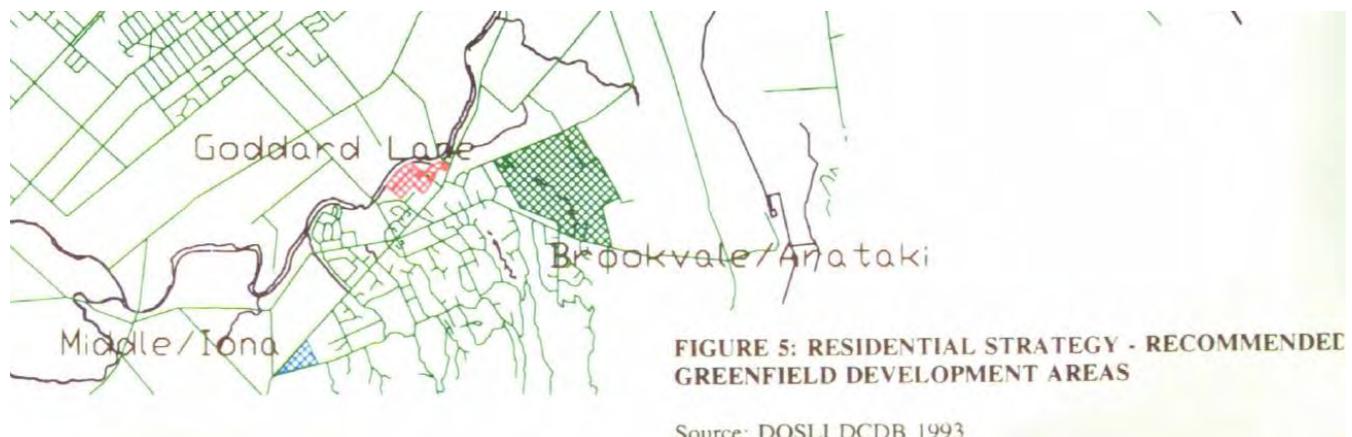
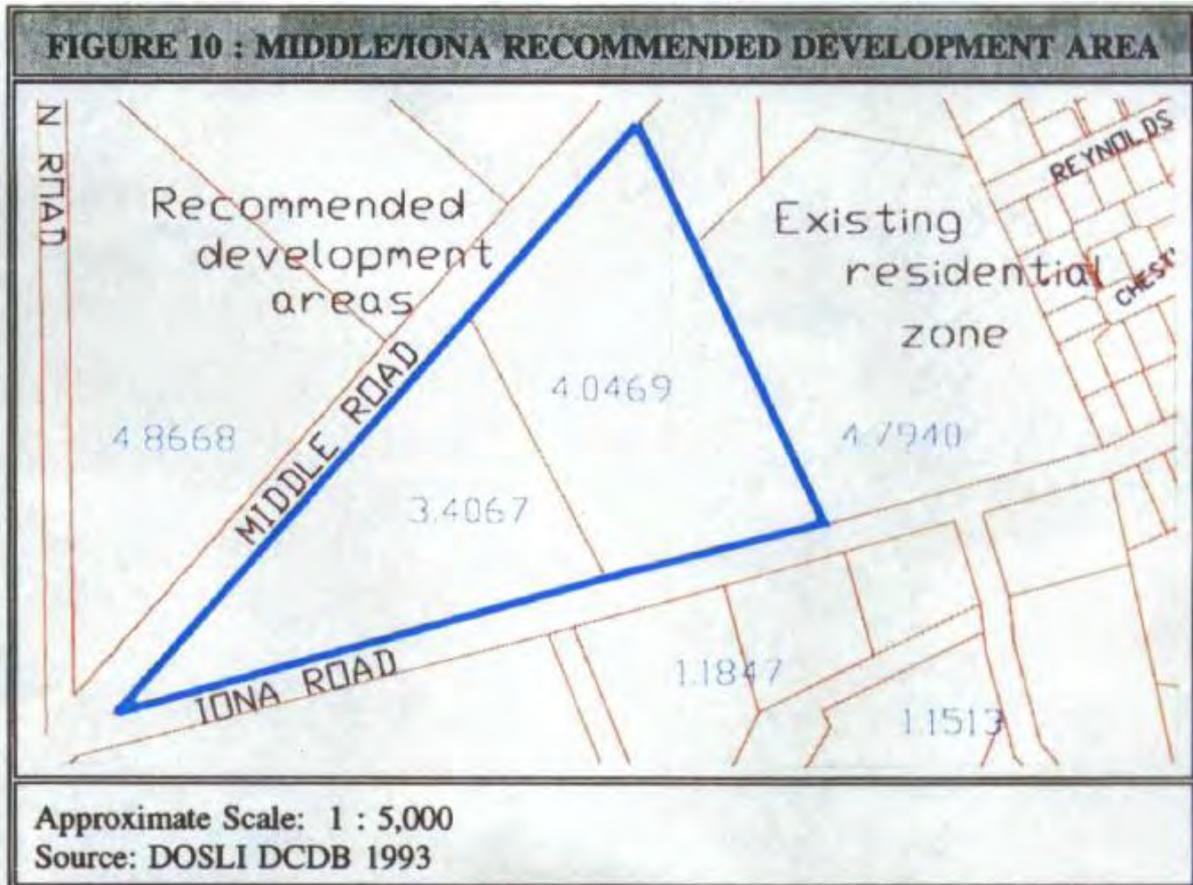


Figure 5 Residential Development Strategy Recommended Greenfield Development Areas

Specifically HUDS 1993 identified the remaining unzoned area of the Iona / Middle Rd triangle block as a recommended development area (refer Figure 10 below). The HUDS 1993 report stated that *“This area has been identified in previous studies and adjoins the existing residential zone. It is estimated that the potential yield of this 7.4ha area is approximately 70-75 lots based on 12 dwelling units per ha and taking into account land requirements for roads, reserves and services”*.



The lower part of the Iona hill area to the south-east of Iona Road and including the Breadalbane Ave area is included within the Havelock Hills recommended development area (refer Figure 9 overleaf). The area was recommended in the HUDS report as *“an extension to the existing general residential zone in this area subject to site specific geotechnical and engineering service investigations. The expected section yield of this area is likely to be 100 lots”*.

The Iona Hill site is also specifically identified in Figure 15 (overleaf) and recommended to be rezoned to Rural 5 – for intensified rural residential development. This was to be achieved by reducing the minimum lot sizes from a 1.5ha average to a 1.0ha average. This particular site was specifically identified in the study recommendations *“as a probable area for early consideration for rezoning”*.

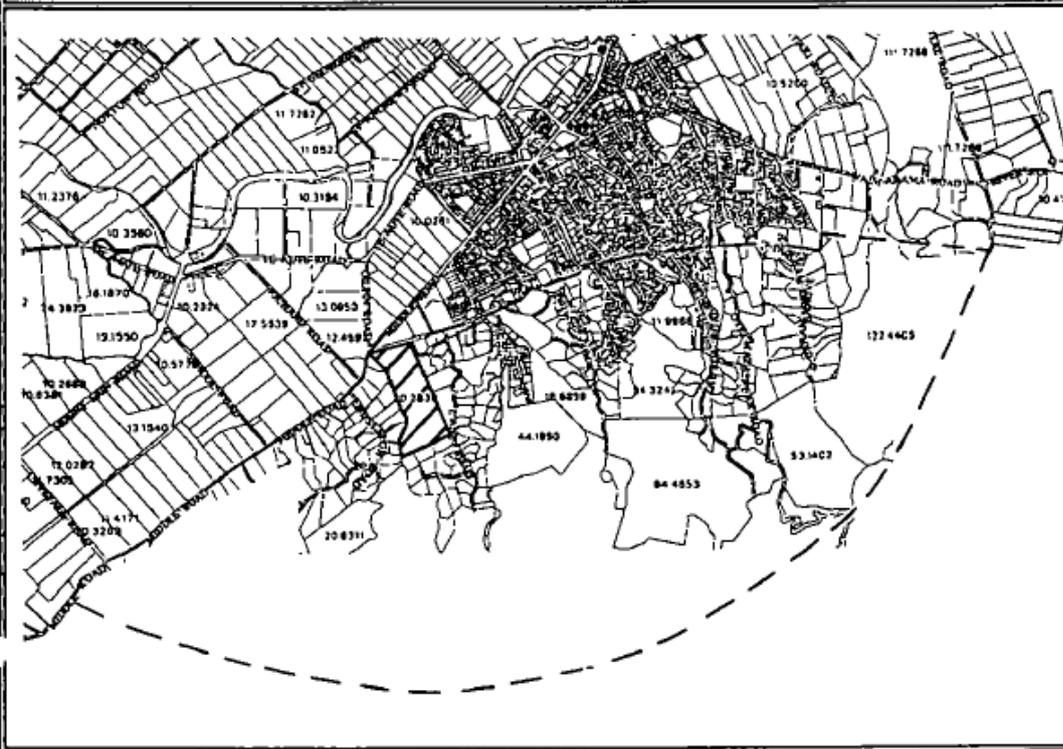
This area was subsequently rezoned to allow for more intensive rural residential development.

FIGURE 9 : POSSIBLE RESIDENTIAL DEVELOPMENT AREAS - HAVELOCK HILLS



Source: DOSLI DCDB 1993

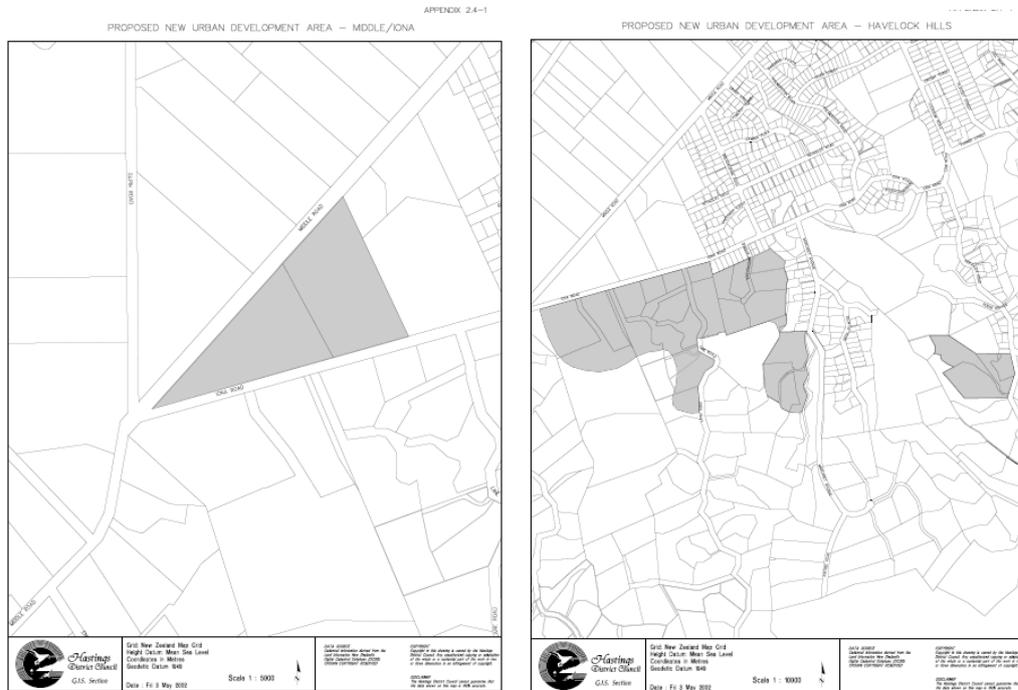
FIGURE 15 : AREA RECOMMENDED FOR REZONING TO RURAL 5 - HAVELOCK HILLS



Source: DOSLI DCDB 1993

HUDS became a fundamental part of the Operative District Plan when it was notified in 1997 (and when it was confirmed as Operative in 2003) and included these areas as identified New Urban Development Areas (NUDA's) as shown in Figure 6 below. These areas signal the Council's intention to rezone these areas for new housing in the future.

Figure 7 Hastings New Urban Development Areas Section 2.4 of the District Plan.



Reviews of HUDS

Following a review of demand in 1999, Council undertook a review of greenfields development options in 2000. This reconfirmed both Arataki and Lyndhurst as the main focus for new residential development. The Arataki area in Havelock North has been developing as planned since 1998.

A further demand review was undertaken in 2005, which projected that the supply remaining in these and other smaller areas such as Williams Street and Clive would be sufficient to meet demand until 2015/16 in Hastings and 2012/13 in Havelock North. It recommended that a full review of the Urban Development Strategy be undertaken to identify potential new sites for rezoning and development beyond that period, and that work on this was to commence soon due to the lag time to open a growth area to the market. Council was to initiate that review in 2007/08 to allow the full results from the 2006 census to be used for re-evaluating projected growth. However Council in consultation with Napier City Council and the Hawke's Bay Regional Council decided to undertake this work as a Regional Growth Study.

Heretaunga Plains Urban Development Strategy (HPUDES) 2010

The development of the HPUDES was a collaborative approach involving the Hastings District Council, Napier City Council and Hawke's Bay Regional Council for the period 2015-2045.

The Strategy took a long-term integrated view of urban land-use and infrastructure and the timescale was extended to 30 years to align with that for transportation strategies prepared under the Land Transport Management Act. The strategy study built on the information from the existing urban development strategies and studies and interim reviews, supplemented by the following additional studies:

- Climate Change - MWHGlobal
- Demographic and Economic Growth Outlook - Economic Solutions
- Retirement Sector Housing Market - Economic Solutions
- Mana Whenua Consultation- Wikki Design
- Market Demand - Telfer Young
- Brownfields Sites - Boffa Miskel

The land identified in the HUDS 1993 strategy in Figure 9 and 10 was carried through in the HPUDS strategy along with an extended area of land (that had been identified previously within the Outer Investigation Area A) to provide more elevated sites off the fertile Heretaunga Plains land. The HPUDS greenfield urban development areas are identified in the two figures immediately below:

Figure 1 - Iona / Middle Road Block

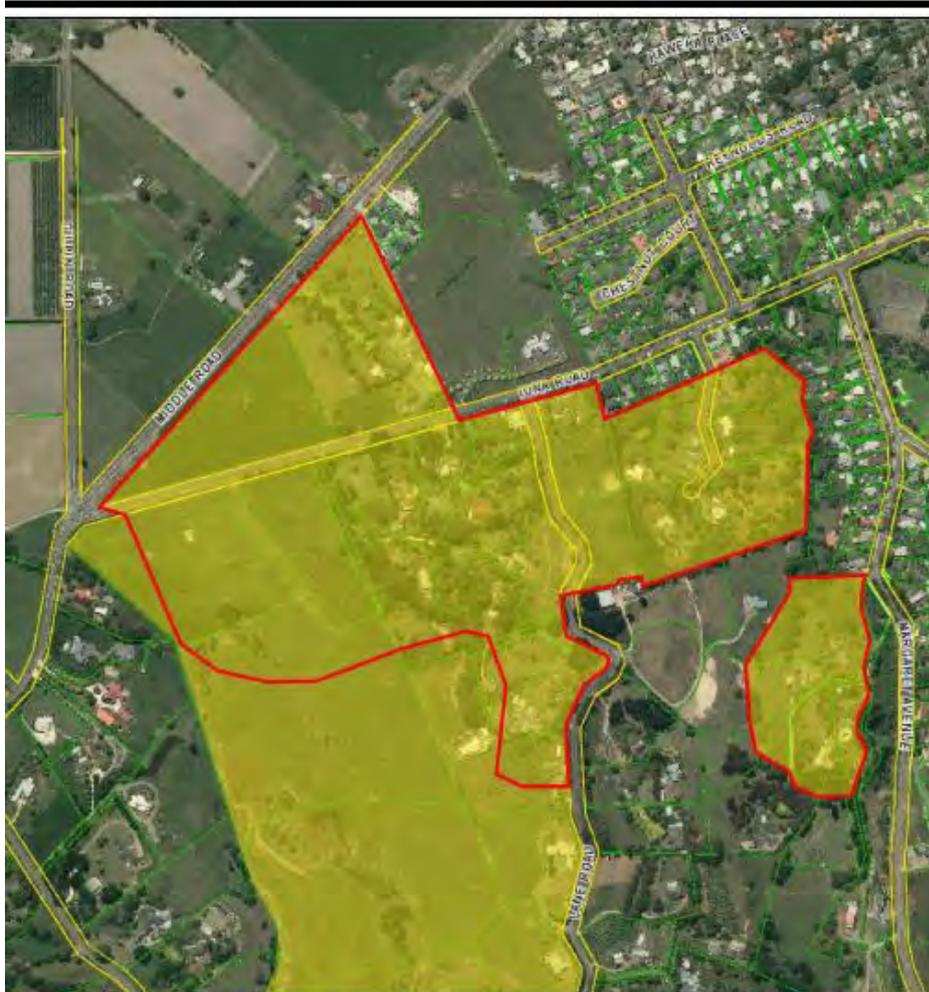


Figure 2 - Havelock Hills Lower



Regional Policy Statement

The HPUDS strategy goals and objectives as well as the areas identified as appropriate for urban expansion were included in the Hawkes Bay Regional Resource Management Plan which includes the Regional Policy statement via Change 4 - Managing the Built Environment. This change was made operative on 1 January 2014.

This change amended the Regional Policy Statement to include a number of objectives and policies relating to the identified urban growth areas. In particular, it included, the requirement for the preparation of a Structure Plan to guide and direct development prior to rezoning land for urban development.

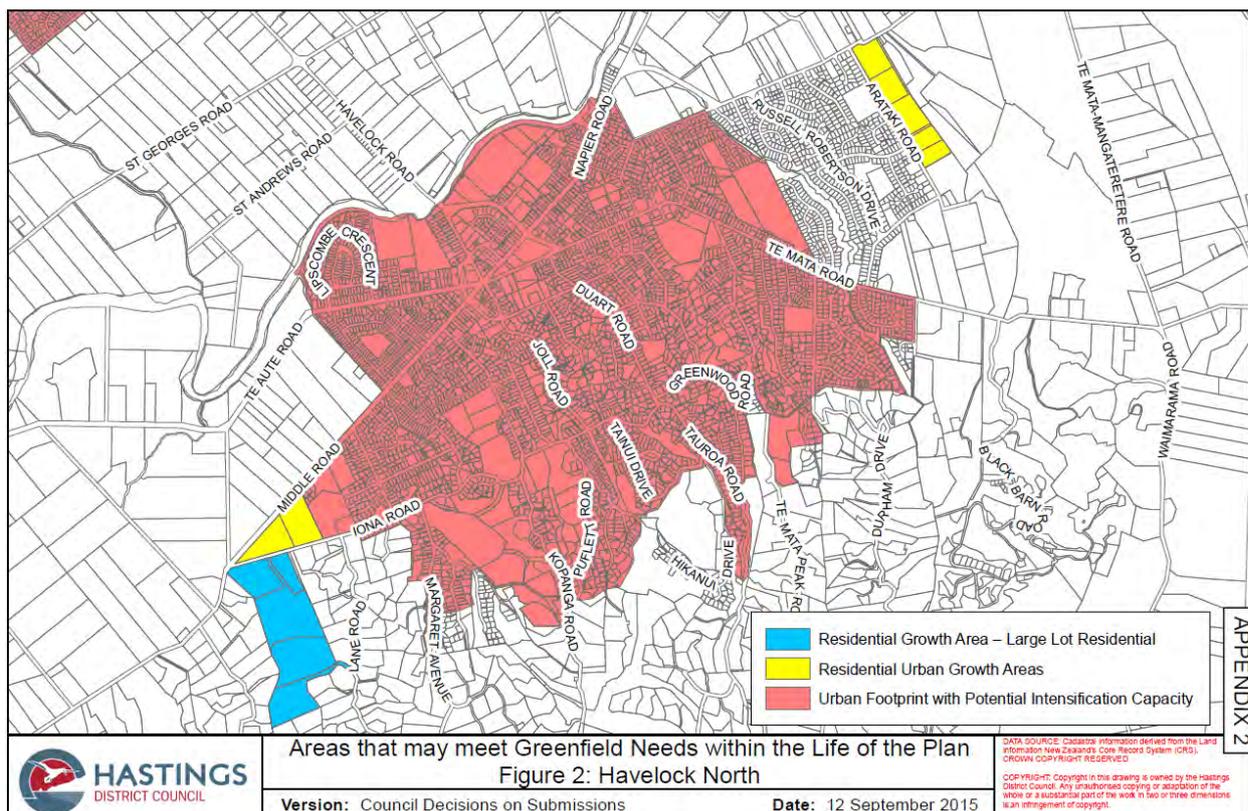
Proposed District Plan (amended by decisions on submissions) 2015

The Council released its Proposed District Plan in 2013 for public submissions. Submissions were received from Lowe Family Holdings requesting that the Iona triangle land be rezoned for general residential purposes and that the hill site be rezoned for large lot residential (minimum 2500m² sites).

As for all submission requests for rezonings to the Proposed District Plan, all landowners adjoining the land requested to be rezoned were notified and had the ability to become involved through the further submission process. Following the submission and further submission period, submission reports were prepared and hearings held for both the triangle and hill blocks of land in April 2015. The decisions on the rezonings were reflected in the Proposed District Plan as it was notified following decisions on submissions in September 2015.

The zoning pattern for these areas shows a deferred Havelock North residential zone applied to the triangular block at the corner of Middle and Iona Roads (refer Figure 10 above). This deferred zone signals Council's intention to rezone this land for new housing once a structure plan has been prepared (as required by the Hawkes Bay Regional Policy Statement) to guide development of the area.

The Proposed District Plan also includes an Urban Strategy which incorporates the principles and growth areas identified within HPUDS and the Regional Policy Statement. It also specifically identifies those HPUDS areas which are likely to be needed within the ten year life of the Proposed District Plan. These areas include the subject areas at Iona (refer Appendix 2 Figure 2 of the Proposed District Plan 2015 below):



Re-prioritising the urban growth areas in Havelock North

Land on the northern side of Arataki Road had been the next area planned for future residential growth in Havelock North. However due to significant odour issues from the nearby mushroom farm, the Council resolved to amend the sequencing of HPUDS identified urban growth areas.

At its meeting on September 24 2015, Council resolved that officers be instructed to progress the preparation of a Structure Plan for the Middle / Iona and Havelock Hills areas on the south western side of Havelock North.

Appeals to the Proposed District Plan

Following the release of the PDP decisions on submissions in September 2015, the Lowe Family lodged two appeals with the Environment Court in respect to the Proposed District Plan's provision for housing in the Iona area. Both appeals seek the more rapid advancement and more intensive development of the identified housing areas. Sixteen parties (primarily landowners adjoining both the triangle and hill sites) notified their interest to become parties to the Appeal (or section 274 parties).

Given the reprioritisation of the Iona area and the resolution of Council to progress the structure plan for this identified urban growth area, the Council requested leave from the Environment Court to pursue mediation of this Appeal via a collaborative design process. These appeals have been, and remain, on hold.

Issues and Options Paper July 2016

Council officers prepared an issues and options paper discussing the proposed residential development of the urban growth areas identified in HPUDS and located on the south western side of Havelock North.

The purpose of the Issues and Options paper was to summarise the initial analysis undertaken by Council with the intention of seeking feedback from potentially affected members of the community in order to inform the development of a Structure Plan for the area.

The paper sought:

- To **inform** parties of the issues identified and the potential development options;
- To **elicit feedback** from interested parties in order for Council to **better understand the issues identified or to raise awareness of additional issues that have not been identified.**
- To **seek feedback on the options proposed** so that these can be further developed and refined.
- To **facilitate community participation and collaboration** in the proposal.

Overall feedback on the Issues and Options Paper was sought to assist with identifying the most appropriate area to include in a Variation (and associated Structure Plan) to be progressed by Council in the short term.

Two community consultation meetings were held in August 2016 to discuss the paper and gain feedback from the community.

Comments from 34 individuals and groups were received on the issues and options document. These comments were summarised and made available to view on the Council's website.

A database was set up with email contact details of all those who had made comments on the issues and options paper. This was used to ensure continued contact with interested and affected parties as the project progressed.

Iona Working Group Process November 2016 – April 2017

An Iona working group was set up to facilitate a design-led plan for residential development of the Iona Urban Growth Area. The working group was made up of representatives from the Lowe Family (as landowner), along with their surveyor and planning consultant, three Council officers (policy manager and two senior policy planners), and four representatives from the 274 group along with their planning consultant. Council's Stormwater Manager and Parks Manager attended meetings as required.

To assist with this process the Council engaged Isthmus Group (landscape and urban design consultants), on behalf of the Iona working group, to lead the design process for the study

area. The study area included the land subject to the appeal as well as additional land in the area identified for urban growth in HPUDS and the Regional Policy Statement.

The Iona Working Group members agreed to work cooperatively for the long term benefit of the Iona area and Havelock North as a whole and set the following objectives and outcomes to be achieved:

- That the Iona Urban Growth area develop into a place that adds value to Havelock North providing an opportunity to create innovative land development responses to this unique environment;
- That the quality of the environment created within the Iona Urban Growth Area – both urban and rural residential – reflects best practice urban design outcomes and the NZ urban design protocol;
- That the development provisions that shape the Iona Urban Growth Area seek to achieve the objectives of HPUDS in terms of development that uses land efficiently while creating a high quality residential community;
- That a structure plan for the Iona Urban Growth area is developed in a collaborative manner that reflects the objectives outlined above;

Eight meetings were facilitated with the Iona working group over the period November 2016 – April 2017. These meetings included:

- Isthmus Group presented a recommended design process;
- Discussion of the features that contribute to the character of the area;
- Discussion of local developments that have retained landscape or residential character, or have specific features that contribute to pleasant amenity;
- A walk-over of the Lowe land;
- Discussion and decision to exclude the Margaret Avenue HPUDS area from the study area due to significant natural hazard and stormwater constraints;
- Isthmus Group presented design principles or concepts that might underpin a design of the area; feedback and refinement of these from the group;
- Isthmus Group presented a design concept for the area including the specific design elements and principles;
- Discussion around appropriate densities in each of the three proposed neighbourhood areas within the development site;
- Presentation of the design concepts for the discrete Breadalbane Avenue area;
- Discussion around the alignment options and design treatment for the main spine road; and
- Feedback on the overall design concepts from both the landowner and 274 group representatives.

To assist in the design process, examples from existing residential areas and subdivision developments were utilised to determine what characteristics would be appropriate for a new residential area at Iona. These included:

- a range of densities;
- Havelock North character;
- responsive to landform;
- maintaining rural character;

- a tree-lined landscape; and
- gracious and quiet.

After further work and discussion the following more detailed concepts emerged as important components for the development of the Iona area:

- retention of the central ridge (unplanted) and valley to divide the area into 'neighbourhoods';
- stormwater neutrality;
- location of any potential spine road to service the hill area – in the saddle of the central ridge to reduce visibility;
- means of achieving buffer areas between existing residences and new development;
- a loop connection for recreational purposes;
- scarps landscaped;
- walking track circuit through reserves with pedestrian access to Lane Road;
- three residential neighbourhood areas – Triangle (including lower hill area), Middle Hill and Upper Hill;
- placement or location of building platforms provides the basis of density in the Upper Hill neighbourhood;
- a range of lot sizes and a mixed layout of lots so they are not uniform – i.e. avoidance of cookie cutter development
- street frontages that enable an open feel to the development; and
- treatment of the main spine road to provide rural character – no parking, footpath on one side only, informal groups of street trees, sloping grassed berms, no kerb and channel.

A concept plan was developed by Isthmus which incorporated these design elements. This plan, and the Iona Working Group discussions on this concept plan, has informed the development of the draft structure plan.

Draft Structure Plan Development May - July 2017

During May, June and July Council officers developed a draft structure plan for the Iona Urban Growth Area based on the outcomes of the Iona Working Group's design-led process. In developing the draft a number of meetings were held with specific adjoining landowners and aspects of the draft plan were workshopped with Council staff and Councillors. The draft structure plan is reflective of all the technical and design work and consultation undertaken to date.

This plan was presented to the Iona Working Group on 27 July 2017.

On 1 August 2017, the Council released the Iona draft structure plan to the community for feedback and began targeted landowner and general community consultation. A full record of all the consultation undertaken to date has been compiled.

IONA

Working Group

NEWSLETTER

PROPOSED IONA RESIDENTIAL
DEVELOPMENT UPDATE

The Iona Working Group has been set up to encourage discussions between the parties involved in the Environment Court Process. This newsletter provides an update from this group about the process and the progress made.

Who is the Iona Working Group?

Council Representatives: Rowan Wallis (Policy Manager), Anna Sanders (Senior Policy Planner Special Projects), Anna Summerfield (Senior Policy Planner);

Representatives for the Appellant (Lowe Family): Hamish Whyte (Lowe family representative), Stephen Daysh (Planning Consultant), Andrew Taylor (Surveyor);

Representatives for S274 Parties: Josi Beamish, Peter Rutter, Chris Miles, Dale Prebble, Roger Wiffin (Planning Consultant).

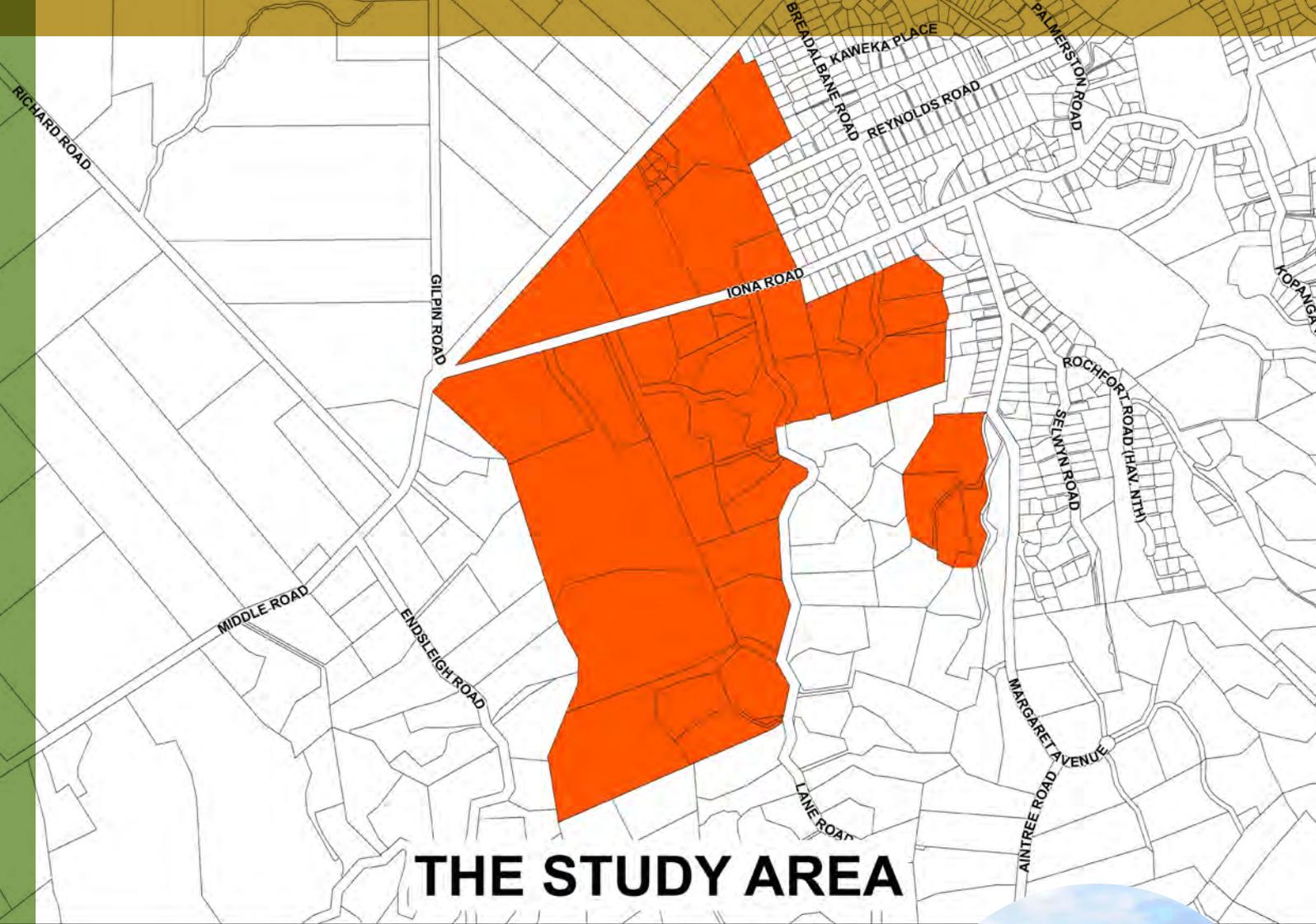
The Iona Working Group met on November 30 and again on December 7 to make a start on a *design-led draft plan for residential development in the area*.

Comments on the eventual draft structure plan will be able to be made during the full consultation with the wider group and local community that will follow this process.

The Iona Working Group members have agreed to work cooperatively for the long term benefit of the Iona area and Havelock North as a whole. The specific objectives of the group, agreed at these first meetings, are:

- That the Iona Growth Area develop into a place that adds value to Havelock North, providing an opportunity to create innovative land development responses to this unique environment;
- That the quality of the environment created within the Iona Growth Area – both urban and rural residential – reflects best practice urban design outcomes and the NZ Urban Design Protocols;
- That the development provisions that shape the Iona Growth Area seek to achieve the objectives of HPUDS in terms of development that uses land efficiently while creating a high quality residential community; and
- That a structure plan for the Iona Growth Area is developed in a collaborative manner that reflects the objectives outlined above and which meets the Council's timeframes for public notification of a variation to the District Plan in May 2017.





THE STUDY AREA

Design led process and extent of the study area

An holistic approach to the residential development of the Iona area is considered important by the group. Therefore the full extent of the area is included in this design process, as shown on the above map.

However, depending on the outcomes of the group's deliberations, the Variation to the District Plan to rezone land may only include a portion of the total area. The final rezoning area will be determined once the design work has been carried out.

Gavin Lister (Urban Designer; Isthmus Group Ltd) has been engaged to help steer the design process. It is intended that the design process will give consideration to the many issues that were identified through the comments received on the Issues and Options document.



Where to from here?

More Working Group meetings will take place in early 2017, with newsletters being produced as the project develops. Once a draft structure plan has been prepared it will be released for community feedback.

In the meantime if you have any questions about the process, please feel free to get in touch with one of Council's representatives on the Working Group.

IONA

Working Group

NEWSLETTER

PROPOSED IONA RESIDENTIAL DEVELOPMENT UPDATE



The Iona Working Group has been set up to encourage discussions between the parties involved in the Environment Court Process. This newsletter provides an update from this group about the progress made over the first quarter of 2017.

What progress have we made so far?

The Iona Working Group has met frequently since our last update in December 2016. The aim of these sessions was to come up with a design-led draft plan for residential development of the area.

THE WORKING GROUP'S OBJECTIVES ARE THAT:

- the Iona Growth Area develops into a place that adds value to Havelock North, providing an opportunity to create innovative land development responses to this unique environment;
- the quality of the environment created within the Iona Growth Area – both urban and rural residential – reflects best practice urban design outcomes and the NZ Urban Design Protocol;
- the development provisions that shape the Iona Growth Area seek to achieve the objectives of HPUDS in terms of development that uses land efficiently, while creating a high quality residential community; and
- a structure plan for the Iona Growth Area is developed in a collaborative manner that reflects the objectives outlined above, and meets the Council's timeframes for public notification of a variation to the District Plan in May 2017.

Note: The Working Group acknowledges that the above timeframe to notify a variation to the District Plan will not be met. However significant progress towards this goal has been made.

Gavin Lister (Urban Designer; Isthmus Group Ltd) and **Mark Radford** (Landscape Architect, Isthmus Group Ltd) have led the design process with input from the working group.

THE WORKING GROUP MEETINGS TO DATE HAVE INCLUDED:

- Gavin and Mark presented a recommended design process (see diagram below);
- discussion of the features that contribute to the character of the area;
- discussion of local developments that that have retained landscape or residential character, or have specific features that contribute to pleasant amenity;
- a walk-over of the Lowe land;
- discussion and decision to exclude the Margaret Avenue HPUDS area from the study area due to significant natural hazard and stormwater constraints;
- Gavin and Mark presented design principles or concepts that might underpin a design of the area; feedback and refinement of these from the group;
- Gavin and Mark presented a design concept for the area including the specific design elements and principles;
- discussion around appropriate densities in each of the three proposed neighbourhood areas within the development site;
- presentation of the design concepts for the discrete Breadalbane Avenue area;
- discussion around the alignment options and design treatment for the main spine road; and
- feedback on the overall design concepts from both the landowner and 274 group representatives.



Concepts contributing to the Iona design

To assist in the design process, examples from existing residential areas and subdivision developments were utilised to determine what characteristics would be appropriate for a new residential area at Iona. These included:

- a range of densities;
- Havelock North character;
- responsive to landform;
- maintaining rural character;
- a tree-lined landscape; and
- gracious and quiet.

FURTHER WORK AND DISCUSSION MEANT THE FOLLOWING, MORE DETAILED CONCEPTS EMERGED:

- retention of the central ridge (unplanted) and valley to divide the area into 'neighbourhoods';
- stormwater neutrality;
- location of any potential spine road to service the hill area – in the saddle of the central ridge to reduce visibility;
- means of achieving buffer areas between existing residences and new development;
- a loop connection for recreational purposes;
- scarps landscaped;
- walking track circuit through reserves with pedestrian access to Lane Road;
- three residential neighbourhood areas – Triangle (including lower hill area), Middle Hill and Upper Hill;
- placement or location of building platforms provides the basis of density in the Upper Hill neighbourhood;
- a range of lot sizes and a mixed layout of lots so they are not uniform – i.e. avoidance of cookie cutter development
- street frontages that enable an open feel to the development; and
- treatment of the main spine road to provide rural character – no parking, footpath on one side only, informal groups of street trees, sloping grassed berms, no kerb and channel.



Where to from here?

- More work will be undertaken to determine how stormwater from the development is best managed;
- Council will start formulating a draft structure plan for consultation;
- Informal consultation – neighbourhood group meetings, one-on-one meetings if requested, and a drop in open day session for small group and/or one-on-one discussion;
- Following informal consultation, amendments to the draft structure plan may be made and a variation to the provisions of the Proposed District Plan will be prepared and taken to Council for approval as a variation to the District Plan; and
- The formal RMA process will begin following notification of the variation, allowing submissions to be made and submitters to speak at a hearing.

Stay tuned for more info...

We anticipate to issue our next newsletter in early July 2017, which will outline Council's draft structure plan for the area, depending on the outcomes of the stormwater investigations. This newsletter will also include information and a timetable for neighbourhood group meetings and open days. This forum will enable you to raise questions, discuss concerns and provide feedback to Council officers on the draft structure plan.

In the meantime, if you have any questions about the process, please feel free to contact one of Council's representatives on the working group: Rowan Wallis (rowanw@hdc.govt.nz), Anna Sanders (annaajs@hdc.govt.nz) or Anna Summerfield (annaes@hdc.govt.nz).



IONA Working Group

IONA

Urban Growth Area

PROPOSED RESIDENTIAL DEVELOPMENT UPDATE NEWSLETTER

Draft Structure Plan

BACKGROUND

The Iona area of Havelock North has been identified as a residential growth area and to address population and household growth in Havelock North, Council is preparing to re-zone land in the Middle and Iona Road area for housing. The outcomes to be achieved through the rezoning of this area are:

- a place that adds value to Havelock North;
- recognition that this is an opportunity to create innovative land development responses to this unique environment;
- a quality environment that reflects best practice urban design outcomes;
- development provisions that shape the Iona Growth Area and seek to achieve HPUDS objectives - uses land efficiently, while creating a high quality residential community; and
- a structure plan that is developed in a collaborative manner and reflects the above objectives.

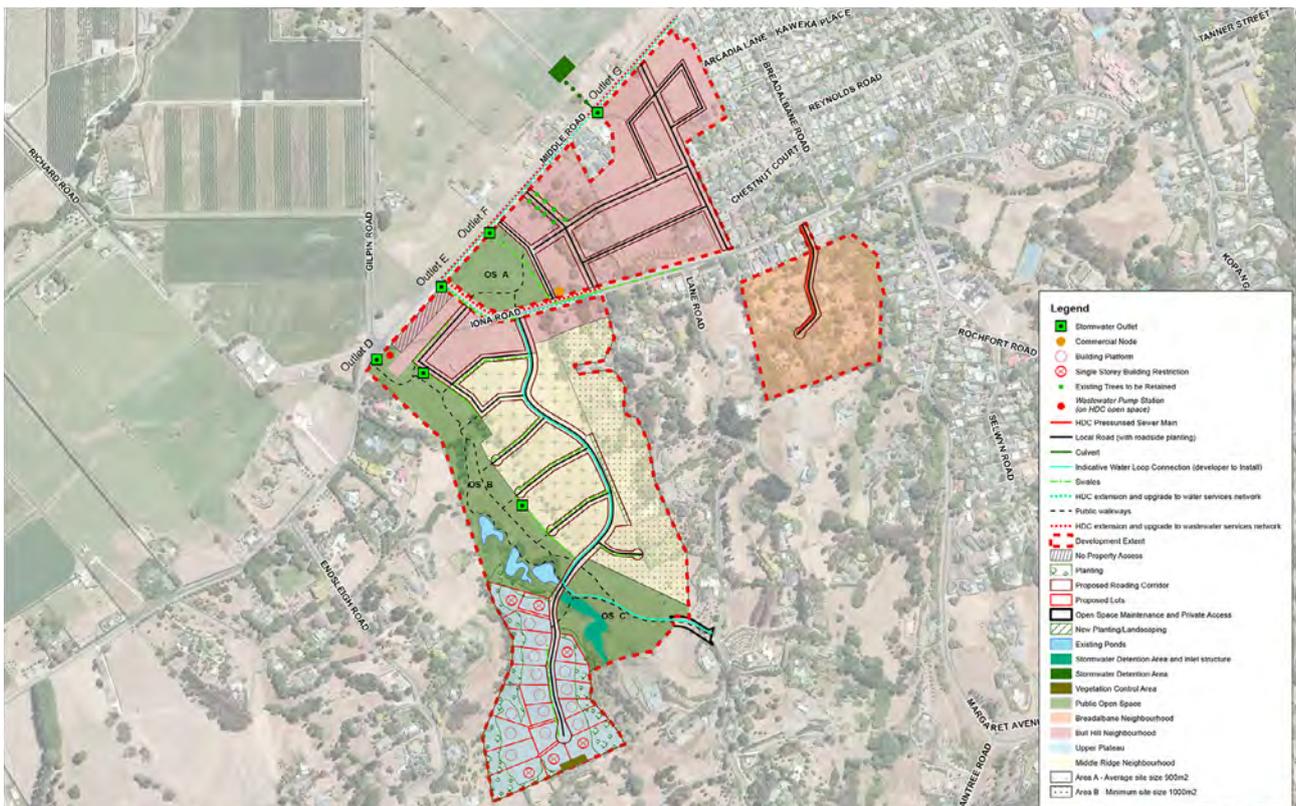
DRAFT STRUCTURE PLAN

To guide and direct development to achieve the stated outcomes for the Iona Urban Growth Area, we have prepared a *Draft Structure Plan* which is outlined below.

Detail regarding how Council proposes to manage residential development within each of the four proposed residential neighbourhoods that form the Iona Urban Growth Area is included on the following page.

The Iona Urban Growth area is considered a special environment, therefore the *Draft Structure Plan* will ensure many of the characteristics of the area that are valued by the local community are retained.

The unique landscape features of this area - the bull hill, the central ridge and valley landform incorporating the ponds and wetland areas are important components of this new residential area, and will provide easily accessible recreational opportunities for existing and new residents.



THE BULL HILL NEIGHBOURHOOD WILL INCLUDE:

- a grid pattern of tree-lined streets that connect with a focal point open space area;
- an average lot size of 600m² ;
- mixed lot sizes suitable for a range of house types – large single houses, townhouses and duplexes or terraced housing
- various lot layouts:
 - > larger lots - located on corners and along Iona and Middle Roads; and
 - > smaller lots - located internally within the neighbourhood, opposite the Bull Hill open space, or on a primary tree-lined road to gain additional amenity.
- a small commercial node that allows for a maximum commercial space of 50m² with 50m² of outdoor dining space with:
 - > a maximum of two tenants – i.e. a café and/or general grocery store;
 - > control over signage, hours of operation, sale of liquor, building design and interface with the Bull Hill open space and Iona Road; and
 - > ancillary residential activities allowed.

THE MIDDLE RIDGE NEIGHBOURHOOD WILL INCLUDE:

- a curved main spine road with a rural character and treatment;
- a middle ridge open space area and walkway loop track with a public walkway and maintenance vehicle access to Lane Road;
- predominantly larger site sizes 700m²-2000m² with an average site size of 900m² within area A;
- a transition site size of a minimum of 1000m² within area B, located between the proposed rezoning area and existing rural residential properties on Lane Road;
- larger lots located on corners and fronting the main spine road;
- no more than three small sections (site size of between 350m²-600m²) shall be located within any one lane; and
- smaller section sizes to be interspersed with larger sized sections and located in the middle of the residential blocks.



THE UPPER PLATEAU NEIGHBOURHOOD WILL INCLUDE:

- a fixed lot layout and building platform locations with a maximum of 20 residential properties; and
- significant planting of the steep slopes which will assist in screening the new residential area from adjoining properties.

THE BREADALBANE AVENUE NEIGHBOURHOOD WILL INCLUDE:

- retention of the existing Breadalbane Avenue alignment and rural treatment;
- protection of some of the existing characteristics of the neighbourhood, such as existing landscaping and variable approach to building location;
- a lower density than the existing Havelock North Character Residential Zone (700m² minimum);
- development which results in stormwater neutrality;
- provision of a pressurised sewer main along the existing Breadalbane Avenue alignment; and
- individual pressurised sewers for each new residential site.

What happens next?

- * Have your say by providing informal feedback on the Draft Structure Plan. **Feedback must be received by 5pm, Monday 4 September 2017.** Feedback forms are available at www.myvoicemychoice.co.nz or by contacting Council on 06 871 5000 to have one sent to you.
- * Any feedback received will be considered and used to improve and develop a final version of the *Structure Plan*.
- * The final version will be included in the rezoning proposal which will be available later this year. You will be able to make a formal submission on the rezoning at this time.
- * Council will make an application to the Environment Minister to adopt a Streamlined Planning Process for the rezoning of this land. Information on this process is available at <https://www.mfe.govt.nz/sites/default/files/media/fact-sheet-5-a%20new-optional-streamline-planning-process.pdf>

PUBLIC OPEN DAY

DATE:

16 August 2017

TIME:

11am-7pm

VENUE:

Havelock North Function Centre, Magdalinos Room
30 Te Mata Road, Havelock North

**MY VOICE
MY CHOICE**

If you have any questions about the Draft Structure Plan or proposed rezoning of land at Iona, please contact either Anna Summerfield or Anna Sanders in the Environmental Policy team on 871 5000 or annaes@hdc.govt.nz or annajs@hdc.govt.nz.

IONA

Urban Growth Area

PROPOSED RESIDENTIAL DEVELOPMENT UPDATE NEWSLETTER

MARCH 2018

PHOTO: www.abovehawkesbay.co.nz

The Iona area of Havelock North has been identified for residential growth since 1993. In a bid to address population and household growth in Havelock North and recognise the acute shortage of residential sites, Council is preparing to re-zone land in the Middle and Iona Road area.

BACKGROUND

The outcomes to be achieved through the rezoning of this area are:

- a place that adds value to Havelock North;
- recognition that this is an opportunity to create innovative land development responses to this unique environment;
- a quality environment that reflects best practice urban design outcomes;
- development provisions that shape the Iona Growth Area and seek to achieve HPUDS objectives - uses land efficiently, while creating a high quality residential community; and
- a structure plan that is developed in a collaborative manner and reflects the above objectives.

Substantial design and infrastructure planning has been carried out to ensure the above outcomes for the rezoning are achieved. This included the release for public comment of a draft Structure Plan in August 2017. It is a more detailed structure plan than Council has produced previously, given the unique landscape within which this area sits, and the desire to retain many of the existing landscape features that the local community identify with and value. Comments received on the draft Structure Plan have been used to shape the final Structure Plan which will be incorporated as part of the Plan Variation to rezone the land.

PROCESS FOR REZONING

As reported in a previous newsletter, as part of the rezoning process Council made an application to the Environment Minister to adopt a Streamlined Planning Process (SPP) for the rezoning of this land. Late in February of this year the Minister issued a direction, to use the SPP for the Iona rezoning. The direction includes procedural steps, timeframes, a statement of expectations and reporting requirements. The timeline, which includes notification, the release of the proposed plan variation for public submissions and a commissioner hearing is as follows:

STEP	DATE
SUBMISSIONS OPEN ON THE IONA REZONING VARIATION	➔ BY 6 APRIL
SUBMISSIONS CLOSE	➔ EARLY MAY
PUBLIC HEARING HELD	➔ END OF MAY/ BEGINNING OF JUNE
WRITTEN REPORT PROVIDED TO THE MINISTER WITH RECOMMENDATIONS ON SUBMISSIONS FOR HIS CONSIDERATION	➔ EARLY AUGUST

Note: These steps are similar in most respects to the normal process followed for the rezoning of land under the Resource Management Act (RMA)

What happens next?

- When notification occurs in April this year details of the proposed variation to rezone this land, including details on how to make a submission will be included on the project page of the Council website www.hastingsdc.govt.nz/ionarezoning.
- We will be available to answer any questions you might have on the Iona Rezoning Variation at an open session or by contacting a project member on the details below.
- A hearing will be held 30 May to 1 June 2018.
- The hearing panel will be made up of three independent hearing Commissioners experienced in planning and resource management law, stormwater, landscape and urban design issues.
- The independent Commissioners provide a report to the Environment Minister showing how submissions have been considered and may make recommendations in respect of the proposed variation for the Ministers consideration.
- The Environment Minister makes the final decision.

PUBLIC Open Session

DATE: 18 April 2018

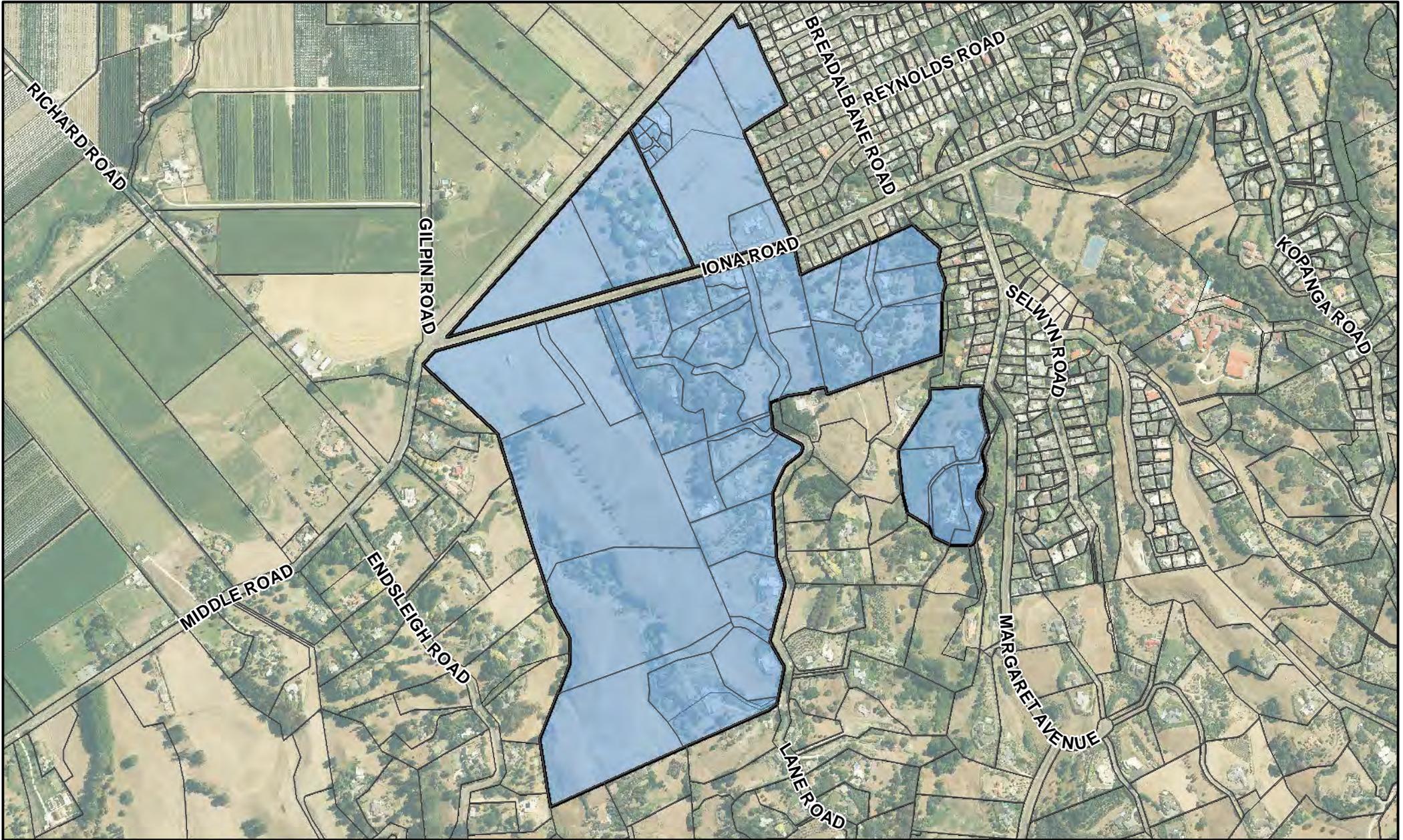
TIME: 3pm-6pm

VENUE:
Havelock North Function Centre
Magdalinos Room
30 Te Mata Road, Havelock North

If you have any questions about the Draft Structure Plan or proposed rezoning of land at Iona, please contact either Anna Summerfield or Anna Sanders in the Environmental Policy team on 871 5000 or annaes@hdc.govt.nz or annaajs@hdc.govt.nz.



PHOTO: www.abovehawkesbay.co.nz



Middle Road / Iona Road / Havelock Hills (lower)



Map Produced using ArcMap

Scale 1:10,000



Original Size: A4



NAPIER
CITY COUNCIL
Te Kaunihera o Ahuriri

Record of Pre-Notification External Consultation – Iona Plan Variation

CONSULTATION SUMMARY

Persons considered likely to be affected include those within the proposed rezoning area (including the landowner/appellant); those adjoining and adjacent; those who registered an interest in the appeal as a 274 party; those who can view the site; those who could be affected by an increase in traffic volumes as a result of the additional houses; those with existing stormwater outlets; iwi authorities and hapu. Consultation to date has been targeted and with both individual/s and key stakeholders. Hastings District Council is committed to continuing this level of consultation through the formal Resource Management variation process.

Organisations consulted with to date include the Hawkes Bay Regional Council; Ngāti Kahungunu Iwi Incorporated; Te Taiwhenua O Heretaunga; the Ministry of Education; Unison Networks (Electricity Distribution); Chorus (Telecommunications) and Powerco (Gas Distribution).

In terms of clauses 75(b)(vi), 76(2) and 76(6) RMA, it is noted that there is no relevant iwi participation legislation nor Mana Whakahono a Rohe which may apply to this proposal. Councils Strategic Advisor Culture and Heritage, has confirmed that there are no iwi participation agreements or Memoranda of Understanding or equivalent, that need to be taken into account in undertaking consultation on this proposed rezoning. Council has a policy of engaging with whanau, hapu and marae, as well as iwi authorities like Ngati Kahungunu Iwi Incorporated, settlement trusts and post settlement entities. Council recognises that hapu is the terminal identity in customary law where whakapapa is the source of mana [authority]. For this reason Council has engaged for 12 years with hapu as tangata whenua with mana whenua. This has enabled Council to effectively consult on matters provided for under the Resource Management Act. This approach will continue in undertaking consultation on the proposed rezoning of land at Iona.

The following outlines the specific steps undertaken to consult on cultural matters (but as outlined this is continuing and for this reason it is suggested that a step to this effect be included in the Streamlined Planning Process):

- a. We met with Ngaio Tiuka, Ngati Kahungunu Iwi Incorporated on 28 June 2017 and discussed the process that we had been going through in the preparation of the Iona Variation. He had no concerns with the rezoning as it had been identified through the growth strategies and is not affecting any areas of significance. We also advised that the Council was intending to apply to the Minister for a direction on the Streamlined Planning Process

and explained that appeal rights to the Environment Court are not provided for as part of this process. He could see that there would be benefits to the community from the streamlined process and did not oppose the Council's intention to make application to the Minister. Ngaio suggested that we also consult with Marei Apatu, Te Taiwhenua o Heretaunga;

- b. As a result of Ngaio's suggestion we consulted with Marei Apatu, Te Kaihautu, Te Taiwhenua o Heretaunga on 20 July 2017. Topics discussed included HPUDS objectives and fulfilling this by promoting development off the Heretaunga Plains; the proposed rezoning and design elements; importance of the Accidental Discovery Protocol; sites of significance; the street naming process; and Councils intention to apply for a Streamlined Planning Process to rezone land at Iona for residential purposes. Marei suggested that we consult with Dixie Reo or Nema Bartlett at a whanau level from Ngāti Mihiroa along with our intended korero with Jerry Hapuku, Kaumatua and hapu;
- c. Following Marei's suggestion we met with Dixie Reo, Ngāti Mihiroa, to discuss the proposal and three particular areas of interest;
- d. A check with the Hawkes Bay Regional Council, has confirmed that the streamlined process would not create inconsistencies with any agreements that the Hawke's Bay Regional Council has with iwi through the Regional Planning Committee. The role of the Regional Planning Committee is to oversee the review and development of the regional policy statement and regional plans for the Hawke's Bay region, as required under the Resource Management Act 1991. Membership of the committee comprises equal numbers of elected members and Treaty claimant representatives and all committee members have full speaking and voting rights. We have queried with the Regional Council's Manager Strategy and Policy, whether the SPP would impinge on the Regional Planning Committee's terms of reference. He said that the committee only deals with Regional issues and submissions on district matters are delegated to staff, so there would be no impact on the rights of the committee;
- e. To Councils knowledge, there is only one Treaty Claim within the district that is relevant to the land at Iona. There were a number of claims that have aggregated under He Toa Takatini and this has resulted in the establishment of a group Settlement Trust known as the Heretaunga Tamatea Settlement Trust. The following link to the Heretaunga Tamatea Settlement Trust website explains the process followed <http://www.heretaungatamatea.iwi.nz/background>. It is believed that this claim is not due to be finally settled until mid-2018. We are continuing dialogue with the claimants in conjunction with Council's Cultural and Heritage Advisor who has an ongoing relationship with the Settlement Trust and mana whenua. At her suggestion the following consultation process is to occur, which is to conclude by the end of September and is to include the Settlement Trust, hapu and whanau:
 - (i) Marama Laurenson, Strategic Advisor Culture and Heritage, to meet with Dixie Reo and get the list and contacts for the mokopuna of Te Heipora (meeting occurred 23 August 2017, see entry below);
 - (ii) Based on the whanau information provided at (i) above, a meeting invitation is to be sent out and will include Jerry Hapuku, Kaumatua; Dixie Reo, Ngāti Mihiroa and Liz Munroe, Chairperson Heretaunga Tamatea Settlement Trust;

- (iii) Giving a 2-3 week run up to the meeting, it is intended that the following be discussed; the situation with the Streamlined Planning Process application; rationale for SPP – lack of land sections available in a high demand area – only 9 sections available in Havelock North; make a presentation on the area – with a map showing the former marae site and the distance from other features; and get a verbal agreement regarding the planning instrument proposed.

For this reason, Council suggests that it would be appropriate to include a requirement in Step 1 of the SPP process to continue dialogue as outlined above and an additional step in the process so that prior to notifying the variation a draft document is sent to the Trust, hapu and whanau for their comment. Council will also meet with the Trust, hapu and whanau to run through the draft to make commenting easier.

Council has discussed the proposed rezoning with the Ministry of Education (see entry below dated 2 July 2017), who in summary advised “*the Ministry is confident that there is sufficient provision within the Havelock North schooling network to accommodate “in zone” students living within the Havelock North catchment*”. No inclusions were therefore needed to the draft Structure Plan as a result of these discussions. A copy of the email conversation with the Ministry is appended to this consultation summary as **Attachment A**. Council will continue to liaise with the Ministry in implementing its regional growth Strategy, the Heretaunga Plains Urban Development Strategy.

The consultation which has occurred to date is summarised below. It is intended that this table be used as a running log for any future consultation and used during the hearing process. The following table is colour coded for ease of reference as follows (noting that some colours may change as a result of considering feedback on the draft Structure Plan):

❖ Appellant and individual meetings with landowners within the proposed rezoning area (interested parties)	
❖ Meetings with property owners adjoining/adjacent to the proposed rezoning area (interested parties)	
❖ Key stakeholders e.g. Ministry of Education, Hawkes Bay Regional Council	
❖ Iwi Consultation	
❖ More general consultation – Open Public Day	

Date/s	Summary of Consultation	Considerations and Amendments to Draft Structure Plan (where relevant)	Staff Involved	Type of Consultation
2010	<p>The Heretaunga Plains Urban Development Strategy was adopted in 2010. The Heretaunga Plains Urban Development Strategy (HPUDS) is a combined effort by the Hastings District Council, Napier City Council and Hawke's Bay Regional Council to plan for urban growth in the years ahead. In the past, Hastings and Napier have planned for such growth independently. Submissions received and considered with the subject land all now included as being needed for residential growth areas from the period 2010 – 2045 (triangle and the lower hill area included in the precursor to HPUDS, Hastings Urban Development Strategy).</p>		Philip McKay (former Hastings District Council Policy Manager)	<div style="display: flex; justify-content: space-between; width: 100%; height: 100%;"> <div style="width: 33%; background-color: #cccccc;"></div> <div style="width: 33%; background-color: #ffffcc;"></div> <div style="width: 33%; background-color: #ccffcc;"></div> </div>
April 2014	<p>Adjoining and adjacent property owners were notified of the submissions received to the Proposed Plan requesting the residential rezoning of the Iona triangle and hill. Opportunity was therefore given to lodge further submissions. Further submissions were received and consideration of these submissions were made through the Section 42A report and hearing. Decisions then released in September 2015.</p>		Anna Sanders, Senior Planner (Special Projects) and Anna Summerfield, Senior Policy Planner	<div style="background-color: #e0e0e0; width: 100%; height: 100%;"></div>

<p>April 2014</p>	<p>Council Officers also visited properties at 50 Lane Road (Peter Rutter); Josi and Simon Beamish (96 Lane Road) and McCutcheon and Chris Miles (71 Endsleigh Road) in considering written submissions to the Proposed Plan. A sample of properties were selected from varying perspectives of the site to improve Officers understanding of submitters concerns. The Beamish property was also visited again with the Hearings Committee prior to the Proposed Plan hearings for Iona.</p>		<p>Rowan Wallis, (then Team Leader, District Plan Review); Anna Sanders, Senior Planner Policy (Special Projects) and Anna Summerfield, Senior Policy Planner</p>			
<p>July 2016</p>	<p>Iona Issues and Options Paper Released for public comment, which outlined three possible options for rezoning land in this area. These 3 options, described and showed development from a smaller to larger scale on the land identified as suitable for residential growth in the Heretaunga Plains Development Strategy 2010 - 2045 (HPUDS). A copy of the Issues and Options document released can be found at this link - http://www.hastingsdc.govt.nz/files/lonaisuesandoptionsreportjuly2016mergedfinal.pdf. Two community meetings were held to outline the three options.</p> <p>Council received feedback from 34 individuals and groups. A summary of the issues and concerns raised were then summarised for further consideration and can be found here: - http://www.hastingsdc.govt.nz/files/SummaryIonaIssuesandOptionsPaper16Nov2016.pdf.</p>		<p>Rowan Wallis, Policy Manager; Anna Summerfield, Senior Environmental Planner Policy and Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>			

	<p>These issues and concerns raised through the feedback forms have been used to inform the preparation of the draft Iona Structure Plan and proposed variation.</p>					
<p>November 2016 – July 2017</p>	<p>Iona Working Group Meetings and Site Walkover. The Iona Working Group was made up of Council Officers, landowner agents (Stephen Daysh, Planner and Andrew Taylor, Surveyor) and Family Member (Hamish White) and representatives appointed by the Wider 274 Group:</p> <ul style="list-style-type: none"> • Josi Beamish, 96 Lane Road (adjoins hill portion of the site to the south); • Peter Rutter, 50 Lane Road (adjoins hill portion of the site to the east); • Chris Miles, 71 Endsleigh Road (adjoins hill portion of the site to the west); and • Dale Prebble, 66 Lane Road (adjoins hill portion of the site to the west). <p>Gavin Lister and Mark Radford, Isthmus Group who provided Landscape and Urban Design advice to the Iona Working Group.</p> <p>Minutes of each Working Group meeting and the Working Group Newsletters were submitted to all 274 parties. The Iona Working Group Newsletters were also circulated to those who submitted on the Issues and Options Paper.</p> <p>Appended to this application is a copy of the Working Group Newsletters issued in December 2016 and May 2017 (refer to Attachment 7).</p>	<p>A number of landscape elements and characteristics, environmental effects and mitigation methods were discussed and refinements made during the course of Working Group discussions, these can be summarised as:</p> <p>(a) retention of the central ridge (unplanted, as it is a key feature in the existing landscape) and valley to divide the area into neighbourhoods;</p> <p>(b) an eastern aligned curved main spine road over a western one, as it resulted in less adverse effects on amenity and character as it is positioned in the saddle of the central ridge;</p> <p>(b) the desire for rural character and treatment of the main spine road;</p> <p>(c) an open space reserve network which includes existing ponds and public walkway loop track connections to Lane Road;</p> <p>(d) No new residential lots accessible to Lane Road to assist retain its rural character;</p>	<p>Rowan Wallis, Policy Manager; Anna Summerfield, Senior Environmental Policy Planner and Anna Sanders, Senior Environmental Planner (Special Projects) (plus Colin Hosford, Reserves Manager; and Matt Kneebone, Stomwater Manager</p>			

		<p>(e) Significant planting to the steep slopes in the Upper Plateau neighbourhood;</p> <p>(f) Retention of bull hill as an existing landform and the intention to include this as a neighbourhood feature;</p> <p>(g) creation of neighbourhoods to be sensitive to existing character through the creation of varying plan rules; and</p> <p>(h) Mix of lot sizes and the avoidance of cookie cutter development.</p> <p>These are also documented in the minutes and the outcomes incorporated into the draft Structure Plan released for community feedback on August 1 2017.</p> <p>A copy of the draft Structure Plan is appended to the Streamlined Planning Process application as Attachment 4.</p>					
<p>Adopted 1 July 2017</p>	<p>The Heretaunga Plains Urban Development Strategy is the result of a collaborative approach by the Hastings District Council, Napier City Council and Hawke's Bay Regional Council towards managing urban growth on the Plains from 2015 to 2045.</p>		<p>Mark Clews, Principal Advisor: District Development, Hastings District Council</p>				

	<p>The joint Strategy was first adopted in 2010, then a reviewed version re-adopted by the three councils in 2017 - www.hpuds.co.nz/assets/Document-Library/Strategies/2017-Heretaunga-Plains-Urban-Development-Strategy-incl-Maps-AUG17.pdf.</p> <p>The version adopted in 2010 included the subject land. Submissions were received on the inclusion of land at Iona but this area was recommended to remain as a future growth area, which was confirmed by the three partner Councils. 274 parties and those who submitted on the Issues and Options were advised of the release of the draft HPUDS document and that they could make submissions.</p> <p>Mana whenua input to the review was provided via the Hawkes Bay Regional Council, Regional Planning Committee which includes Appointed Members of Treaty Settlement Groups and two iwi representatives on the review panel.</p>						
<p>2015 – August 2017</p>	<p>Phone, email and individual meetings (onsite and at Council offices) with Peter Rutter (also a member of the Iona Working Group), 50 Lane Road. Property identified within the proposed rezoning area in the draft Structure Plan.</p> <p>Concerns relate to landscape qualities, reverse sensitivity, light spill, noise, traffic and cost of developing the land, due its hilly topography.</p>	<p>Attempts have been made to resolve Peter Rutter’s concerns, these include the concepts introduced in the draft Structure Plan to avoid, remedy or mitigate effects, preparation of cross sections to determine landscape effects, contouring the spine road 6m below the current topography at the boundary of 50 Lane Road to address noise and lighting concerns, land swaps and discussions around the character treatment of the Spine Road adjoining his property.</p>	<p>John O’Shaughnessy, Group Manager Planning and Regulatory Services; Rowan Wallis, Policy Manager and Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>				

		Discussions will continue through feedback on the draft Structure Plan. Refinements to the draft Structure Plan as a result of these discussions maybe required.			
<p>December 2016 and 4 August 2017</p> <p>Hastings District Council, Policy Meeting Room</p>	<p>William and Cath Davidson, property owners at 47 Gilpin Road (property in the vicinity of an existing stormwater outlet and opposite the Iona Triangle).</p> <p>12/16: Concerns relate to stormwater and the potential for current flows experienced to increase and the potential positioning of the wastewater pump station outside their property. Agreement given in December 2016 that we would meet with the Davidson's individually once the concept for Stormwater management was better understood and the draft Structure Plan had been completed for feedback.</p> <p>4/8: Met with William, Cath, Karen and John Davidson, to discuss how the catchment currently works and the stormwater design prepared and proposed by Tonkin + Taylor. Proposed infrastructure for the stormwater solution (swales, ponds (some existing), inlet structure and detention areas) identified on the draft Structure Plan. Advised that flows to existing outlets are to remain at pre-development flows. Additional design work to be done, consent sought from the Hawkes Bay Regional Council and further discussions with the Davidson's maybe needed.</p> <p>Karen raised whether any upgrades might be proposed to Gilpin Road as part of the rezoning. Explained that our</p>	<p>Wastewater pump station is positioned opposite the Davidson's property and on land to be vested as public open space.</p> <p>Changes to the draft Structure Plan as they relate to stormwater design and management will be needed once further modelling work completed. This is to be completed before notifying the variation.</p>	<p>Rowan Wallis, Policy Manager; Anna Sanders, Senior Environmental Planner Policy (Special Projects) and Matt Kneebone, Stormwater Manager</p>		

	<p>roading engineers would monitor traffic volumes. Post meeting email sent to our roading team suggesting that pre-development counts should be carried out, so we have a baseline.</p> <p>The Davidsons also attended the Stapleford Park/Middle Road community meeting, where discussions centred around stormwater also.</p>			
<p>March 2017 - 10 August 2017</p>	<p>Geoff Gage, property owner within the proposed rezoning area 'Breadalbane Neighbourhood' (62 Breadalbane Avenue).</p> <p>During various phone calls and meetings we have discussed the proposed rezoning of their property in Breadalbane Avenue; the work the Iona Working Group had undertaken to date; early thinking around its character; their development aspirations; preliminary work Gavin Lister had done around some intensification development scenarios and servicing issues (particularly wastewater and stormwater).</p>			
<p>8 February 2017 Hastings District Council, Green Room 10.30am</p>	<p>Met with Gillian Fookes, property owner within the proposed rezoning area 'Breadalbane Neighbourhood' (55 Breadalbane Avenue) and Colin Shanley (Surveyor).</p> <p>Discussed the proposed rezoning of their property in Breadalbane Avenue, the work the Iona Working Group had undertaken to date and our early thinking around its character.</p>		<p>Anna Sanders, Senior Environmental Planner Policy (Special Projects) and Rowan Wallis, Policy Manager</p>	

<p>11 April 2017</p> <p>Hastings District Council, Policy Meeting Room</p> <p>9.30am</p>	<p>Met with Gillian Fookes, property owner within the proposed rezoning area 'Breadalbane Neighbourhood' (55 Breadalbane Avenue) and Colin Shanley (Surveyor).</p> <p>Discussed some preliminary work Gavin Lister had done around some intensification development scenarios and stormwater issues. Concern that the inclusion of any new roads results in loss of density and that better standalone access options exist. Explained that it is just a concept and that more work needs to be done. Agreed that further consultation would occur.</p>		<p>Anna Sanders, Senior Environmental Planner Policy (Special Projects) and Anna Summerfield, Senior Environmental Policy Planner</p>	
<p>11 April 2017</p> <p>Hastings District Council, Policy Meeting Room</p> <p>1.30pm</p>	<p>Initial meeting with Craig Goodier, Principal Engineer/Team Leader (Modelling), Hawkes Bay Regional Council to discuss stormwater modelling work for Iona and the need to look carefully at catchment swaps, effects on development downstream and pre and post development flows. Draft stormwater management plan to be prepared by Tonkin + Taylor.</p>		<p>Rowan Wallis, Policy Manager; Anna Sanders, Senior Environmental Planner Policy (Special Projects) and Matt Kneebone, Stormwater Manager</p>	
<p>8 June 2017</p> <p>140 Lane Road</p>	<p>Met with Stephen and Kim Matthews, onsite at 140 Lane Road (adjoins the Upper Plateau area). Site visit included walking to the rear boundary of their property to look at the proximity of the proposed site and buildings.</p> <p>Discussed intentions with regards to the Upper Plateau and that a concept/master plan was likely to be used to manage development effects.</p>	<p>After this meeting we spoke to our Landscape advisor and discussed the Matthews concerns, which are similar to the Working Groups and which resulted in the inclusion of a masterplan for the Upper Plateau.</p> <p>However, single storey control added to the draft Structure Plan to</p>	<p>Anna Sanders, Senior Environmental Planner Policy (Special Projects) and Anna Summerfield, Senior</p>	

	<p>Matthews outlined that while they understood progress was likely to happen, they wanted to understand how close buildings were likely to be to their common boundary and whether consideration could be given to limiting the height of dwellings along this boundary to single storey (similar situation to Kinloch, Taupo).</p>	<p>some lots as a result of this onsite meeting.</p>	<p>Environmental Policy Planner</p>	
<p>20 June 2017 Chorus, Nick van Druten, Senior Delivery Specialist (by email)</p>	<p>Infrastructure consultation with Chorus as telecommunications infrastructure supplier. Email sent asking whether there is telecommunications capacity. Advised “... <i>Currently Chorus has nowhere near enough capacity in its network for the scale of development you are describing.</i></p> <p><i>However, it is not impossible with some serious civil work and project management to get capacity there from the Havelock Nth. Telephone exchange”.</i></p> <p>No changes needed to the draft Structure Plan needed as a result of this advice but agreed to keep Chorus up to date as the proposed rezoning progresses.</p>		<p>Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>	
<p>20 June 2017 Powerco, Emma Gibson, Gas Account Manager (by email)</p>	<p>Infrastructure consultation with Powerco as gas infrastructure supplier. Email sent asking whether there is gas distribution capacity. Advised “...<i>Powerco does not currently have gas mains and services in the area Hastings District Council is looking to rezone. The nearest gas main terminates in front of 45 Iona Road however this can be extended and Powerco would be happy to look at providing gas infrastructure to the development and the potential dwellings. Although there is no current works plan in the area Powerco can work directly with the development</i></p>		<p>Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>	

	<p><i>managing any works with other services and infrastructure to future proof supply”.</i></p> <p>No changes needed to the draft Structure Plan as a result of this advice, but agreed to keep Powerco up to date as the proposed rezoning progresses.</p>			
<p>28 June 2017</p> <p>Ngāti Kahungunu Iwi Incorporated Offices</p> <p>11am</p>	<p>Met with Ngaio Tiuka, Director (Acting) Environment and Natural Resources, Ngāti Kahungunu Iwi Incorporated, and discussed the proposed rezoning; generally that this land has been signaled for potential rezoning in the Heretaunga Plains Urban Development Strategy for some time; housing affordability and the need to look at this regionally; infrastructure; Councils intention to apply for a Streamlined Planning Process to rezone the land at Iona and a suggestion to consult with Taiwhenua. No inclusions needed in the draft Structure Plan as a result of these discussions.</p> <p>It was also agreed when the draft Structure Plan was released that a copy would be provided to Ngāti Kahungunu Iwi Incorporated. On 2 August 2017 a copy of the draft Structure Plan was provided to Ngaio.</p>		<p>Rowan Wallis, Policy Manager and Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>	
<p>2 July 2017</p> <p>Ministry of Education (Alan Dibley, Regional Property Adviser and Kirsty Oosterkamp, Network Analyst)</p>	<p>Contacted the Ministry of Education to outline the proposed rezoning and ask whether there were any issues Council needed to be aware of in drafting the draft Structure Plan.</p> <p>The Ministry advised Council advised in an email dated 2 August 2017 that <i>“the Ministry is confident that there is sufficient provision within the Havelock North schooling network to accommodate “in zone” students living within</i></p>		<p>Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>	

<p>Email and phone conversations.</p>	<p><i>the Havelock North catchment. In zone students are those currently residing or have resided at some point within the school's home zone for which they are attending.</i></p> <p><i>The provision of 8 new classrooms, due for completion by end of 2017, will provide additional capacity to the existing network which could be generated from the development of new growth areas identified in HPUDS. The Ministry will also be undertaking an area strategy review in 2018 for the Havelock North schooling network to ensure that we are making best use of the network and providing for any future growth in the area.</i></p> <p><i>In the interim, the Ministry will continue to liaise with HDC regarding new growth areas so that we can anticipate any potential effects these may have on the existing schooling network"</i></p> <p>(The Ministries response is appended to this consultation record as Attachment A).</p> <p>Agreed to provide a copy of the draft Structure Plan once released for community feedback.</p> <p>Ministry advised by email of the release of the draft Structure Plan for community feedback on 2 August 2017 as agreed.</p>				
<p>12 July 2017</p> <p>Hastings District Council, Policy Meeting Room</p>	<p>Met with David MacCallum, property owner of 155 Iona Road and discussed his potential inclusion in the proposed rezoning area, whether he had any development aspirations and how best to provide access should his property be included in the proposed rezoning area.</p>	<p>If this property is to be included in the proposed rezoning area, look at access arrangements to the middle ridge 'Area B'.</p>	<p>Rowan Wallis and Anna Sanders, Senior Environmental Planner Policy</p>		

11am			(Special Projects)		
18 July 2017 Hastings District Council, Policy Meeting Room 2pm	<p>Met with Tony Craig, property owner at 78 Lane Road (a portion of his property is within the proposed rezoning area). Discussed:</p> <ul style="list-style-type: none"> • his concerns that he submitted to the Iona Issues and Options paper on; • Councils intention to include a portion of his property in the proposed rezoning area; • Whether Council might consider including the vacant portion of his property fronting Lane Road in the proposed rezoning area; • Proposed access arrangements to Lane Road (walking, open space service vehicles and retention of existing residential) of which he has a ¼ share in; • whether he had a preference around the proposed inclusion of a portion of his property in the proposed rezoning area and the access arrangements; and • a suggestion that he submit on the draft Structure Plan when released. 		Anna Summerfield, Senior Environmental Policy Planner and Anna Sanders, Senior Environmental Planner Policy (Special Projects)		
18 July 2017 Hastings District Council, Policy Meeting Room 3.30pm	<p>Meet with Roger Pharazyn, property owner at 71 Breadalbane Avenue.</p> <p>Discussed his potential inclusion in the proposed rezoning area and whether he might look at protecting his dwelling (designed by John Scott) as a heritage item. Agreed to provide DP rules around heritage items and continue discussions either at the Breadalbane neighbourhood meeting or individually.</p>		Anna Summerfield, Senior Environmental Planner Policy and Anna Sanders, Senior Environmental Planner Policy (Special Projects)		

	Provisions provided but follow up needed in working through feedback on the draft Structure Plan.				
20 July 2017 Taiwhenua Heretaunga 11am	<p>Meet with Marei Apatu, Te Kaihautu, Te Taiwhenua o Heretaunga. Topics discussed:</p> <ul style="list-style-type: none"> • HPUDS objectives and fulfilling this by promoting development off the Heretaunga Plains; • Discussed the proposed rezoning and design elements; • Importance of the Accidental Discovery Protocol; • Street Naming process; and • Suggestion that we discuss the proposed development with Nema Bartlett or Dixie Reo along with our intended korero with Jerry Hapuku. 		Anna Summerfield, Senior Environmental Planner Policy and Anna Sanders, Senior Environmental Planner Policy (Special Projects)		
21 July 2017 Hastings District Council, Policy Meeting Room 11am	Met with Roger Wiffin, planning agent for the Slade Property, 69 Breadalbane Avenue. Discussed proposed rezoning; a development proposal; and whether this was best served by way of a resource consent application or being included in the proposed rezoning area.		Rowan Wallis and Anna Sanders, Senior Environmental Planner Policy (Special Projects); Anna Summerfield, Senior Environmental Planner Policy and Craig Scott, Policy Planner		
25 July 2017 Hastings District Council, Policy Meeting Room	<p>Meet with Dale and Jenny Prebble, property owners at 66 Lane Road. Discussed:</p> <ul style="list-style-type: none"> • the proposed rezoning and Councils intention to include a portion of their property within the rezoning area; 		Rowan Wallis, Policy Manager and Anna Sanders, Senior Environmental Planner Policy		

<p>1pm</p>	<ul style="list-style-type: none"> the possibility of a deferred zoning, mechanisms for uplift and whether this mechanism would have the same effect on any rate increases; if they chose not to be included in the re-zoning how might Council manage this and their neighbour's desires; if included in the zone, the Prebble's have no intention to develop the site immediately but if and when they do how might it be serviced; and the ability to submit on the draft Structure Plan to shape the final version. 		<p>(Special Projects)</p>		
<p>25 July 2017 Hastings District Council, Policy Meeting Room 2pm</p>	<p>Met with Simon and Kate Andersen, property owners at 145 Iona Road. Discussed:</p> <ul style="list-style-type: none"> the proposed rezoning and Councils intention to include their property within the rezoning area; and the ability to submit on the draft Structure Plan to shape the final version. 		<p>Rowan Wallis, Policy Manager and Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>		
<p>25 July 2017 Hastings District Council, Policy Meeting Room 4pm</p>	<p>Met with Paul and Julia Beamish. Discussed the Work the Iona Working Group have undertaken to date; use of a masterplan with a suggested maximum of 20 lots to guide development and manage effects, how the open space maintenance and private access adjoining their property is proposed to work and servicing (suggestion that there is a water easement that runs through the Lowe property which provides water to their property). Water easement needs investigating.</p>		<p>Rowan Wallis, Policy Manager and Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>		
<p>27 July 2017</p>	<p>Presented the draft structure plan to the Iona Working Group</p>		<p>Rowan Wallis, Policy Manager, Anna Sanders</p>		

<p>Hastings District Council, Meeting Room 1 Civic Admin Building</p> <p>2pm</p>	<p>Discussed all aspects of the structure plan and those relevant to each of the four proposed neighbourhoods, discussed the consultation proposed – neighbourhood group meetings, open day and individual meetings as requested.</p> <p>Outlined and discussed the Council’s intention to apply for a Streamlined Planning Process for the variation to the PDP to rezone the land for residential purposes.</p>		<p>Senior Environmental Planner Policy (Special Projects) and Anna Summerfield Senior Environmental Planner Policy.</p>		
<p>31 July 2017</p> <p>Hastings District Council, Policy Meeting Room</p> <p>4pm</p>	<p>Met with Craig Goodier, Principal Engineer / Team Leader (Modelling), HBRC; Gary Clode, HBRC; Russell Nettlingham and Andrew Taylor as landowner agents and Jon Rix, Tonkin and Taylor. Discussed the draft stormwater management plan prepared by Tonkin + Taylor. Additional pre and post development modelling flows needed along with further information on Stormwater Outlet D.</p>	<p>Modelling to be done and built into the Structure Plan where needed.</p>	<p>Rowan Wallis, Policy Manager and Matt Kneebone, Stormwater Manager</p>		
<p>Release of Draft Structure Plan 1 August 2017 for Community Feedback 1 August 2017</p> <p>The release of the draft Structure Plan for community feedback and information on the community open day has been prepared in conjunction with Councils communications team and has included:</p> <ul style="list-style-type: none"> • information on the dedicated webpage on Councils website - http://www.hastingsdc.govt.nz/proposed-residential-growth-2016; • targeted Facebook ads for Havelock North residents inviting feedback and information on the community open day (16 August 2017); • Personal invitations to the five neighbourhood meetings held, which were targeted and organised based on location and common issues; • a paid advertisement in the Havelock North Village Press (free community newspaper which also is circulated to Clive, Haumoana and Te Awanga) on August 1; • A press release and resultant HB Today Article http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&objectid=11900016; • Targeted flyer drops in the vicinity of the proposed rezoning of Breadalbane Avenue and to the east of the ‘Iona triangle’ which is currently rezoned residential but density changes proposed to meet Heretaunga Plains Urban Development Strategy objectives (Reynolds Road, Arcadia Lane and Chestnut Court) with information about the open day on August 16; and 					

- Emails to those who previously submitted on the Issues and Options Paper, were registered 274 parties to the appeal or have been earlier consulted with on the proposed rezoning.

Feedback on the draft Structure Plan can be provided via downloading a feedback form and emailing it to a dedicated email address or via my voice my choice <http://www.myvoicemychoice.co.nz/iona-urban-growth-area-consultation> Councils online dedicated feedback tool. Feedback on what elements are supported and those which are not, along with the identification of where additional investigations are required have been encouraged. Council will prepare a summary of feedback received and provide preliminary comments. This will be available on Councils website in time.

<p>1 August 2017 – 11 August 2017</p>	<p>Met with the future owner of 142 Lane Road/email discussions.</p> <p>Discussed intentions with regards to the Upper Plateau and that a concept/masterplan plan was likely to be used to manage development effects. A copy of the draft Structure Plan was sent the day it was released for community feedback (1 August 2017), with a suggestion that they submit.</p> <p>A copy of the masterplan was sent, as it includes lot sizes, placement, measurements and assists provide greater clarity.</p> <p>11/8: Met again and discussed the Draft Structure Plan in more detail. Agreed to arrange for two cross sections to be prepared from two different vantage points (dwelling and visitor accommodation) showing a single storey dwelling on proposed lots 14 and 15 and the inclusion of the vegetation control (with a maximum height of 2 metres). Further discussion can then occur.</p>	<p>Changes to the Structure Plan might occur as a result of any feedback received, agreed cross section work and further discussions.</p>	<p>Anna Summerfield, Senior Environmental Planner (Policy) and Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>		
<p>2 August 2017</p> <p>Draft Structure Plan Neighbourhood</p>	<p>Invitations sent to all property owners in Breadalbane Avenue (properties within the proposed rezoning area). Attended by:</p> <ul style="list-style-type: none"> • Geoff and Lyn Gage – 62 Breadalbane Ave • Stephen and Gillian Fookes – 55 Breadalbane Ave 		<p>Rowan Wallis, Policy Manger; Anna Sanders, Senior Environmental</p>		

<p>Meeting – Breadalbane Avenue, HN Community Centre</p> <p>4pm</p>	<ul style="list-style-type: none"> • Derek, Anne and John Slade as Trustees for Tasman Smith Estate Trust – 69 Breadalbane Avenue • SuYen Pharazyn – 71 Breadalbane Avenue <p>(attendance log kept and on record).</p> <p>Consultation material including the draft Structure Plan and key points prepared and distributed for the 'Breadalbane Neighbourhood' (ENV-9-19-4-17-135) meeting to encourage discussion. Discussed servicing including stormwater, which includes a pressurised sewer main along the existing alignment and individual pressurised sewers for each new residential site; whether existing character was important and whether this should be sought to be retained and rating issues.</p> <p>Outlined that while there is not a lot of detail for the Breadalbane neighbourhood itself currently (and more detail may be needed in the refined version of the Structure Plan), we would value comments on the characteristics of Breadalbane Avenue, values that are important to the existing residents and development aspirations. This will help develop the proposed District Plan provisions that would sit alongside the Structure Plan.</p> <p>Towards the conclusion of the meeting project timing and Councils intention to apply for a Streamlined Planning Process for the variation to the PDP to rezone the land for residential purposes was discussed.</p> <p>Follow up email sent to all those who attended this meeting with information on what was discussed and how to provide feedback.</p>		<p>Planner Policy (Special Projects), Craig Scott, Policy Planner and Matt Kneebone, Stormwater Manager</p>		
---	--	--	---	--	--

<p>3 August 2017</p> <p>Unison Networks Limited, Customer Projects Planner, Stephen Whitaker (by email)</p>	<p>Map of proposed rezoning area sent to Unison requesting advice on whether there is current capacity to supply an estimated 390 dwellings, if there are any overhead lines that pose any issues and any Unison infrastructure that will need moving should this land be rezoned. Upon the release of the draft Structure Plan for community feedback and advice of this to them, Unison advised:</p> <p><i>“The roads that flank the highlighted area all have overhead lines which might or might not impact on the proposed subdivision. If the subdivision necessitates the undergrounding of the lines Unison will be willing to look at this option with the costs going to the developer.</i></p> <p><i>There are two 11kV feeders that run along these roads that flank the highlighted area, namely the Te Aute feeder and the Iona feeder. At this point in the network both feeders are rural and I would expect that a network upgrade would be needed for 390 new dwelling.</i></p> <p><i>Depending on the layout as a rule of thumb you could look at approx. 50 dwellings per 300kVA transformer, therefore 8 transformers would be required together with the associated HV and lv switches and pedestals.</i></p> <p><i>To accurately assess and prepare an estimate for this type of subdivision a scheme plan would be required. It generally takes about 8-12 weeks to prepare an electrical layout and an estimate”.</i></p> <p>These feeders may need to be repositioned, but can be built into the project plan. There is nothing that needs further consideration in preparing the Structure Plan for notification.</p>		<p>Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>	
---	--	--	---	--

<p>3 August 2017</p>	<p>Nadim and Michelle Azar, 142 Lane Road (adjoins the proposed Upper Plateau area to the south). Email received regarding the proposed rezoning. Change of ownership occurred with this property in May 2017. Response sent. Invitation sent to the neighbourhood meeting, but chose not to attend. Their property is currently on the market, so a copy of the draft Structure Plan was sent to the listing agent upon its release.</p>		<p>Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>	
<p>7 August 2017</p> <p>Draft Structure Plan</p> <p>Neighbourhood Meeting – Stapleford Park/Middle Road/Te Aute Road/Gilpin Road</p> <p>Hastings District Council, Landmarks Room</p> <p>4pm</p>	<p>Invitation sent to property owners in the Stapleford Park, Middle, Te Aute and Gilpin Roads (properties in the lower stormwater catchment and/adjoining the Iona triangle). Attended by:</p> <ul style="list-style-type: none"> • Dave and Kaye Nelson – 93 Richards Road; • Peter and Barbara Moore – 139 Te Aute Road; • Chris Nimon – 155 Middle Road; • William Davidson – 47 Gilpin Road; and • John Davidson and Karen Davidson – 47 Gilpin Road. <p>(attendance log kept and on record).</p> <p>Consultation material including the draft Structure Plan and key points prepared and distributed for the ‘Bull Hill Neighbourhood’ meeting to inform and encourage discussion.</p> <p>Discussed residents’ concerns around the management of stormwater and the servicing of the proposed development area. Concerns in respect of site size in the Bull Hill neighbourhood expressed. Explained that a key outcome for this area is to have a variety of site sizes to enable choice in the market and to provide different housing options for a range of household types, thereby fulfilling HPUDS objectives and Urban NPS requirements.</p>		<p>Rowan Wallis, Policy Manager; Anna Summerfield, Senior Environmental Planner Policy and Matt Kneebone, Stormwater Manager</p>	

	<p>Towards the conclusion of the meeting project timing and Councils intention to apply for a Streamlined Planning Process for the variation to the PDP to rezone the land for residential purposes was discussed.</p> <p>Follow up email sent to all those who attended this meeting with information on what was discussed and how to provide feedback.</p>			
<p>8 August 2017</p> <p>HN Community Centre, Neighbourhood Meeting – Upper Endsleigh</p> <p>4pm</p>	<p>Invitation sent to all property owners in the Upper Endsleigh/Lane Road area (adjoining the Upper Plateau). Attended by:</p> <ul style="list-style-type: none"> • Paul and Julia Beamish – 84 Lane Road; • Chris Miles and Susan McCutcheon – 71 Endsleigh Road; • Keith and Velma Kyle – 98 Lane Road; • Stephen and Kim Matthews – 140 Lane Road; and • David and Karen Kenwright – 57 Endsleigh Road. <p>(attendance log kept and on record).</p> <p>Consultation material including the draft Structure Plan and key points prepared and distributed for the ‘Upper Plateau Neighbourhood’ meeting to inform and encourage discussion.</p> <p>Discussed concerns in respect of traffic impacts, height and species of plantings proposed in the Upper Plateau neighbourhood, and the location of some of the building platforms in relation to the ridgeline in the south-western corner of the upper plateau area.</p> <p>Towards the conclusion of the meeting project timing and Councils intention to apply for a Streamlined Planning Process for the variation to the PDP to rezone the land for residential purposes was discussed.</p>	<p>Additional work and ongoing discussions needed with certain property owners in preparing the notified Structure Plan. More work needed around the height and species of plantings within the Upper Plateau.</p>	<p>Rowan Wallis, Policy Manager; Anna Summerfield, Senior Environmental Planner Policy and Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>	

	Follow up email sent to all those who attended this meeting with information on what was discussed and how to provide feedback.			
8 August 2017 140 Lane Road	<p>Draft Structure Plan discussed with the Stephen and Kim Matthews (140 Lane Road) at the Upper Endsleigh Neighbourhood Meeting.</p> <p>They asked for greater clarity around the placement of the building platforms in relation to their dwelling and potential effects caused. Also asked whether consideration might be given to the inclusion of vegetation control area on proposed lot 13, similar to what has been suggested and shown on the draft Structure Plan for proposed lots 14 and 15. A maximum height of 2 metres for planting within the vegetation control area was also discussed. Agreed to get a cross section done and to then discuss again.</p>	Some changes may be needed as a result of additional investigations.	Anna Sanders, Senior Environmental Planner Policy (Special Projects)	
9 August 2017 Draft Structure Plan Neighbourhood Meeting – Lane Road Hastings District Council, Landmarks Room 4pm	<p>Invitation sent to all property owners in the lower Lane Road area. Attended by:</p> <ul style="list-style-type: none"> • Peter Mackie - 133 Iona Road; • Matthew and Rozalie Dixon - 8 Lane Road; • David and Jenifer Oliver - 151 Iona Road; and • Robin Wilkins – 153 Iona Road. <p>(attendance log kept and on record).</p> <p>Consultation material including the draft Structure Plan and key points prepared and distributed for the ‘Middle Ridge Neighbourhood’ meeting to inform and encourage discussion.</p> <p>Discussed that the proposed ‘Middle Ridge Neighbourhood’ boundary to the east was at the recommendation of our</p>		Rowan Wallis, Policy Manager; Anna Summerfield, Senior Environmental Planner (Policy) and Anna Sanders, Senior Environmental Planner (Special Projects)	

	<p>Landscape Architect and that it roughly follows the low ridge (adjusted to property boundaries) separating the Lane Road valley from catchment to the west. The boundary is configured so as to retain the existing rural character on Lane Road.</p> <p>Some attendees thought that the boundary could be extended to include some lower Lane Road properties without altering the rural character of Lane Road. Feedback to be provided to Council for consideration, to this effect.</p> <p>Towards the conclusion of the meeting project timing and Councils intention to apply for a Streamlined Planning Process for the variation to the PDP to rezone the land for residential purposes was discussed.</p> <p>Follow up email sent to all those who attended this meeting with information on what was discussed and how to provide feedback. Additional information on zoning, rural character overlay and lot creation history provided by email post neighbourhood meeting (10/8).</p>			
<p>10 August 2017 125 Lane Road 10am</p>	<p>Met with Rebecca Huckle (125 Iona Road), Juliet Cottrell (4 Lane Road) and Warwick Thomson (6 Lane Road) as they could make the neighbourhood meeting the night before.</p> <p>Consultation material prepared for ‘Bull Hill Neighbourhood’ and ‘Middle Ridge Neighbourhood’ circulated.</p> <p>Discussed their broad concerns regarding the rezoning; loss of special character, traffic, lighting, commercial node its need and resultant increase in traffic, density in the Bull Hill Neighbourhood, access issues, stormwater, current wildlife populations, tree and Macrocarpa hedge retention; the need</p>		<p>Rowan Wallis, Policy Manager; Anna Sanders, Senior Environmental Planner Policy (Special Projects) and Anna Summerfield, Senior</p>	

	<p>for speed restrictions and Councils intention to apply for an SPP. Thought that the Bull Hill portion of the draft Structure Plan needed additional thought.</p> <p>Explained HPUDs objectives, Urban NPS and that a portion of the land opposite Lane Road is already zoned Residential so a portion of the anticipated effects could be experienced now.</p> <p>Feedback progress outlined and agreed to keep discussing their concerns.</p>		Environmental Planner Policy	
<p>10 August 2017</p> <p>Neighbourhood Meeting – Lower Endsleigh</p> <p>HN Community Centre</p> <p>4pm</p>	<p>Invitation sent to all property owners in the lower Endsleigh Road area. Attended by:</p> <ul style="list-style-type: none"> • Liz Ashby - 225 Middle Road, Havelock North; and • Alex and Jennie Copeland - 31 Endsleigh Road. <p>(attendance log kept and on record).</p> <p>Consultation material including the draft Structure Plan and key points prepared and distributed for the 'Upper Plateau and Middle Ridge Neighbourhoods' to inform and encourage discussion.</p> <p>Discussed concerns in respect of visual impacts; impacts on existing watercourses and streams that are located on the edge of the rezoning area and drain into the proposed open space area; fencing along the proposed open space boundary and security concerns in terms of the location of public walking tracks near neighbouring property boundaries; lighting impacts (support the use of a rural standard for lighting in the hill area) and construction effects – dust and protection of ponds from siltation (mentioned that it's the Hawkes Bay Regional Council that controls these effects). Thought the placement of the reserve was key in assisting mitigate landscape effects.</p>		Rowan Wallis, Policy Manager; Anna Summerfield, Senior Environmental Planner (Policy) and Anna Sanders, Senior Environmental Planner Policy (Special Projects)	

	<p>Towards the conclusion of the meeting project timing and Councils intention to apply for a Streamlined Planning Process for the variation to the PDP to rezone the land for residential purposes was discussed.</p> <p>Follow up email sent to all those who attended this meeting with information on what was discussed and how to provide feedback.</p>			
<p>11 August and 14 August 2017</p> <p>Phone Conversation/ Email</p>	<p>Barbara Muldoon, part owner in 155 Iona Road. Discussed the potential inclusion of this property in the proposed rezoning area; whether there was an ability to opt in or out and up to what point and what the rezoning might mean for her rates.</p>		<p>Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>	
<p>16 August 2017</p> <p>Community Open Day, HN Community Centre</p> <p>11am – 7pm</p>	<p>The community open day has been advised via targeted Facebook ads, a paid advertisement in the Havelock North Village Press (free community newspaper which also is circulated to Clive, Haumoana and Te Awanga) on August 1, via Councils website, via flyers, the latest newsletter, at the neighbourhood meetings and in email correspondence.</p> <p>Approximately 70 people attended and issues discussed included:</p> <ul style="list-style-type: none"> Spoke to residents of Arcadia Lane and Reynolds Road about site sizes along their boundary edge, heights of new dwellings, yard setbacks, site coverage requirements and the proposed roading layout in the Bull Hill neighbourhood; 		<p>Rowan Wallis, Policy Manager; Anna Summerfield, Senior Environmental Planner Policy; Anna Sanders, Senior Environmental Planner Policy (Special Projects) and Craig Scott, Policy Planner</p>	

	<ul style="list-style-type: none"> • The open space areas and walking tracks were seen as a big positive of the proposed rezoning area. Agreed that bull hill should not be built on, also that a corridor should be retained for walking and birdlife; • Spoke to several people about the possible timing of the development – and the impacts of construction and how these effects are managed; • Retention of character and outlook was a recurring concern with many people valuing their outlook of a treed open landscape and requesting that as many existing trees as possible be retained; • Concerns over design elements of the bull hill/lower catchment, general agreement that they would not like it to look like the Arataki development. Appeared to be agreement that stricter design controls would be suitable; • Spoke to several people who were enquiring about purchasing sections in the rezoning area and when these might be available for sale. Particular interest in wanting to buy in the middle 900/1000m² catchment; • Density of development across all neighbourhoods was a key interest point as well as total numbers of dwellings within each of the proposed neighbourhood areas; • Concern over schooling capacity; • Question regarding whether the Stapleford Park Area should be rezoned residential; • Support for a community commercial area (dairy and/or café); • Breadalbane Ave: <ul style="list-style-type: none"> ○ General Support for larger lot sizes ○ General support for protecting existing character ○ Concerns over modifying the Here Here Stream for development 			
--	--	--	--	--

	<ul style="list-style-type: none"> ○ General questions on how this area would be serviced, ensuring no increase in stormwater runoff ○ Concerns on the effects of additional development on neighbouring properties, both Lane Road and Iona Road sides; ● Questions on how development will be paid for; and ● Traffic Effects, specifically: <ul style="list-style-type: none"> ○ Any additional traffic flow on Lane Road ○ Existing speed, noise and traffic flow issues at the Breadalbane Rd/Iona Rd Intersections ○ Acknowledgement that the Iona/Middle Rd intersection needs to be modified, either roundabout or re-alignment ○ Extending the 50km speed limit along Middle and Iona Roads ○ Concerns regarding the ability of town centre to cope with additional capacity (potential of a bypass discussed) ○ General concerns about potential for rat runs (where traffic is likely to go with current design (Reynolds/Iona Roads)). <p>People who attended were invited to complete the attendance log (kept on file). A follow up email was sent 21/08 again inviting people to provide feedback on the draft Structure Plan.</p>			
<p>Dixie Reo, Ngāti Miihira</p> <p>21 August 2017</p>	<p>Discussed the draft Structure Plan in general terms; housing affordability; National Policy Statement on Urban Development Capacity and the Heretaunga Plains Urban Development Strategy. Dixie sought clarification on three particular areas of interest. Agreed to discuss the proposed rezoning with Jerry Hapuku, Kaumatua and report back to Dixie.</p>		<p>Rowan Wallis, Policy Manager and Anna Sanders, Senior Environmental Planner Policy</p>	

Hastings District Council, Policy Meeting Room 1pm			(Special Projects)	
Dixie Reo, Ngāti Miihoroa 23 August 2017 Offsite 2pm	Met with Dixie Reo, to discuss the Streamlined Planning Process application and the suggested meeting with whanau, hapu and the Heretaunga Tamatea Settlement Trust. Meeting arranged with invitations to be sent via Marama Laurenson, Councils Strategic Advisor Culture & Heritage and Dixie to ensure mokopuna of Te Heipora are included.		Rowan Wallis, Policy Manager; Marama Laurenson, Strategic Advisor Culture & Heritage; and Anna Sanders, Senior Environmental Planner Policy (Special Projects)	
David and Colleen Youngquest 55 Iona Road, Havelock North 23 August 2017 4 – 5.15pm	Met with David and Colleen Youngquest, owners at 55 Iona Road and discussed: <ul style="list-style-type: none"> the Working Group process and how it has resulted in the release of the draft Structure Plan for community feedback; elements of the draft Structure Plan; the feedback the Youngquest’s previously provided on the Issues and Options Paper; the Bull Hill and Breadalbane Neighbourhood’s and issues such as the suggested road layout, traffic generation, stormwater management; servicing and the importance of any bulk and location provisions; the SPP application; and 		Anna Sanders, Senior Environmental Planner Policy (Special Projects) and Craig Scott, Policy Planner	

	<ul style="list-style-type: none"> • how to provide feedback on the draft Structure Plan. 			
<p>Bill Calver</p> <p>117 Iona Road, Havelock North</p> <p>Hastings District Council, Policy Meeting Room</p> <p>30 August 2017 2pm</p>	<p>Discussed:</p> <ul style="list-style-type: none"> • HPUDs objectives and background history to the proposed rezoning of this area; • Urban NPS; • Discussed that the proposed 'Middle Ridge Neighbourhood' boundary to the east was at the recommendation of our Landscape Architect and that it roughly follows the low ridge (adjusted to property boundaries) separating the Lane Road valley from catchment to the west. The boundary is configured so as to retain the existing rural character on Lane Road; • Bills submission on the Issues and Options paper in particular reverse sensitivity issues; • Discussed the SPP application and that it would result in no appeal rights; • Likely sequencing of development; and • Value of properties and rates. 		<p>Rowan Wallis, Policy Manager and Anna Sanders, Senior Environmental Planner Policy (Special Projects)</p>	
<p>Jerry Hapuku, Kaumatua</p> <p>HDC Offices</p> <p>21 September 2017</p>	<p>Met with Jerry Hapuka, Kaumatua following the Maori Joint Committee meeting to let him know that an application had been made to the Minister for the Environment for a direction under the Streamlined Planning Process. His feedback was sought.</p> <p>He had no problems with the SPP application and felt that additional housing was needed at Havelock North. He wanted to ensure that the appropriate protocols were in place for any potential discovery during the development process. He gave the example of the adze discovered on the McHardy? Subdivision and said that a total of 3 had been buried on the Havelock Hills.</p>		<p>Rowan Wallis Environmental Policy Manager</p>	

<p>Hui with Te Heipora</p> <p>Havelock North Community Centre</p> <p>9 October 2017 3.30pm</p>	<p>A hui was held with the Te Heipora whanau to outline the proposed development and the process that will follow included the application to the Minister to follow the SPP process. Feedback was sought on the matters of importance to them. They raised the following issues;</p> <ul style="list-style-type: none"> • Lack of acknowledgement of Te Heipora in consultation on previous projects in Havelock North. • Boundaries of the Karanema Reserve. • Seeking separate treaty claim with the Crown. • Need for Cultural Impact Assessment for the proposed development. • Aim to establish a marae in Havelock North, if successful in their claim. 		<p>Rowan Wallis, Environmental Policy Manager, Anna Sanders, Senior Planner Special Projects, Anna Summerfield, Senior Policy planner, Te Heipora Whanau</p>	
<p>SuYen and Roger Phرازyn</p> <p>HDC Offices</p> <p>10.30am</p>	<p>Discussed the in principle inclusion of their John Scott designed dwelling in the Plan as a Category II historic building and what the implications of this might be for future alterations.</p>		<p>Anna Sanders, Senior Environmental Planner Policy (Special Projects) and Craig Scott (Senior Environmental Planner Policy)</p>	
<p>Peter Rutter</p> <p>HDC Offices</p> <p>17 October 2018</p>	<p>Met with Peter Rutter to discuss effects around maintaining a rural residential zoning for his property. The matters discussed were:</p> <ul style="list-style-type: none"> • Reverse sensitivity and how that will be managed. • Possible setback distances for buildings on the adjoining properties. • Request for a copy of the Wastewater Assessment Report. 		<p>Rowan Wallis, Policy Manager</p>	
<p>Geoff Gage and Stephen Fookes</p>	<p>Discussed progress on the rezoning including the SPP application, what Council was proposing around density and</p>		<p>Anna Sanders, Senior</p>	

<p>HDC Offices</p> <p>18 October 2018 3pm</p>	<p>what Geoff might be proposing for the future development of his properties in Breadalbane Avenue. Discussed a recent development on the outskirts of Levin, Speldhurst Country Estate which Geoff felt had achieved some positive design outcomes using existing trees.</p>		<p>Environmental Planner Policy (Special Projects) and Craig Scott (Senior Environmental Planner Policy)</p>	
<p>Derek Slade</p> <p>24 October 2017 10.30am</p> <p>HDC Offices</p>	<p>Derek Slade and consultant came to discuss the planning implications of a proposed development and idea of lodging an application before the Plan being notified. Was advised that the Resource Consent process would be far more difficult if he took this option, with no guarantee that the development would be approved.</p>		<p>Craig Scott (Senior Environmental Planner Policy) and Michelle Hart (Senior Environmental Planner – Consents)</p>	
<p>Josi & Simon Beamish 96 Lane Road</p> <p>Onsite</p> <p>22 November 2017 9am</p>	<p>Josi and Simon have been actively involved in planting the ponds, which are proposed to be vested in Council. This meeting was held to discuss work to date with Council staff who will be responsible for the ongoing management and planting of this area.</p>		<p>Colin Hosford (Parks and Property Services Manager) and Chris Freeman (Parks Policy Planner)</p>	
<p>Mary and Ken Jones</p> <p>HDC Offices</p> <p>12 February 2018 1pm</p>	<p>Brought them up to date on the progress with the SPP application. Outlined how their request from the October hui for the inclusion of a CEA would be incorporated into the Proposed Variation and that it would be the responsibility of the developer to commission the CEA.</p>		<p>Rowan Wallis (Policy Manager) and Anna Sanders (Senior Environmental Planner Policy)</p>	

			(Special Projects))	
<p>Met with Mary Jones and Dr Robert Joseph</p> <p>Location: Facility of Law, University of Waikato, Hamilton</p> <p>7 March 2018</p> <p>11am</p> <p>Variation material (including Structure Plan) was pre-circulated</p>	<p>A meeting was held post the issue of the direction. This meeting builds on earlier ones and a hui last October. This korero covered:</p> <ul style="list-style-type: none"> • The importance of hapu engagement; • The content of the Direction issued by the Minister, in particular steps and timing; • The content of the Variation and Structure Plan (which will be notified as part of the variation to rezone the land); • The inclusion in the draft Subdivision section of a requirement for a (Cultural Effects Assessment (CEA) to be included as part of any subdivision application, which has been included as a result of our hui last October. It was advised that the wording of the provisions relating to the CEA were based on current best practice. It was outlined that any guidance on the provisions, but specifically those around the CEA wording prior to notification were welcome. No changes to the provisions have been suggested to date, but direct notification of the variation will occur and hapu have been advised that any submission made on the variation could incorporate amended wording; • The rezoning process and opportunity for submissions; and • That once notification has occurred the opportunity to meet again to discuss any possible submission. 		Rowan Wallis (Policy Manager) and Anna Sanders (Senior Environmental Planner Policy (Special Projects))	
<p>Peter Rutter</p> <p>50 Lane Road</p> <p>HDC Offices</p>	<p>Confirmed that the structure plan should show his property as remaining in the rural residential zone. Further discussed amenity concerns and how these are proposed to be dealt with in the variation. Specially discussed the treatment of the road</p>		Rowan Wallis (Policy Manager) and Anna Sanders	

<p>20 March 2018</p>	<p>reserve of the Spine Road where is adjoins his property. Agreed when variation is directly notified to send an email outlining specifically where Peter’s concerns have been dealt with, to assist him in preparing any submission.</p>		<p>(Senior Environmental Planner Policy (Special Projects))</p>	
<p>Tom Harper 142 Lane Road Policy Meeting Room, HDC 9.30am</p>	<p>Further discussed amenity issues as it directly relates to this property at 142 Lane Road (cross sections prepared by Isthmus provided). Specifically discussed amenity issues including the location of several building platforms, outdoor living areas and proposed mitigation measures.</p>		<p>Anna Sanders(Senior Environmental Planner Policy (Special Projects))</p>	
<p>William Davidson and Robbie Gardner Middle Road Residents Policy Meeting Room, HDC Offices 2pm</p>	<p>Discussed;</p> <ul style="list-style-type: none"> • the rezoning process including that they will be directly notified and that there will be an opportunity to make submissions; • discussed the various stormwater catchments and mitigation proposed; • Councils intent that the development be stormwater neutral and what Council was proposing to ensure this occurs with outlet ‘D’ through the inclusion of an additional stormwater detention area; • Invitation to meet onsite and/or attend the open session on April 18 to answer any further questions. 		<p>Rowan Wallis (Policy Manager) and Anna Sanders (Senior Environmental Planner Policy (Special Projects))</p>	

HAVELOCK NORTH
GREENFIELD RESIDENTIAL DEVELOPMENT

PROPOSED
**IONA RESIDENTIAL
GROWTH AREA**
JULY 2016

ISSUES AND OPTIONS PAPER



Summary

The Iona area of Havelock North has been identified as a residential growth area for several years.

In a bid to address Havelock North's growth, the District Council is preparing to rezone land in the Middle and Iona Road area for housing.

But first, a Structure Plan needs to be prepared. The Structure Plan shows the Area; where major roads, reserves, walkways and infrastructure services will go; and whether development will be staged.

Council is seeking your input to deciding which of the 3 options is preferred which will ultimately guide development of the area. Feedback is sought from local land owners, manawhenua and the wider community on these options.

These 3 options, described and shown overleaf, offer development from a smaller to larger scale on the land identified as suitable for residential growth in the Heretaunga Plains Development Strategy 2010 – 2045 (HPUDS).

The option that will be progressed, will determine the nature of the changes to be made to the District Plan. It should be noted that if either Option 1 or 3 are the preferred options and a detailed Structure Plan is developed, the remaining areas will still be factored into a wider framework for residential development in the future.

Following the completion of the Structure Plan, changes will be proposed to the District Plan which aim to rezone land for residential use. This process will happen next year, 2017, and you will have the opportunity to be involved.

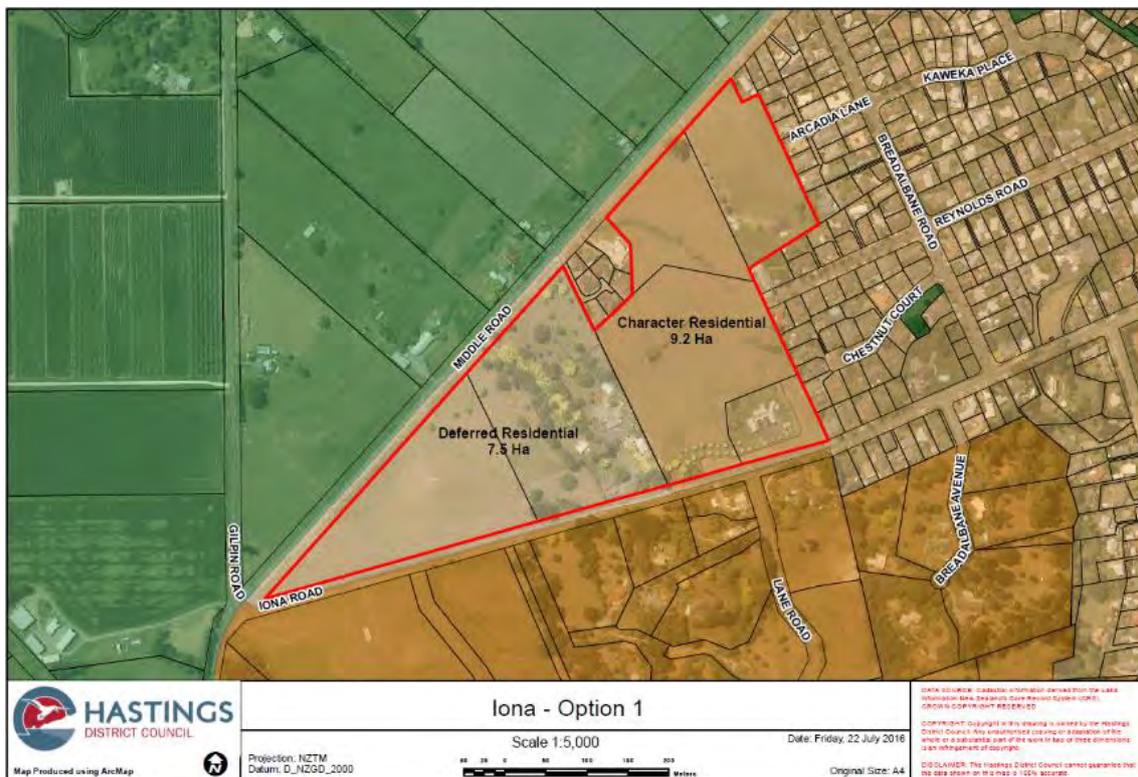
SUMMARY OF OPTIONS FOR LAND DEVELOPMENT

Option 1 - The Iona Triangle

- Between Middle Road and Iona Road
- 16.7 hectares
- Yield some 210 dwellings (average section size of 650m²)
- Includes an open space reserve
- Infrastructure improvements needed (water, stormwater and sewer)
- 7 year housing supply (based on 30 dwellings per year)
- Land areas may not be used in the most efficient manner as the triangular shape of the site makes layout of sections more difficult.
- Could be developed in stages

For full details on Option 1 refer to Page 28 of the Report

Map of Option 1 – Growth Area outlined Red

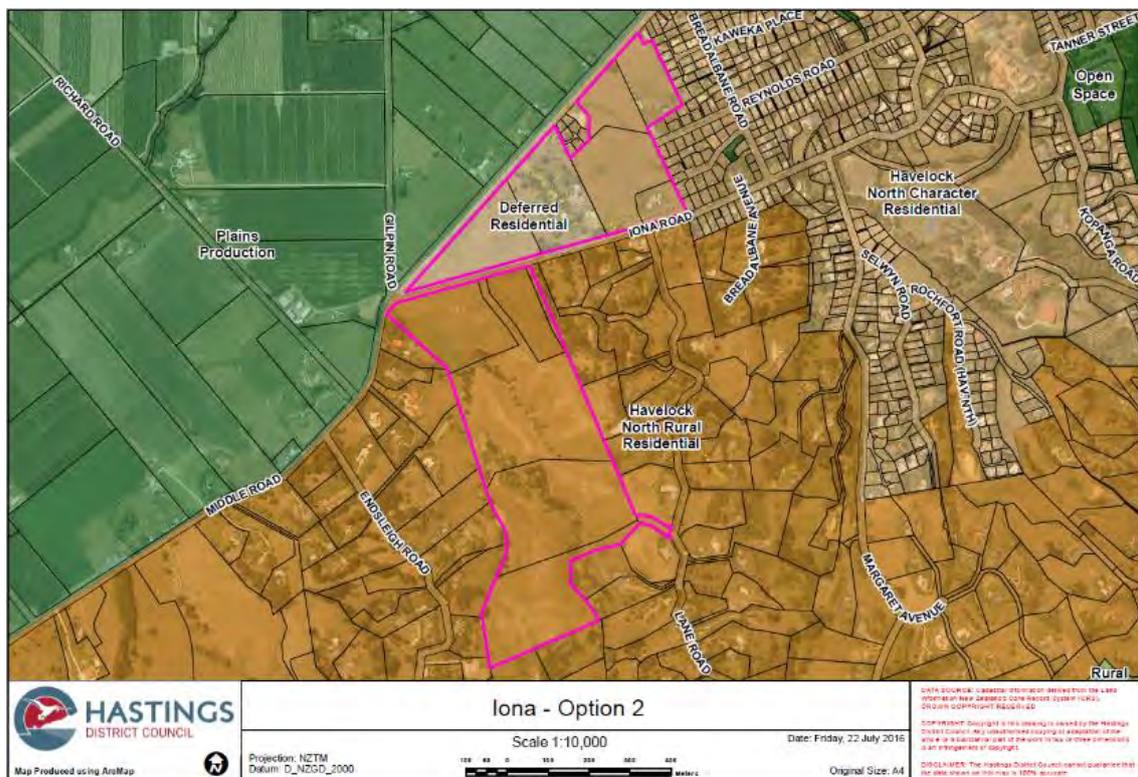


Option 2 - The Iona Triangle & The Hill

- The Triangle - Between Middle Road and Iona Road and
- The Hill - land on the south side of Iona Road
- 43.6 hectares
- Yield - some 360 dwellings
- Includes an open space reserve and walkway linkages
- Infrastructure improvements needed (water, stormwater and sewer)
- A greater range of section sizes and choice for the residential market
- 12 year housing supply (based on 30 dwellings per year)
- The larger land area provides greater efficiencies around staging of infrastructure and flexibility/responsiveness to market conditions.

For full details on Option 2 refer to Page 32 of the Report

Map of Option 2 – Growth Area outlined Pink

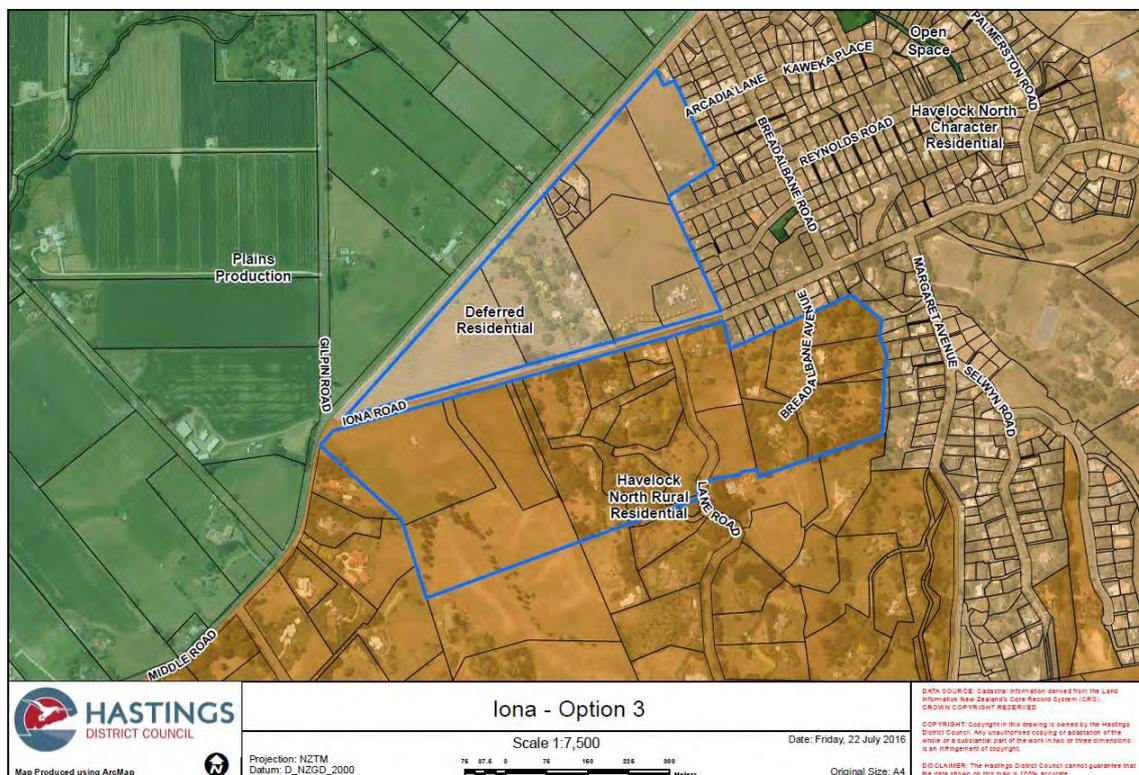


Option 3 - The Iona Triangle & Lower Hills Area (HPUDS)

- The Triangle - Between Middle Road and Iona Road and
- The Lower Hills - south of Iona Road (between Breadalbane Ave and Gilpin Road)
- 43.6 hectares
- Yield – some 300 dwellings (works around existing dwellings)
- Includes an open space reserve
- Infrastructure improvements needed (water, stormwater and sewer)
- 10 year housing supply (based on 30 dwellings per year)
- Provides choice of site size, maximises development of the Triangle and Lower Hills land whilst allowing more time to consider the best options for the development of the steeper upper Hills area.

For full details on Option 3 refer to Page 37 of the Report

Map of Option 3 - Growth Area outlined Blue



Introduction

The District Council has started planning for new residential development on the south-west side of Havelock North. This will ensure a continued supply of residential land for new housing.

Until recently land on the northern side of Arataki Road was planned for future residential growth in Havelock North. However due to significant odour issues from the nearby mushroom farm, residential development on that land is no longer possible at this time.

Development in the Iona area is being progressed because it is an area identified as suitable for residential development (see Figures 1 and 2 below). This is contained in the Hawke's Bay Regional Policy Statement (RPS), the primary policy document that guides urban development in the Region. The policy direction outlined in the RPS stems from Heretaunga Plains Urban Development Strategy (HPUDS).

The Council is now consulting with the community on the preparation of a Structure Plan, prior to progressing a Variation to the Proposed District Plan. Variations are the mechanism by which land can be rezoned.

The purpose of this Issues and Options Paper is to assist with identifying the most appropriate area to include in a Variation (and associated Structure Plan) to be progressed by Council in the short term.

The proposed structure plan and variation for this initial development area will go to Council for approval for public notification in the last quarter of 2016, with notification of the variation and associated structure plan to change the zoning for the Iona area occurring in the first quarter of 2017. The public process of submissions and a hearing would then follow with a decision on the variation proposal expected by the 3rd quarter of 2017.

What is a Structure Plan?

Structure planning is an important part of planning a new development. It provides a way to manage all the necessary elements to bring on a new residential area. The Structure Plan covers elements such as the location of roads, open spaces, walking and cycle ways; where water and sewer pipes will locate, and how stormwater will be dealt with. It will also outline any development staging, what the density of development should be, and the location of any buffer areas required.

Structure planning will integrate new urban development and ensure urban growth is accommodated in a sustainable way. The structure plan process will also ensure that all constraints and issues are investigated and addressed prior to the rezoning of the land. Development occurring ahead of structure planning has the potential to reduce the efficiency of infrastructure and limit options available. Rezoning land prior to completing the structure plan can also cause issues if all constraints have not been sufficiently investigated to the point that there is confidence that the land is suitable for residential development.

Planning Approach

The Regional Planning provisions and policy framework outline a best practice approach for new greenfield development and in particular require structure planning to be undertaken for the whole area. Both Council and the landowner seek to undertake a best practice process to ensure a continued supply of residential land in Havelock North.

While, the existing zoned land is available for immediate development, the landowners have expressed a preference in an holistic planning approach to allow all of the landholdings identified in HPUDS to be taken into account. This will ensure that the infrastructure can be planned and constructed as efficiently as possible and also allows layout planning to gain the greatest benefit of linkages throughout the entire study area including surrounding land which is already developed.

Purpose

The purpose of this Issues and Options paper is to summarise the initial analysis undertaken by Council with the intention of seeking feedback from potentially affected members of the community in order to inform the development of the Structure Plan and help to identify an initial development area for Iona in the short term.

This paper seeks:

- To **inform** parties of the issues identified and the potential development options;
- To **elicit feedback** from interested parties in order for Council to **better understand the issues identified or to raise awareness of additional issues that have not been identified.**
- To **seek feedback on the options proposed** so that these can be further developed and refined.
- To **facilitate community participation and collaboration** in the proposal.

Identified Greenfield Growth Areas in the Hawke's Bay Regional Policy Statement

Figure 1 - Iona / Middle Road Block

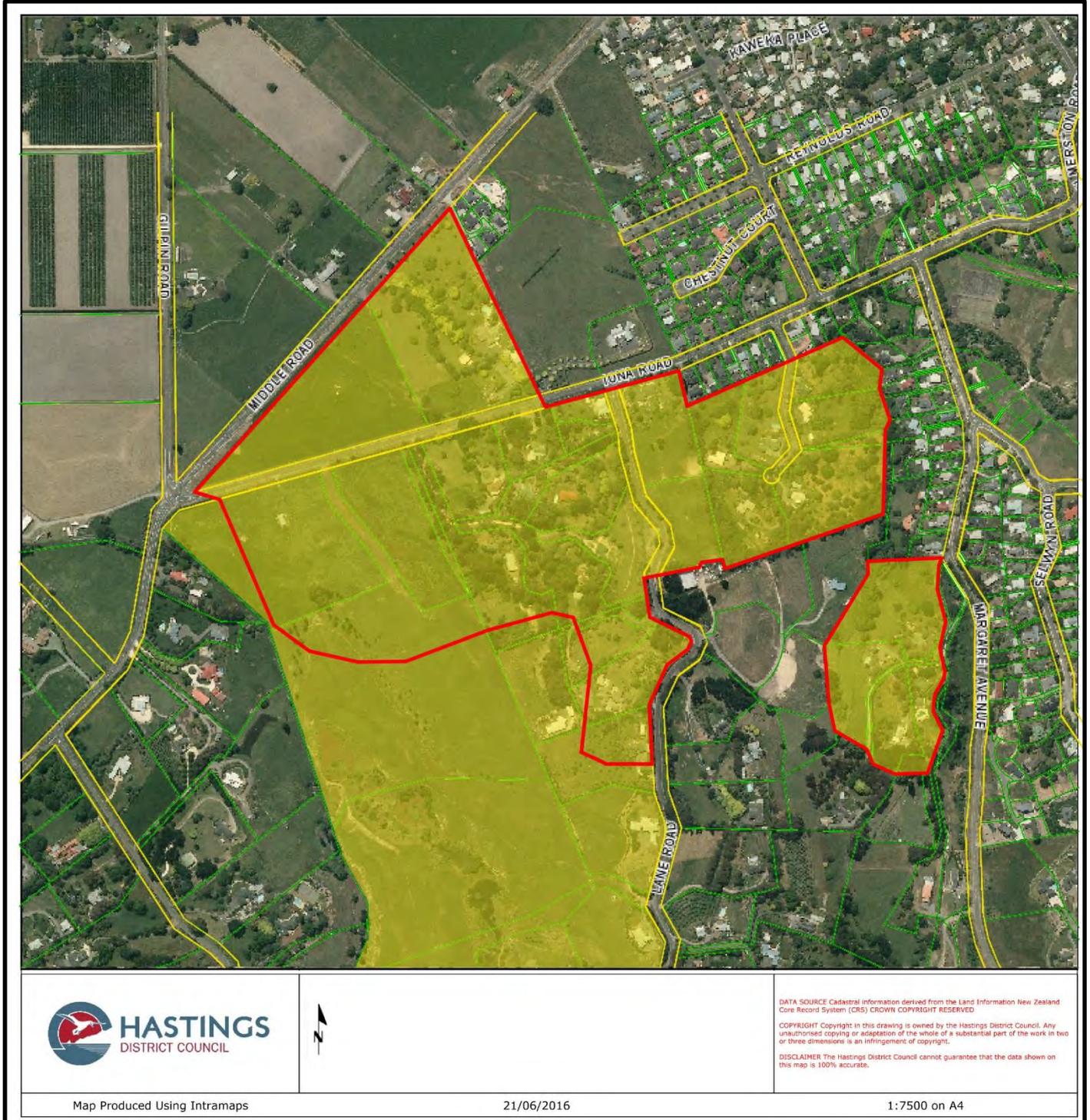
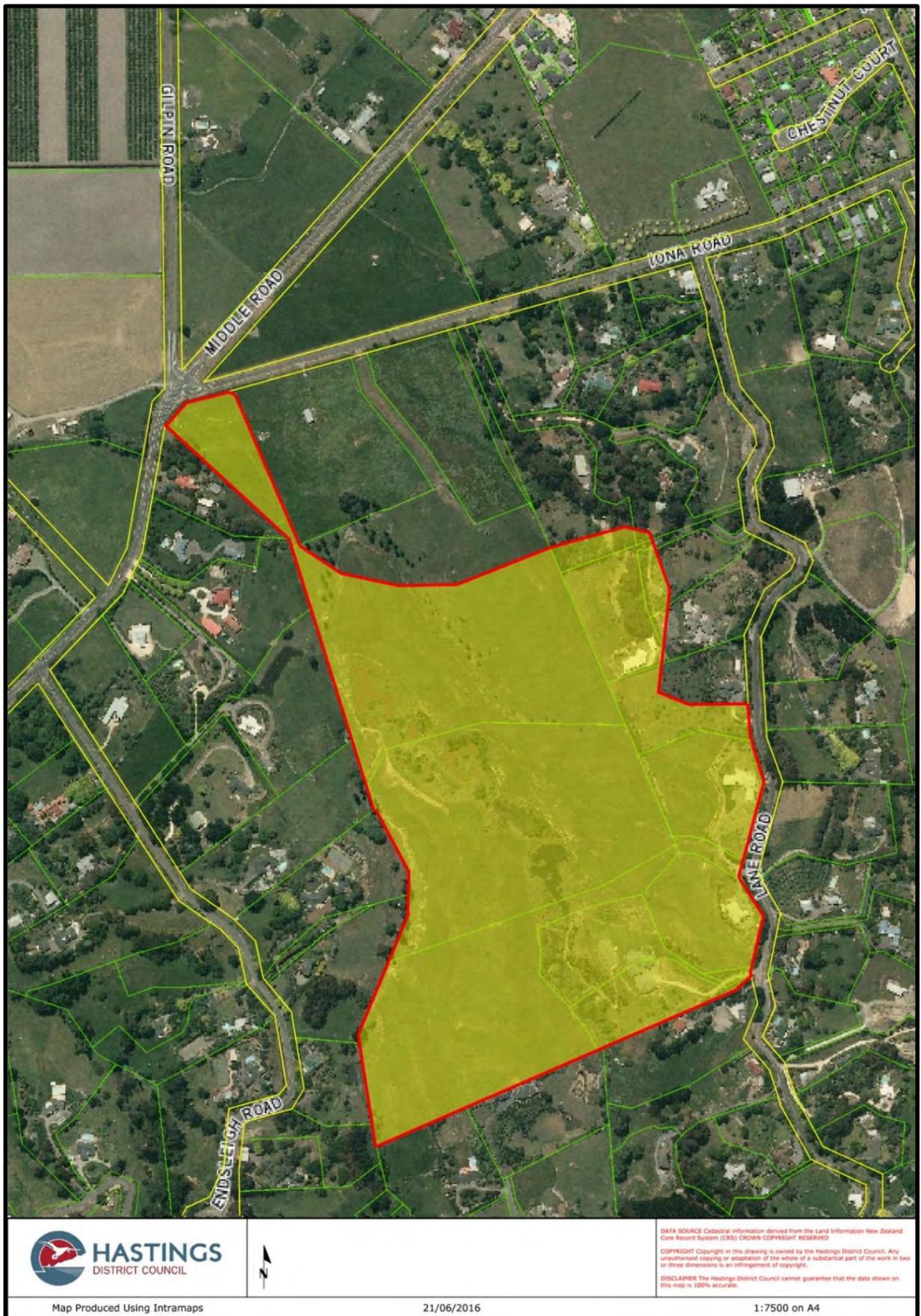


Figure 2 - Havelock Hills Lower



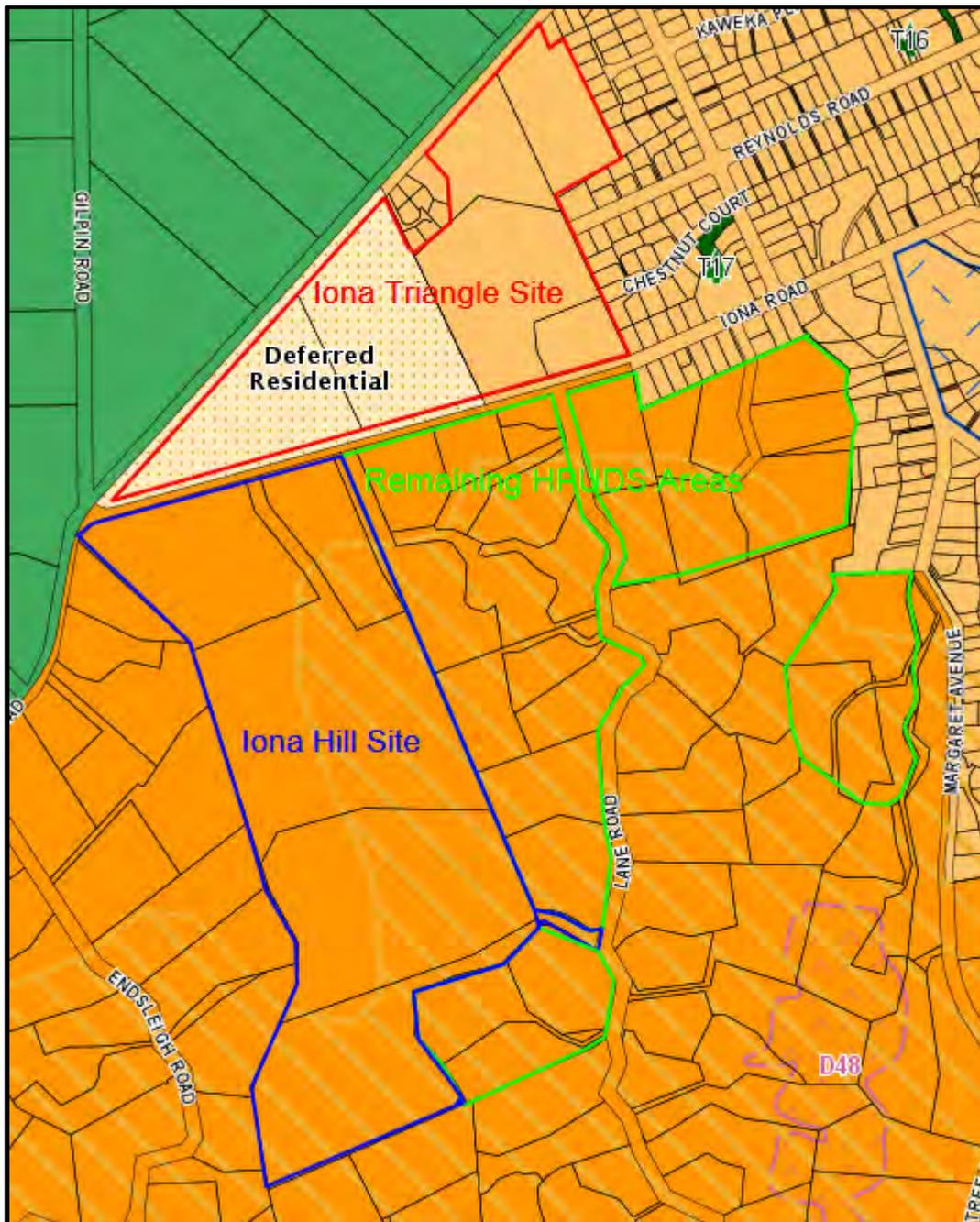
Description of the Iona Residential Growth Areas

The Iona Residential growth area comprises all land identified in Figures 1 and 2 above as well as an existing block of vacant Character Residential zoned land that adjoins the existing residential area at the end of Reynolds Road.

For the purposes of this paper, the Iona greenfield growth area has been broken into three distinct areas:

- the Iona Triangle site
- the Iona Hill site and
- the remaining HPUDS areas

These are outlined in Figure 3 below:



THE IONA TRIANGLE SITE

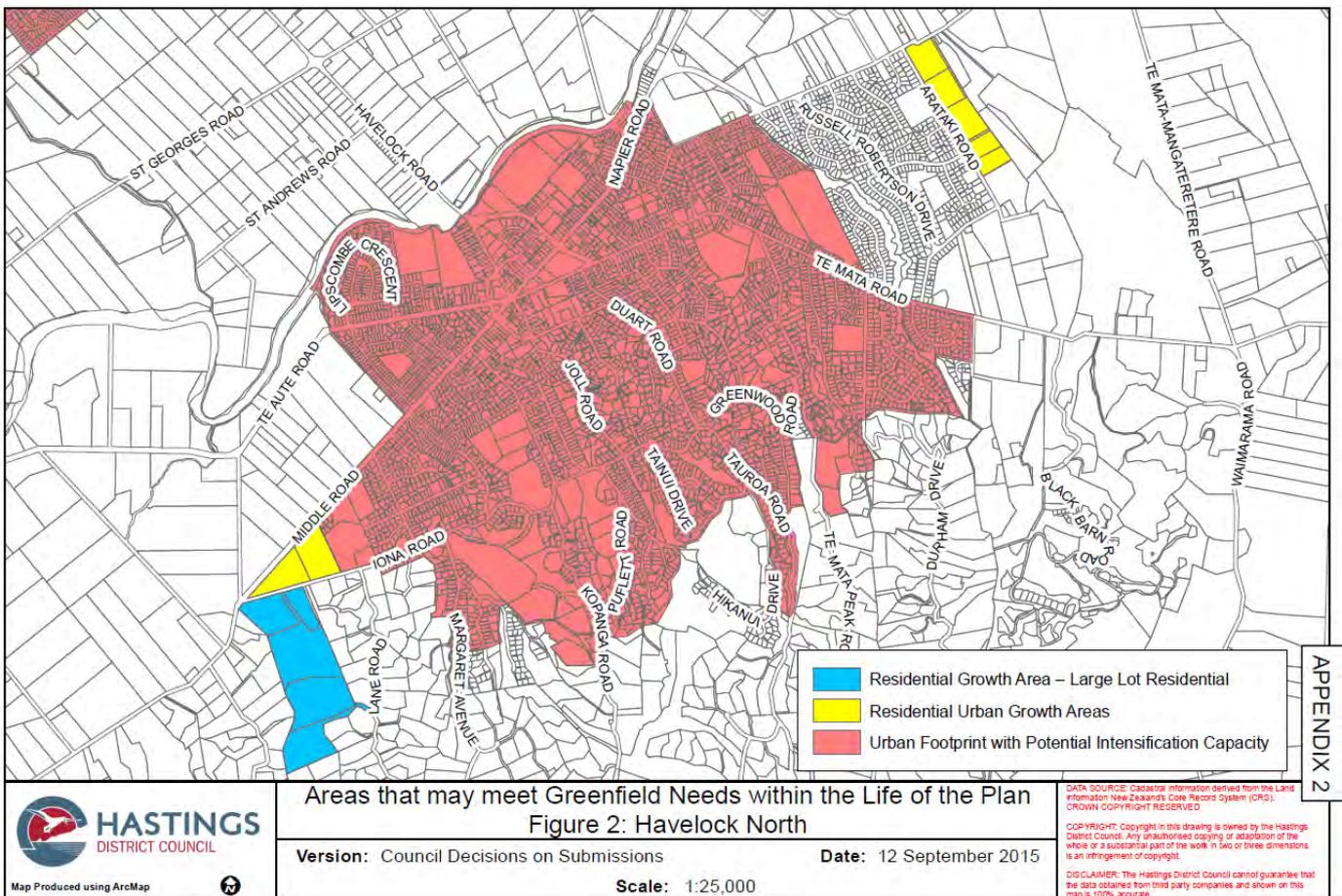
The Iona Triangle site comprises land that is currently in two zones under the Proposed District Plan.

9.2ha of the Triangle is zoned Character Residential and has been zoned for residential development for more than 20 years. However services (water, sewer, stormwater) have never been provided to the site as the landowner had no desire to develop the land for this purpose.

The current Character Residential zoning (700m² sites) of this land does not align with the existing topography or landscaping conditions associated with this vacant lifestyle site.

Therefore Council is proposing have a general residential zone density. This will enable land to be used in an efficient manner and achieve the 15 dwelling per hectare residential density set out in the Hawke’s Bay Regional Policy Statement for new greenfield residential developments.

The second part of the Triangle is 7.5ha and zoned Deferred Residential. This is listed as an urban growth area for Havelock North in the Proposed District Plan (see Figure below), meaning that this land may be needed to accommodate growth within the 10 year life of the District Plan. This land has also been identified for future residential growth for over 20 years (See Appendix 2 Figure 2 of the Proposed District Plan below).



Existing Land Use and Character of the Iona Triangle Site

The Deferred zoned area of the Triangle is about 7.5 hectares and in two separate titles.

One title is a triangular shape of 3.5 hectares. This parcel is currently used for grazing and has a flat to gently sloping topography with a hill approximately 20m high in the middle of the parcel. The other 4ha parcel of land is more rectangular in shape and is characterised by existing mature trees and established gardens surrounding a large home, and two other dwellings and associated accessory buildings. This parcel is primarily used for lifestyle purposes with some grazing of animals. The Character Residential zoned part of the Iona Triangle site has an area of 9.2ha and is currently used for grazing and lifestyle purposes.

The land surrounding the Iona Triangle is characterised by a mixture of lifestyle and rural residential blocks to the south of the site on the lower slopes of the Havelock Hills (Lane Road / Endsleigh Road). To the north of the site are larger blocks of Plains Zoned land used for cropping, pastoral grazing and lifestyle purposes. In the north east part of the Iona Triangle and accessed off Middle Road is an intensive residential subdivision of 8 houses called Stapelford Park. Site sizes in this subdivision range from 470m² – 770m² with one larger lot of approximately 1,900m². Beyond to the east of the vacant Character Residential Zone land that forms part of the triangle site is the existing suburban area of Havelock North.

The Iona Triangle site is the subject of an appeal to the Proposed District Plan by the landowners seeking that the zoning of this land be changed to Havelock North General Residential Zone. While the existing zoned (9.2ha) land is available for immediate development, the landowners have expressed a preference for a holistic planning approach to allow all of the landholdings identified in HPUDES to be taken into account. This will ensure that the infrastructure can be planned and constructed as efficiently as possible and also allows layout planning to gain the greatest benefit of linkages throughout the entire growth area including surrounding land which is already developed.

THE IONA HILL SITE

The Iona Hill site is located on the southern side of Iona Road, and is positioned between Lane and Endsleigh Roads. The topography of the site and wider area is a series of valley areas and ridgelines which are orientated towards Iona Road and form part of the lower Havelock Hills (Kohinuraukau Range).

The site is zoned Rural Residential under the Proposed Plan and is located within a 'Rural Character Landscape'. This site is also the subject of an appeal to the Proposed District Plan by the landowners seeking the application of a residential zone through the application of a structure plan that allows for a greater level of residential development on this site than the current rural residential zoning allows.

The site comprises of 5 lots, with a total area of 26.89 hectares. All these parcels of land are however held in one ownership.

Existing Land Use and Character of the Iona Hill Site

Within the longest valley is a series of partially manmade connected ponds that form an enhanced wetland fed by surface runoff and groundwater. These ponds have been planted

in both natives and exotic species. The remainder of the site is used for grazing purposes. The only building on site is a hay barn positioned on the lower slopes towards the Iona Road frontage.

The site is part of the western approach experience to the Havelock North village. Iona Road and Middle Road, in the vicinity of the subject site, form the boundary between the Havelock Hills and the Heretaunga Plains. Situated on the fringe of the Havelock North urban area the site is bounded by rural residential lifestyle properties.

THE REMAINING GROWTH AREAS

This area comprises properties on the southern side of Lane Road that bound the Hill Site, as well as two discrete areas on the northern side of Lane Road that adjoin the existing character residential zoned suburban area. The topography of these areas is similar to the hill site in that the land forms part of the lower Havelock Hills (Kohinuraukau Range) and comprises a series of valleys and ridgelines that orientate towards Iona Road and lane Road. Currently this area is used for residential lifestyle purposes and stock grazing.

In identifying these areas as well as the Iona Hill and Triangle Sites for future urban growth HPUDS states that this area:

“has a number of locational advantages being close to existing development for services, not impacting on versatile soils for productive purposes, not conflicting with adjacent land uses, not impacting on landscape qualities and not impacting on transport infrastructure. It may be marginally more expensive to develop due to the rolling nature of the topography. It is recommended as a greenfield expansion area for the period 2015-2045”.

ISSUE IDENTIFICATION

Density / Development Yield

The density of development controls the number of dwellings or residential sections able to be developed or built on within an area. The density of development together with design principles is a key mechanism in shaping the character of an area.

The Hawkes Bay Regional Policy Statement (Policy UD8) requires that residential subdivision and development seeks to achieve minimum net densities (or section sizes) across residential growth areas as a whole. These density targets are reflective of the promotion of a more compact settlement pattern that efficiently utilises land for residential development, ensuring that prime versatile Heretaunga Plains land is retained for productive purposes.

For greenfield residential growth areas the relevant minimum net density is set out in a) below:

- a) an average yield of 15 lots or dwellings per hectare in each greenfield growth area development post 31 December 2015;

The appropriate density of development should take into account the need to utilise land efficiently while providing for a variety of housing and lifestyle options. It is also important to ensure that the residential density is appropriate in terms of topography, impacts on existing character and amenity levels and landscape and visual effects of housing on the lower slopes of the Havelock Hills. Other issues to consider when setting density controls for a new greenfield area include constraints or requirements for a minimum number of dwellings (a critical mass) to facilitate water supply and wastewater services.

Density is generally controlled using a minimum site size and/or an average site size over a larger area. Other options to control density could include a maximum or minimum number of dwellings per hectare or a maximum or minimum number of dwellings within each identified development block depending on the characteristics and size of the block.

There is a need to provide for a level of flexibility in density controls to encourage variety in dwelling type and section size. Using a maximum and/or minimum number of dwellings per hectare or dividing the development area into blocks enables flexibility to allow, for example, the clustering of higher density housing focused on an internal road or public open space / reserve area with larger residential lots surrounding these on the edges of the development area. In this way a gradual transition can occur from the more rural landscape of plains and rural residential zoned land to the urban residential nature of the greenfield growth area.

Amenity / Urban Design / Quality Environment

The term Amenity Values is defined in the Resource Management Act and Hawke's Bay Regional Policy Statement as

“those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes”.

An important aspect of developing a new greenfield residential area is the creation of a quality living environment that establishes a sense of community and makes connections to the existing residential and rural residential areas that surround the Iona growth area.

Achieving a high quality living environment in new greenfield growth areas is a guiding principle of HPUDS and is a stated objective of the Hawkes Bay Regional Policy Statement (RPS).

Objective UD1 of the RPS states the following in this respect:

“Establish compact, and strongly connected urban form throughout the Region, that:

a) achieves quality built environments that:

- i. provide for a range of housing choices and affordability,*
- ii. have a sense of character and identity,*
- iii. retain heritage values and values important to tangata whenua,*
- iv. are healthy, environmentally sustainable, functionally efficient, and economically and socially resilient, and*
- v. demonstrates consideration of the principles of urban design;”*

The HPUDS strategy identifies the following specific objectives in relation to quality living environments:

- A range of densities in new residential development
- Provide housing and lifestyle choice within defined locations with greater emphasis on good urban design outcomes as well as recognising an aging population.

In August 2005 Hastings District Council became a signatory to and adopted the Ministry for the Environment: New Zealand Urban Design Protocol. As part of the Councils commitment to championing urban design outcomes for the District, a best practice design guide for subdivision and infrastructure was developed in June 2011. Aspects of this design guide are now referenced within the provisions of the Proposed District Plan and can be used to assess applications for subdivision.

The structure of a new residential area – road layouts and design, reserve areas, and block sizes – are important ingredients to get right at the outset to ensure a high quality living environment results. The major road and infrastructure components including reserves are identified through the Structure Planning process which identifies indicative locations within the development area. Once these aspects are set, consideration needs to be given to whether existing District Plan zones and rules will achieve the outcomes desired by the landowner, Council and community for the development of individual sections or whether alternative controls or methods such as design guides are required to achieve the outcome desired.

Reserves and Open Space

Reserve provision is an essential component of achieving social and cultural well-being. Reserves can also act as a focal point for a community and enable social interaction as well as recreation.

Havelock North has a good level of reserve provision however, the provision of flat land for active recreation and play is poor, particularly in the southern hillside residential areas. The 2006 Reserve Strategy identifies a need to acquire 0.5 – 1ha of additional neighbourhood reserve land to ensure provision is adequate for the Havelock North population.

The Strategy recommends that future subdivisions in Havelock North provide neighbourhood reserve areas that are of a size and geography that are useful for playgrounds and small-scale ball play. The strategy also recommended that a linked network of reserves to provide walkway connectivity is created overtime through subdivision and development.

The creation of a new greenfield growth area on the western side of Havelock North provides an opportunity to create greater connectivity both within the greenfield growth area and to reserves within the existing residential areas to the north. It also provides an opportunity to identify and set aside suitable land for a play area and neighbourhood reserve.

In the past reserves have sometimes had a dual purpose - as a stormwater detention basin and open space for recreation. Whether, given that reserve requirements for Havelock North are for flat land for playgrounds, there is the potential available for multi-use in this respect, is a matter that requires further consideration through the consultation and structure plan process. First and foremost, however, the purpose of reserve provision is for community recreation and interaction.

Neighbourhood reserve areas cater for the immediate adjacent residential area. The aim is to provide a neighbourhood reserve within an easy 10 minute walk of most residential property in areas where the community exceeds or is likely to exceed a population of 500.

The ideal size for a neighbourhood reserve is between 3000m² - 5000m² of flat to gently sloping topography and of a usable shape. Neighbourhood reserves should be visible within the community with an open frontage - dual road frontage is ideal. Provision for carparking, lighting, shade and landscape plantings, toilets and drinking fountains as well as the type of play equipment and furniture to suit the future community are all considerations to be made.

Pedestrian, Cycle and Transportation Linkages

A network of interconnecting roads, cycleways and footpaths / walkways are an essential component of planning for a new residential area. The ease within which people of all ages can get around ensures that an area functions well and creates a quality living environment. Connections between existing and new residential areas help to integrate the new community and provide access to existing facilities and services.

While a new residential area means that existing transport routes will need to cater for additional traffic, it also provides an opportunity to upgrade pedestrian, cycle and transport infrastructure to better meet the needs of the current and future community. Such provision could include better intersection design, visibility and signage, footpath and cycle lane provision, and amenity street plantings.

The scale and nature of any improvements to existing transportation infrastructure are issues that need to be worked through as part of the consultation and structure plan preparation.

Servicing the Iona Greenfield Growth Area

Stormwater

The primary objective in stormwater management is to minimise any impacts of flooding on the downstream network and to ensure that water quality is not adversely affected.

New residential areas create the potential for additional stormwater to be generated over and above the currently undeveloped land through the introduction of impermeable surfaces such as roofs, roads, footpaths and paved areas.

Stormwater services need to consider the impacts of development on water quantity and quality up to the design criteria within the HDC Engineering Code of Practice (ECoP) which is largely based on NZS4404: 2010 Land Development and Subdivision Infrastructure. Council's design specifications for stormwater require up to a 1 in 5 year rain event to be contained within a piped network and consideration for control of overland flow in a 1 in 50 year rainfall event.

The proposed development area is not currently part of the urban stormwater network.

Stormwater flows via the natural land into rural streams and waterways with some modifications via a rural drainage network (culverts, drains and swales) to convey runoff from land and roads. The Karamu Stream is the final receiving water body for all stormwater generated from catchments in the proposed development area.

A basis for all stormwater design is to ensure that, as much as possible, the downstream receiving environment is unchanged or alternatively, the impacts on the downstream system are negated via improvements.

The impacts of residential development in Iona and Middle Road require a combination of stormwater upgrades that will align with generally accepted sustainable and low impact urban design. This includes the use of detention areas where practical to contain excess stormwater flows and ensure that the receiving environment is not overloaded.

The developer is intending to incorporate low impact designs within the development area so as not to create any adverse effects downstream of Middle Road. The residential area will incorporate a standard urban approach with a primary stormwater pipe system and conventional roadway design to convey overland flows up to the ECoP defined performance standards.

The catchment area to the east of Iona Road (rural residential in nature) includes a modified waterway area incorporating a permanent dam and pond. This provides improved amenity for landowners, assists in reducing stormwater flows and improves water quality. Intensification in the catchment area above the pond could increase the extent of runoff and reduce the effectiveness of the existing system unless individual site mitigation measures are required as part of any further development.

The design of new stormwater systems will need to ensure that the capacity of drains and any proposed detention areas are sufficient so that flooding does not occur in both every day and heavy or high intensity rainfall events, particularly for properties north of Middle Road. The on-going ownership and maintenance of stormwater detention ponds also needs consideration as part of the consultation, design and structure plan process.

Options that are being considered include building additional stormwater detention towards the Iona/Middle/Gilpin Rd intersection which could cater for a range of residential intensities and ensure that flowrates to the Karamu Stream are not affected.

Water Supply

The Havelock North water supply is sourced from a bore field on Brookvale Rd. Connectivity to the Hastings water supply via Havelock Road ensures that the current supply has sufficient capacity to meet the township's existing needs.

In 2018 the Brookvale bore consent lapses. Any future consent is likely to be at a reduced rate and this has been evaluated as part of Council's long term water supply strategy. A reduced take from the Brookvale bores will require increased flows from Hastings to supplement this loss. Network strengthening will be necessary to ensure that an adequate supply can be sourced to provide additional capacity for growth and this work is being programmed to align with anticipated increases in demand coming on stream.

The development area has service mains extending partway along Iona Road and within Middle Road. The watermain in Iona Road will need to be extended and upsized linking into the existing Middle Road watermain at the Gilpin Road intersection. Internal service mains can then be positioned within the development area to suit road layouts and provide alternative connectivity and continuity for firefighting.

Land within the development area to the east of Iona Road and adjacent to Iona Road will be serviced from the Iona Rd water main. In areas where the development will be largely rural residential in nature, it is anticipated that a primary domestic supply will be available without firefighting capacity or as an alternative a reduced level of service and an augmentation supply may also be appropriate.

Wastewater

Significant wastewater projects have been implemented over the last 10 years to ensure that there is sufficient capacity to support growth in Havelock North.

The construction of the Breadalbane pump station and rising main in 2010 was in response to the extent of greenfields expansion and infill development in the Havelock Hills but this project was limited to the Lucknow and Breadalbane catchments with no provision for extending services further along Middle Road.

The land along Middle Road generally falls to the south and west away from the centre of Havelock North therefore options to gravitate are not available without a significant investment in bulk infrastructure to convey wastewater on the southern side of Havelock North to the gravity network on the northern side.

Preliminary optioneering has identified a range of bulk gravity and pump station configurations to provide interim and long term wastewater servicing to the entire development area. Given the nature of the terrain it is expected that internal servicing can be achieved by gravity solutions without the need for localised pump solutions. All wastewater will be intercepted in Middle Road with conveyance back into Havelock North via a pump station and rising main.

Options for staging have been considered and this will depend on the extent of spare capacity available at the Breadalbane pump station and whether further development is pending in the upstream catchment. The modelling report has identified an additional 21 litres per second being generated across the development area utilising a range of development densities however actual demand will depend on the rate of development. Further work is

to be undertaken to determine a preferred option that aligns with developer expectations and the staging of development.

Roads

The capacity of Iona Road and Middle Road which are higher order roads in the districts road hierarchy is sufficient to meet the additional growth projected from the residential development of this area. However consideration needs to be given to possible linkages from the proposed new development to the existing local roads and the impacts that this may have on the lower order roads.

The Structure Plan has a role in guiding the best location for the principal road(s) within the new development areas but does not extend to the layout of individual roads.

The intersection of Middle Road and Iona Roads has been investigated and there are no safety issues arising for this intersection as a result of the new development. There may however be benefits in an alternative intersection design as a result of combining roading outcomes with stormwater outcomes for the development. This would result in moving the intersection further north on Middle Road to provide a new alignment onto Gilpin Road as shown in figure 4 below.



Figure 4

Natural Hazards

Is the Iona greenfield growth area physically suitable for residential development? Should the physical suitability of the land be questioned, and a resolution not found it would not be appropriate for Council to promote the development of this area.

A search of the Council's GIS maps and information has found the following in respect of natural hazards:

- The site has very low susceptibility to liquefaction;
- There are no fault lines mapped on the site or surrounding land;
- The site is not subject to the HBRC's 50 year flood extent modelling;

Geotechnical Matters

A recent report from Tonkin and Taylor Engineers has been prepared for both the Iona Triangle and Hill sites. For the Hill Site this report concludes that

“based on the information available and on our experience on neighbouring and nearby sites, we consider that the subject site can be satisfactorily engineered to achieve a successful residential development”.

The walkover, site investigations including test-pits in the lower third of the site closest to Iona Road indicates the following:

- That minor earthworks will be required to establish dwelling platforms on suitable grades. It should be noted that the landowner has a Certificate of Compliance to undertake earthworks on the site.
- That site specific investigations will be required to confirm bearing capacities.
- That Liquefaction is very unlikely to occur in areas underlain by Kidnappers group rock. However, areas underlain by alluvial sediments will require deeper site investigations during detailed design to delineate these zones and confirm the susceptibility to liquefaction.
- Further site investigation is required in order to confirm the underlying geological conditions of proposed development sites especially on the upper slopes of the hill site where no investigations have been undertaken.
- Areas of historical refuse disposal were observed on site in the form of a series of rubbish pits likely from historic farming activities.

In respect of the Iona Triangle Site the report concludes that:

“based on the results of the site investigation, we believe the investigation area is generally suitable for residential development”.

The key points of the Tonkin Taylor assessment are as follows:

- The site is typically underlain by Kidnappers Group sandstone and siltstone. Pockets of alluvial deposits (interbedded sand and silt) were encountered in localised gullies across the site.
- The Kidnappers Group is considered to have negligible susceptibility to liquefaction. For alluvial and gully deposits, further investigation and laboratory testing are recommended.
- Minor earthworks may be required to form platforms and fill gullies.

- Site specific foundation assessments are recommended to be carried out where alluvial soils were encountered to allow site specific earthwork and foundation design.
- Shallow foundations in accordance with NZS 3604:2011^s bearing on “good ground” are considered to be generally appropriate for typical residential structures.
- During detailed design, lot specific investigations such as hand augers (with shear vane measurements), Scala penetrometers and additional test pits should be carried out to confirm the underlying geological conditions for each proposed site.

Historic Contamination / Contaminants in Soils

This has generally only been an issue for greenfield development within this District where there is a history of orcharding operations occurring on the site. The National Environmental Standard is however applicable to any subdivision or change of use on sites known to have been used for HAIL activity. The Hazardous Activities and Industries List (HAIL) is a compilation of activities and industries that are considered likely to cause land contamination resulting from hazardous substance use, storage or disposal.

Council has no knowledge of HAIL Activity occurring on this land. Should anyone have knowledge of a Hail activity occurring on the subject land this feedback would be appreciated.

Soil Versatility

The protection of versatile and highly productive soils of the Heretaunga Plains is a primary purpose of both the Region’s and District’s planning instruments.

The 7.5ha Middle / Iona Road triangle portion of the Iona greenfield growth area is currently zoned Plains. The site is not used for productive purposes at present with only a 3.4ha block of grazing available on the triangle parcel and a lifestyle block and gardens being the predominant use of the remaining land (4.04ha). The triangle area has a soil type of ashy sandy loam on sandy loam (loess) on pan over gravel. The drainage class is poor and the water holding capacity is low.

The 26.9 hectare hill part of the Iona greenfield growth area is zoned Rural Residential and is currently used for grazing purposes. Due to its current zoning and effects which permitted rural uses can have under that zoning, it is considered that the subject site has reduced capacity to be used for intensive land based primary production purposes. A check of the Landcare Research Soil Maps shows that the site has a soil type of silty loam (loess) on a pan. The drainage class is poor and the water holding capacity is moderate over slow.

The Hawkes Bay Fruitgrowers Association have stated in their submission to the request to rezone this land that it has limited capacity for horticultural production because of its shape and contour. The definition of versatile land in the Regional Policy Statement is primarily geared towards protecting land from development that can be used for horticultural and viticultural purposes rather than pastoral farming activities.

Therefore the permanent loss of this land for the purposes residential activities is not believed or known to be an issue. Such a loss would not be contrary to the central tenant of urban growth management outlined in HPUDS, the RPS and the Proposed District Plan to protect versatile land.

Reverse Sensitivity

The triangle portion of the identified growth area is surrounded by two roads – Middle Road to the north which has a 30m road reserve and Iona Road to the south with a 20m road reserve. Any reverse sensitivity issues are likely to arise between this part of the site and the rural activities and properties to the north of the site on the opposite side of Middle Road.

In general a 30m buffer strip is the rule of thumb under the Operative Plan when mitigating reverse sensitivity effects between standard horticultural and pastoral activities and residential activities. Therefore in this case, the Middle Road width should provide such a buffer with no need for additional separation.

The greenfield growth area south of Iona Rd (the hill site) is surrounded by Iona Road and established lifestyle residential development along Lane and Endsleigh Roads. If necessary building setbacks could be established to successfully separate landuse activities if these were considered necessary.

There is no knowledge of any intensive rural production activities in the vicinity of the subject site which might require larger separation or buffer areas to be required or necessitate further investigation into other mitigation options.

Feedback on whether there are any landuse activities in proximity to the greenfield growth area that could be affected by increased residential activity in the area would be appreciated.

Cultural, Historic and/or Archaeological Values and/or Sites

There are no heritage items or notable trees on the subject site listed under the Operative or Proposed District Plan. There are no recorded archaeological or wahi tapu sites on this land under the NZAA site recording scheme or District Plan.

As such cultural, Historic and/or Archaeological Values do not appear to present an issue for the residential development of this area.

However, to date no consultation with manawhenua has been carried out to ascertain whether there are any specific values or stories associated with this land. Consultation with manawhenua groups will form part of the consideration of this issues and options paper that will feed into the structure plan process.

Should anyone have knowledge of any site of value associated with the greenfield growth areas, feedback in this respect would be appreciated.

Ecological Values and Habitats

Within the longest valley on the hill part of the Iona growth area is a series of partially manmade connected ponds that form an enhanced wetland fed by surface runoff and groundwater. These ponds have been planted in both natives and exotic species and provide the only known area of ecological value and habitat on the subject site.

Should anyone have knowledge of any other areas of ecological value or habitat within the greenfield growth area, feedback in this respect would be appreciated.

Landscape Values, Rural Character and Visual Effects

In considering the landscape and visual effects of the rezoning requests (which were submissions on the Proposed District Plan) for both the Iona Triangle and Hill sites which form the major part of the HPU DS Iona greenfield growth areas, Council engaged the services of a Landscape Architect, Sue Dick from Eastern Earth Landscape Architects.

This assessment highlights that the Triangle site does provide a gateway to Havelock North and the hill in the middle of the subject site with the bull sculpture atop has also become a central part of the landscape and arrival experience and contributes to the identity of Havelock North. It is acknowledged however that the sculpture is privately owned and on private land. The landscape assessment concludes that in the event that the subject site is developed for residential purposes, the western gateway will have shifted further west and the entrance to the suburb of Havelock North will occur at the Gilpin/Middle/Iona Roads intersection.

The report also notes the large lifestyle site sizes, boutique accommodation, large homesteads and mature trees will provide a transition to the more suburban density of the greenfield growth area, if and when this is developed.

The landscape assessment made the following observations:

- *“In the short term the subject site may become a residential fragment, but if care is taken to ensure that both sides of Iona Rd have a complementary character, then the fragmentation of rural character should be minimised.*
- *Over time as more residential sections are developed, an integrated residential environment will be established, bounded by land with rural character to the south and west”.*

A portion of the Iona hill site is located within a Rural Landscape Character Area (RLCA). There are no rules applying directly to RLCA. It is however recommended that any development be undertaken in accordance with Councils landscape and development guide (The Guide) to encourage design that protects and enhances the qualities of the District’s rural landscapes.

The landscape assessment concluded the following for the hill part of the Iona growth area:

“Although visible from several locations around the Havelock North, the landform, natural characteristics and landuse patterns of the site and surrounding area mean that it is a site which has the ability to accommodate a reasonable level of change without significant adverse landscape and visual effects;”

Provision for Commercial Activities

Consideration needs to be made as to whether it is appropriate or whether there is potential to include provision for small scale community based commercial activities such as dairies or cafes.

In doing so there is a need to be mindful that any such provision is in line with the District's Commercial Strategy as well as the objective, policy and zone framework within the Havelock North Strategic Management Area.

Under the Operative District Plan corner dairies have been provided for as part of Suburban Commercial Zone. Under the Proposed Plan this changed within the Havelock North SMA to provision on a more individual basis through the scheduling of existing dairy and commercial activities located within the residential area.

Currently the nearest dairy that could service the Iona growth area is located on Middle Road at the intersection with Upham Street. At its closest this location is a distance of approximately 800m from the Iona growth area land adjoining the existing residential area. However for the bulk of the greenfield growth area it would be a distance of approximately 2km.

Feedback is requested on the potential need to provide for such activities within the Structure Plan for this Iona growth area.

OPTION DEVELOPMENT

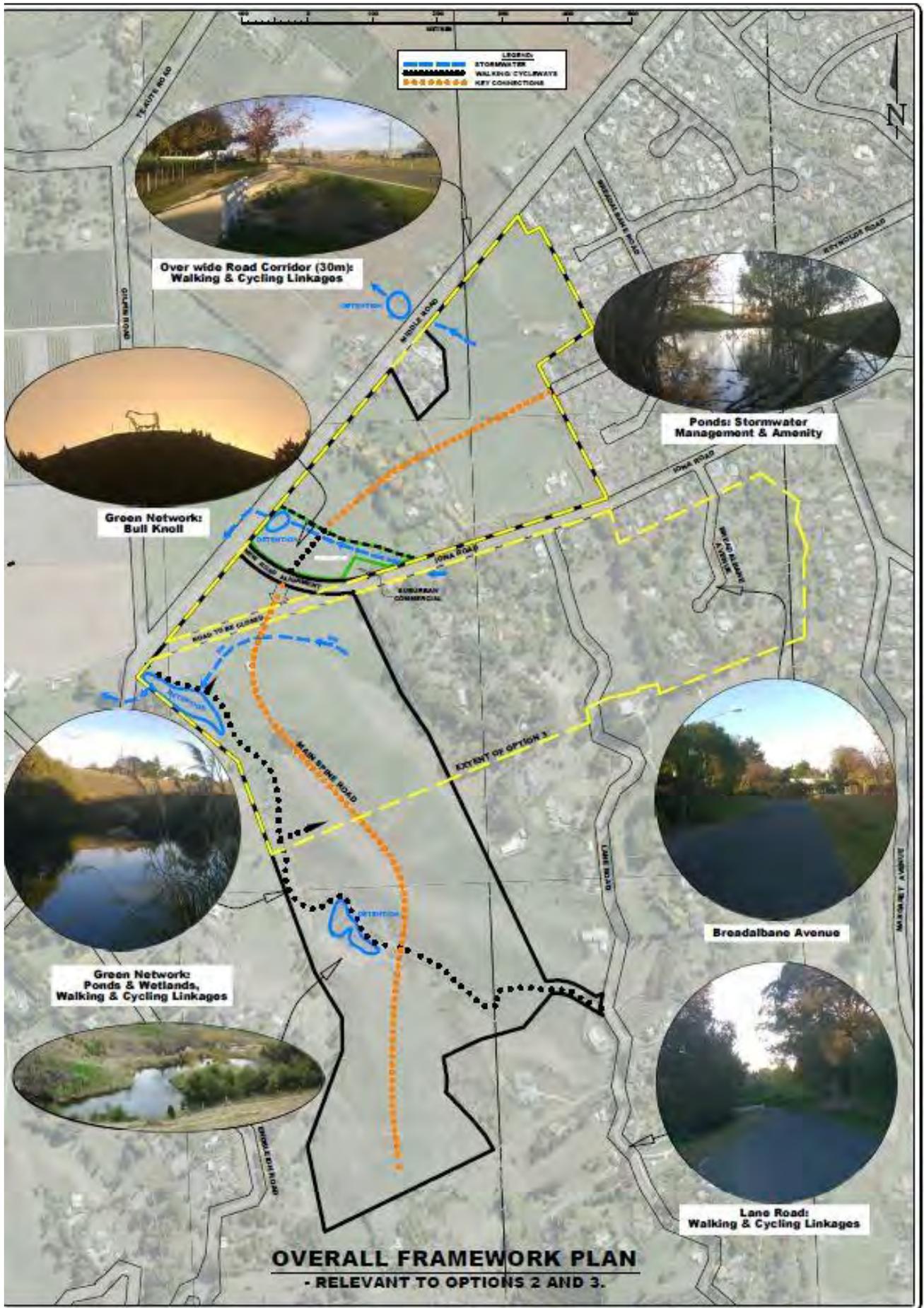
The three options put forward as part of this paper are for the purpose of identifying the best option to proceed to an initial variation to the Proposed District Plan and would include the preparation of a structure plan.

As stated in the Introduction to this paper while both the Iona/Middle Road and Havelock Hills Lower Greenfield Growth Areas (shown on Figures 1 and 2) have been identified for future residential development in the Heretaunga Plains Urban development Strategy in the longer term, the purpose of this Issues and Options Paper is to assist with identifying the most appropriate area of land to include in a Variation to the District Plan (and associated Structure Plan) to be promoted by the Council in the short term.

It is hoped that any plan change process for this land could be completed by the 3rd quarter of 2017, barring Appeals. As part of this feedback process and as further more detailed technical assessments and analysis is carried out, it is anticipated that the three options set out below will be modified and developed and/or that alternative options are identified.

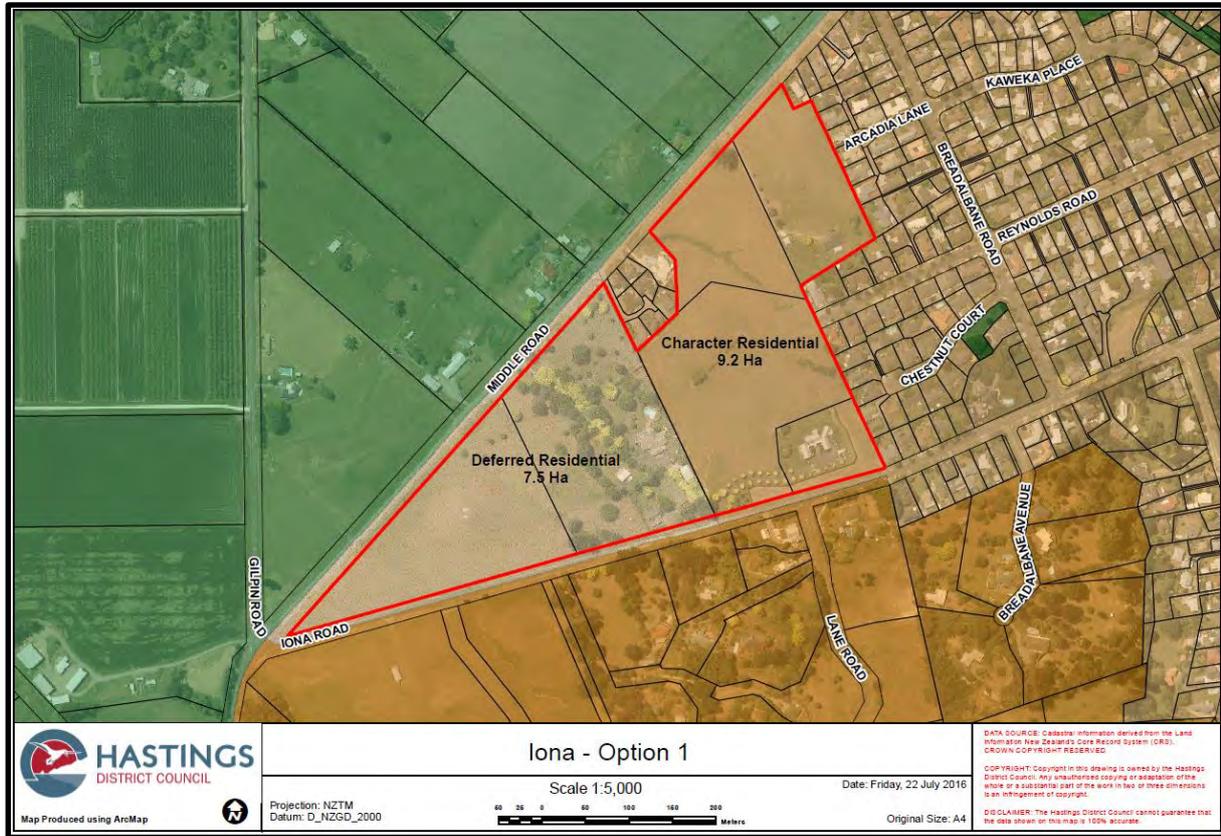
These 3 initial options cover the wider area as well as smaller portions of the land identified as suitable for development. If it is determined that a smaller development area be the subject of an initial plan change, the remaining areas identified as suitable for residential growth will still be factored into a wider framework plan for residential development in the future.

A draft Framework Plan has been prepared and is shown on the following page to indicate the type of development features that might form the basis of future development including key road linkages, walkways and green network reserves.



Option One – The Iona Triangle

Figure 5 below illustrates the extent of the area covered by Option One. The map also shows the current zoning applied to the land.



This option has a total yield (total number of residential sections) of approximately 210 dwellings.

An average site size of 650m² has been used to estimate the yield for this area. Taking into account land requirements for roads, in addition to the site size, the total number of dwellings that the character residential zoned portion of the site could accommodate is approximately 110. This is very similar to the density of dwellings in the neighbouring existing residential area to the east (Reynolds Rd / Chestnut Court area). The Deferred Residential zoned land could accommodate approximately 100 dwellings on the same basis.

An average site size does not mean that all sites will necessarily be 650m². It is possible to have small pockets of townhouse or perhaps duplex development on 250m²-450m² within the development area, however this would need to be offset by larger sites of perhaps 900m²-1000m² along the middle road frontage for example to create a gradual transition between rural and urban land uses.

Reserves

A neighbourhood reserve node of approximately 5000m² – 1ha with enough space for small ball play and a minimum of 3 pieces of playground equipment near the apex of the triangle or incorporating the bull hill and subject to roading design options is proposed.

Transportation Linkages – Cycleways, Walkways and Roads

A Traffic Impact Assessment report prepared by MWH has concluded that there appear to be no major obstacles (such as grade/visibility) in regard to connection between the Deferred and Character zone parts of the Iona Triangle Site and the existing external road network.

While the introduction of the proposed residential development will bring additional trips, the impact in terms of traffic operation at an intersection level is expected to be minimal. The design of the road network for this option therefore does not need to be driven by any need to provide additional intersection capacity.

However there is a need to keep in mind the wider framework plan for the future development of land on the southern side of Iona Road and to ensure an integrated approach to the roading and land use within these two areas.

This Option allows the existing road network and intersection at Middle/Iona/Gilpin to be retained initially with the extension of Reynolds Road through the Triangle Site as shown below in Figure 6. The extension of Reynolds Road will allow development to occur within the triangle site gradually progressing towards and Iona/Middle/Gilpin Intersection.

Figure 6 Existing Road Network



Development at the apex of the Triangle Site will need to align with the preferred road and stormwater solutions for the wider development area and therefore it is important that these form part of the Structure Plan for the initial variation at the outset.

Three Water Infrastructure Services

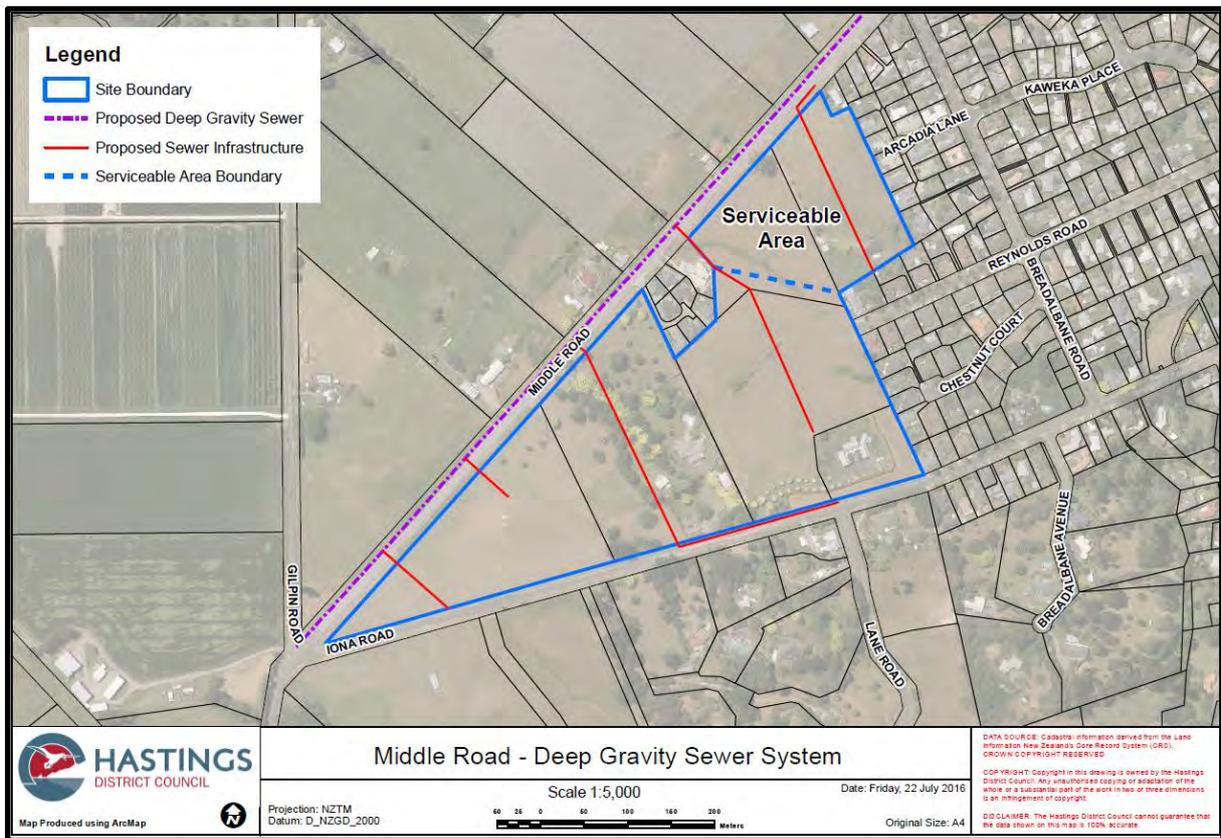
Water

The development area has service mains extending partway along Iona Road and within Middle Road. The watermain in Iona Road will need to be extended and upsized linking into the existing Middle Road watermain at the Gilpin Road intersection. Internal service mains can then be positioned within the development area to suit road layouts and provide alternative connectivity and continuity for firefighting.

Wastewater Services

The traditional approach to the provision of wastewater services is to construct gravity wastewater systems with pump stations where gravity flow is not feasible. The terrain of the Iona Triangle Site generally falls to Middle Road permitting the use of gravity network systems for all the reticulation sewers. Therefore the option illustrated below shows gravity reticulation systems, linking into a trunk wastewater system in Middle Road.

Deep Middle Road Gravity Wastewater System – Figure 7



The serviceable area illustrated above is able to utilize existing infrastructure to facilitate development with minor pump upgrades. However the remainder of the Iona Triangle would require a new pump station in Breadalbane Road with additional storage and the new gravity trunk sewer to be constructed in order for development of this larger area to occur. The main advantage offered by this option is the reduction in operation and maintenance costs due to its reliance on a gravity wastewater system all the way to the receiving Breadalbane Pump Station. The disadvantage of this option is that it does not optimise the existing Breadalbane Pump Station capacity and delay or stage the need for major upgrades. It

requires the Breadalbane Pump Station to be upgraded earlier than other options considered.

Stormwater Detention

It is intended to incorporate low impact designs within the development area so as not to create any adverse effects downstream of Middle Road. This includes the use of detention areas where practical to contain excess stormwater flows and ensure that the receiving environment is not overloaded. The residential area will incorporate a standard urban approach with a primary stormwater pipe system and conventional roadway design to convey overland flows up to the Engineering Code of Practice defined performance standards.

Option 1 – The Iona Triangle - Overall Conclusion

This option would meet the Regional Policy Statement density requirements of 15 dwellings / hectare for greenfield development and could potentially supply a variety of urban sized residential lots including smaller sites for townhouse development.

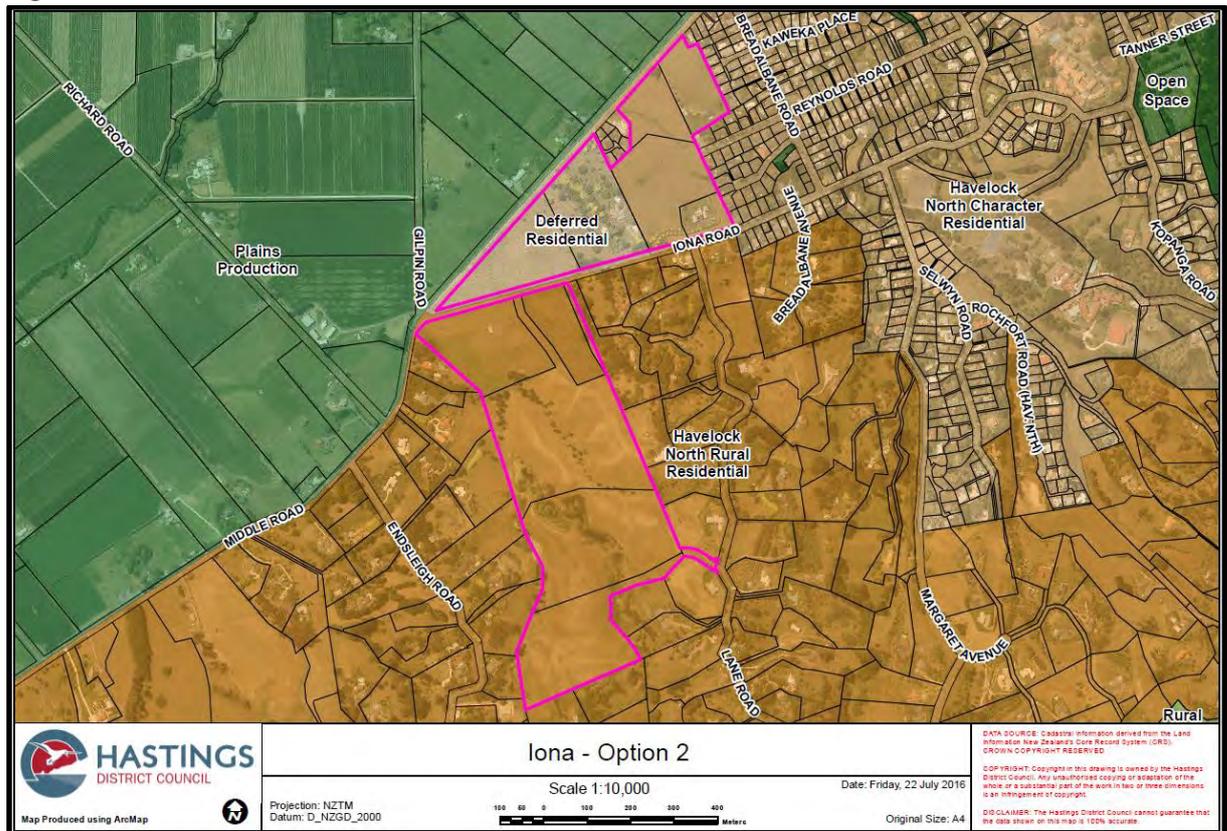
This scenario would delay the need to immediately zone and service the Iona hill land and remaining HPUDS areas for residential development and would provide an approximate 7 year supply based on development rates of 30 dwellings per year. However delaying the cost of servicing and development may not necessarily be cost effective. It may be more efficient to zone a larger area at the outset to ensure a larger land supply while staging the provision of infrastructure overtime.

Given the length of time required to zone and service residential land and make it available for development, this option would only provide enough land supply for the short – medium term. As a comparison the Arataki Development which made residential sections available in the late 1990s-2000 has provided an ongoing supply of residential land for the past 16 years.

This option may not result in the land areas being able to be used in the most efficient manner with its triangular shape making the layout of sites more difficult.

Option Two – The Iona Triangle and Hill

Figure 8



Density Proposed

The Triangle – 210 – equates to an average lot size of approximately 650m²

The Hill Site - 150 – 70 (lower hill area south of Iona Rd), 40 (middle to upper section of hill site), 40 (upper hill site).

The total yield would be approximately 360 dwellings.

This option provides for greater choice in section size and thereby a mixed community at different life stages. The design ideas are built around the following elements:

- Green network – the bull knoll will be a gateway landmark to Havelock North and will link the triangle site with the foothills; The valley and wetland areas and steep south-facing scarp (which is to be treed) will form reserve and stormwater detention areas within the Hill site. The planting of trees and vegetation is proposed to screen and soften the outlook for neighbours to the south and southeast.
- Main spine roads designed to give structure and character – the extension of Reynolds Road is to have a more treed character (including the retention use of existing trees on the site). This road will have an open end terminating at the Bull knoll.
- Side streets and lanes that link to spine roads are to be short and straight with lane ends open for views to countryside. These side roads are to be narrow to slow traffic speeds and encourage a shared space character or use.

- A variety of lot sizes with opportunities for retirement villages or comprehensive developments around the existing dwellings;
- Design Control which allows for a variety of building styles but ensures coherence and good quality
- Staging of development – initial areas to be developed will include the northwest corner of the triangle site and lower part of hill site with early establishment of spine roads and planting of the green network.

Reserves

This option will not result in the need for neighbourhood reserves above those identified for Option 1 (the Triangle). There will be a node of approximately 5000m² – 1ha with enough space for small ball play and a minimum of 3 pieces of playground equipment near the apex of the triangle or incorporating the bull hill and subject to roading design options is proposed.

This option will provide for walking linkages from the lower portions of the development area adjacent to Iona Road through to the upper section. This could align with the possible greening of areas that may not be suitable for development as a result of the topography.

Transportation Linkages – Cycleways, Walkways and Roads

The assessment analysed 5 possible roading options as well as connecting to the existing road alignment. The preferred option is one that can be integrated with a preferred stormwater solution for a detention basin and/or a reserve area on either side of the intersection. Figures 9 and 10 below illustrate the preferred roading options 2 and 4 that were identified in the “Middle Road Iona Road Growth Area – Transport Assessment Report; MWH April 2016”:

Figure 9 - Roading Option 2



Figure 10 - Roading Option 4



The provision of a roundabout at the 3 way intersection between Iona/Middle/Gilpin Roads acts to slow all drivers down upon approach to the intersection and reduce the potential conflict points for vehicles approaching from Gilpin and Iona Roads. This option enhances accessibility through both proposed greenfield growth areas and between the Iona Hills and Middle Road and through to Te Aute Road.

The remaining triangular shapes may be considered as a less efficient use of space when developing the residential area, however these could be used for stormwater detention or reserve areas. Additional land take may be required to construct the roundabout and realign Gilpin Road. This option may provide stormwater benefits for primary and secondary conveyance.

Overall, the assessment commented that

“one of the distinct advantages of Option 4 is that the realignment of Iona Road helps to create a gateway entrance to the area which could incorporate some additional recreational green space”.

The two traffic layout options that were identified in the Triangle development area will form the basis of the principal road layouts for this development option.

The Traffic Impact Assessment identifies the need for a main spine from Iona Road through to the top of the hill area. A more refined location would be identified through the Structure Plan if this was to proceed as the preferred development option.

Road connectivity is an important part of the development considerations for this option to ensure the accessibility of the development area both from a traffic and pedestrian perspective. Endsleigh Road, Lane Road and Margaret Ave which are all immediately adjacent to this area are 'dead ends' and it is important that this development provides linkages to the adjacent roads to provide improved access to the schools in the area.

A number of linkage options have been identified in the Traffic Impact Assessment Report. Not all options will be required and it is envisaged that the most appropriate option would be decided on through the structure planning process.

Three Water Infrastructure Services

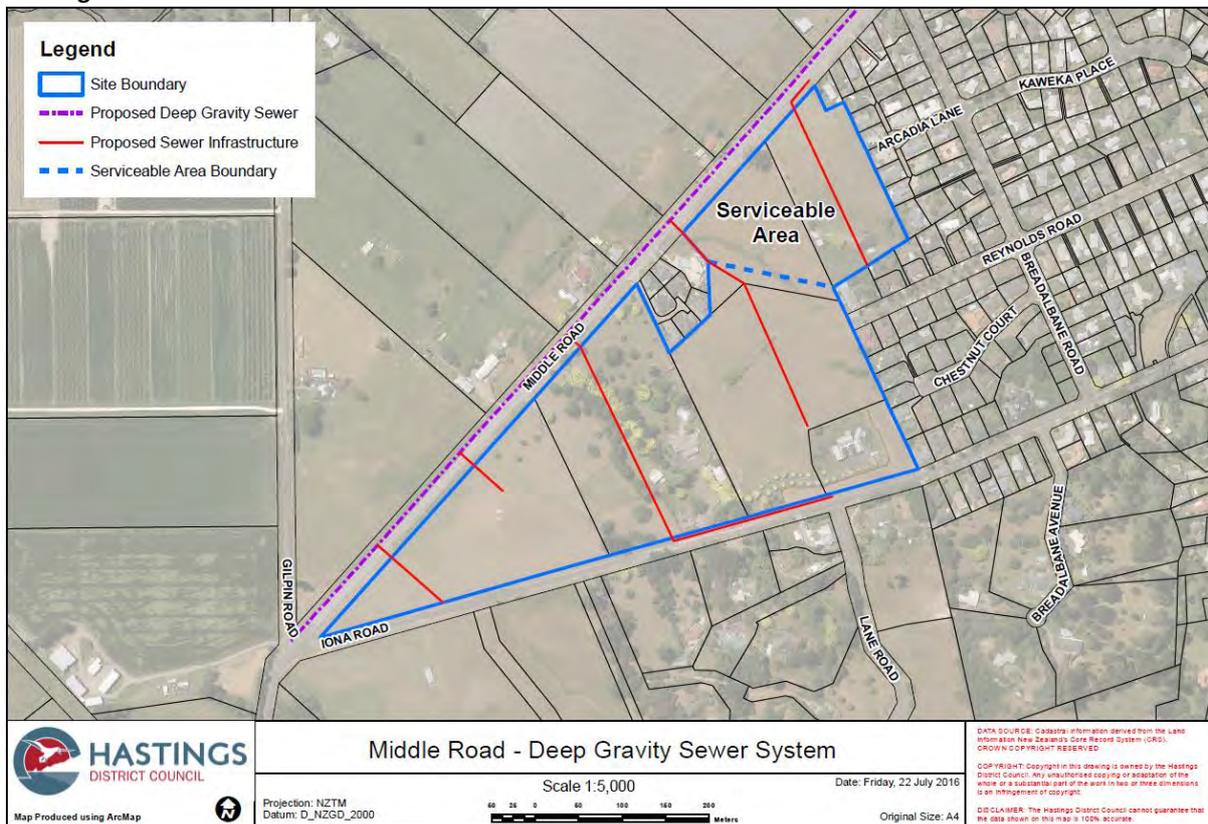
Water

The assessment of the water infrastructure has indicated that the watermain in Iona Road will need to be extended and upsized linking into the existing Middle Road watermain at the Gilpin Road intersection. This would allow internal service mains to be positioned within the development area adjacent to Iona Road. The hill area of this development option will however be serviced at a level without firefighting capacity or at a reduced level of service in much the same way as the rural residential areas currently are.

Wastewater Services

The traditional approach to the provision of wastewater services is to construct gravity wastewater systems with pump stations where gravity flow is not feasible. The terrain of Option 2 generally falls to the Middle Road permitting the use of gravity network systems for all the reticulation sewers. Therefore the option illustrated in Figure 11 below shows gravity reticulation systems, linking into a trunk wastewater system in Middle Road.

Figure 11



Options for staging of the development can be considered but will be dependent on the spare capacity of the Breadalbane pump station. As for Option 1 the serviceable area of the Triangle will be able to use the spare capacity within the Breadalbane pump station but the remainder of the Triangle will require a new pump station.

It is expected that the servicing of the Hill area will be able to be achieved by gravity solutions without the need for localised pump stations. All wastewater will be intercepted in Middle Road and then pumped back into Havelock North.

Stormwater Detention

The stormwater solutions for the Triangle area of this development option will be the same as for Option 1. For the area to the east of Iona Road there would be a need for detention areas to contain excess water flows. There is currently a modified waterway area comprising a dam and pond. Intensification above this system could result in the need to modify this current system or create additional detention at a natural low point towards the intersection of Iona and Middle Roads. Stormwater solutions are readily achievable for the development of this option.

Overall Conclusion - Option 2 - The Iona Triangle and Hill

The purpose of this option is to provide for a greater range of site sizes to create a wider choice of residential options. While the development of the hills area has the potential to have greater visual, landscape and rural character effects than that of the other two options it does also create opportunities for increased connectivity with the existing rural residential areas on the adjacent Endsleigh and Lane Roads.

The benefits of this connectivity are the creation of reserves and walkway linkages from the existing residential area of Havelock North through the Triangle Site and up through the Hill site to the existing rural residential areas in the southwestern hills. These increased opportunities for recreation would provide for the social wellbeing of the residents of these areas as well as the wider community.

The existing wetland area on the Hill Site could become part of this walkway area ensuring the habitat for existing flora and fauna of this area will be more accessible to the local community and provide opportunities for community interaction and learning.

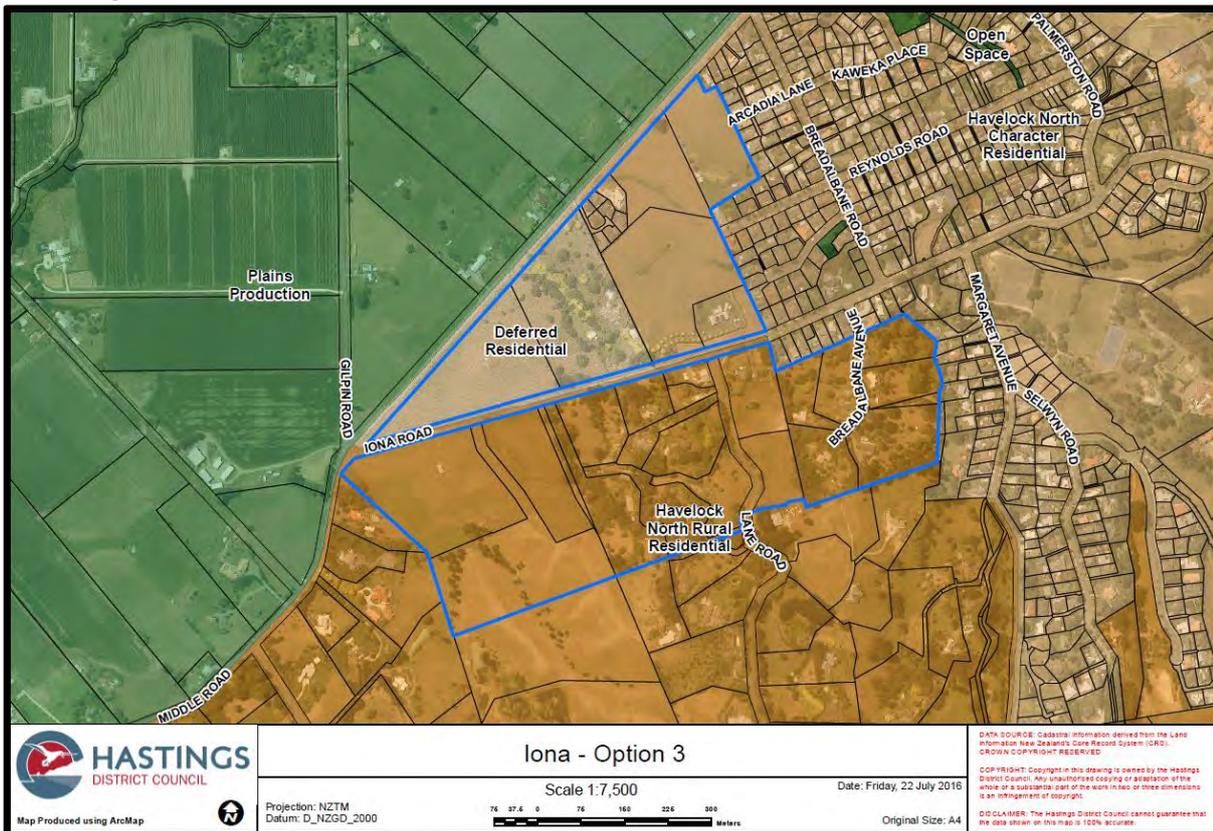
Furthermore, this option would provide for a larger supply of residential land that could service Havelock North for approximately 12 years depending on development rates. This larger area of land will also provide greater efficiencies around the staging of the infrastructure and the ability to bring land on stream to respond to changing demand levels.

However, the topography of the Hill area above the lower slopes requires careful consideration of the best layout of sites, taking into account the character and amenity of the existing rural residential environment. This process would benefit from a longer period of planning.

Option Three – The Iona Triangle and Lower Hills area (HPUDS)

Option 3 is a composite of the entire residential growth area identified in the Heretaunga Plains Urban Development Strategy. It includes the Iona Triangle, plus the lower Havelock Hills area (Iona Rd frontage from Breadalbane Ave through to and including the lower part of the Hill Site). The approximate total yield of this area would be 305 sites – this includes 210 (Triangle Site) + 70 (the lower area of the Hill Site) + 25 (HPUDS areas fronting Iona Road). See Figure 12 below.

Figure 12



This option will allow for the development of the HPUDS identified areas with the gentler topography to proceed first, allowing for the 15 dwellings per ha densities that are sought to be achieved through the Regional Policy Statement and the Heretaunga Plains Urban Development Strategy.

This option will need to be staged so that it is phased with the infrastructure upgrades that are required for the full development of the area. The infrastructure upgrades for some of the services may not necessarily be able to match the desired stages of the landowners, with some components needing to be upgraded before others.

This option would provide a wider range of section types and sizes than the other options with the ability to provide more intensive development within the Triangle and larger sites based around the topography of the land on the southern side of Iona Road. The larger area of land will also provide greater efficiencies around the staging of the infrastructure and the ability to bring land on stream to respond to changing demand levels.

In this respect the service upgrades that relate to this option are set out as follows:

Reserves

This option will not result in the need for neighbourhood reserves above those identified for Option 1 (the Triangle). There will be a node of approximately 5000m² – 1ha with enough space for small ball play and a minimum of 3 pieces of playground equipment near the apex of the triangle or incorporating the bull hill and subject to roading design options is proposed.

This option will provide for walking linkages from the lower portions of the development area adjacent to Iona Road through to the upper section of this option with possible walkway linkages through to Lane Road. This could align with the possible greening of areas that may not be suitable for development as a result of the topography.

Transportation Linkages – Cycleways, Walkways and Roads

The assessment of the proposed development of the Iona area identified that there are no capacity issues for Iona Road and Middle Road. This equally applies to the area proposed for development under this option (Option 3). Similarly there are no road safety issues arising as a result of the development. There may be some changes to the intersection of Iona Road and Middle Road to facilitate improved stormwater options for the wider catchment.

The two traffic layout options that were identified in the Triangle development area will form the basis of the principal road layouts for this development option. It is likely that Rooding Option 4 will result in a more efficient development layout and allow a greater section yield than the alternative Rooding Option 2.

Three Water Infrastructure Services

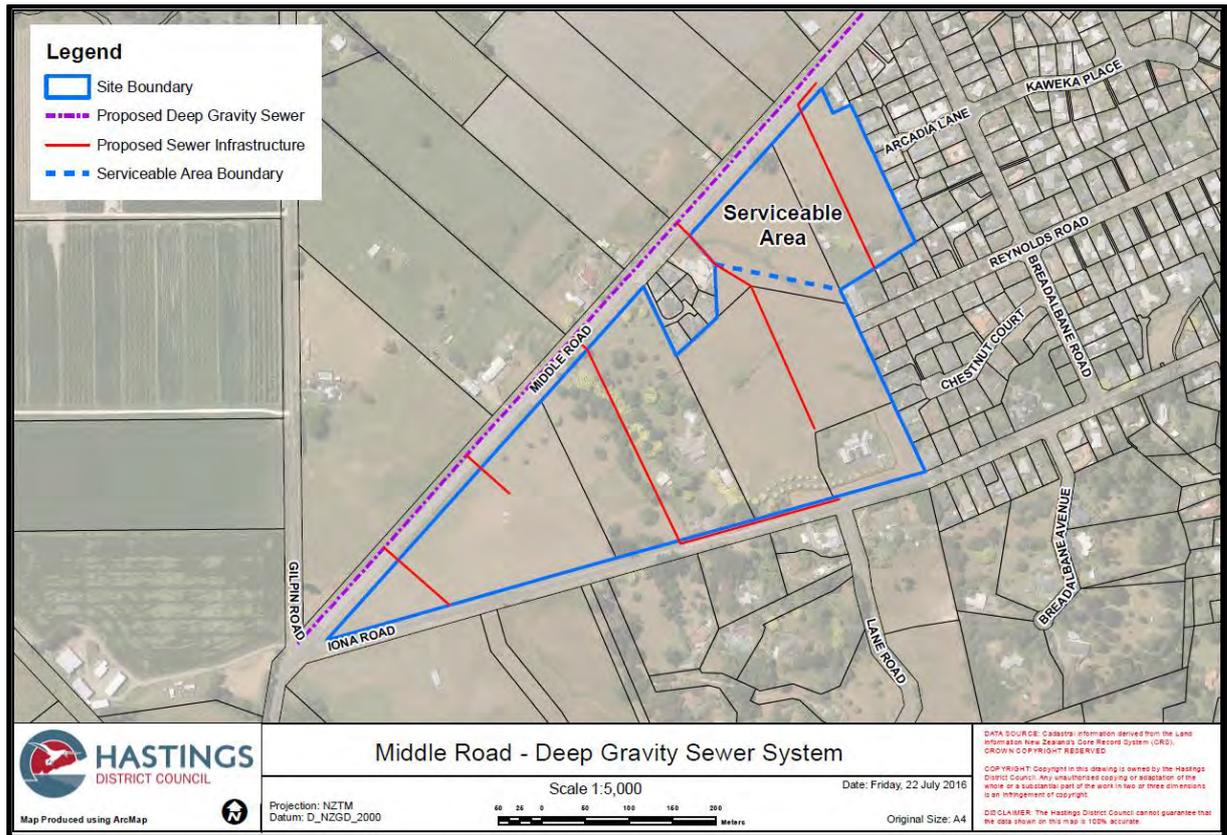
Water

The assessment of the water infrastructure has indicated that the watermain in Iona Road will need to be extended and upsized linking into the existing Middle Road watermain at the Gilpin Road intersection. This would allow internal service mains to be positioned within the development area adjacent to Iona Road.

Wastewater Services

The traditional approach to the provision of wastewater services is to construct gravity wastewater systems with pump stations where gravity flow is not feasible. The terrain of Option 3 generally falls to the Middle Road permitting the use of gravity network systems for all the reticulation sewers. Therefore the option illustrated in Figure 13 below shows gravity reticulation systems, linking into a trunk wastewater system in Middle Road.

Figure 13



Options for staging of the development can be considered but will be dependent on the spare capacity of the Breadalbane pump station. As for Option 1 the early stages of the Triangle will be able to use the spare capacity within the Breadalbane pump station but the remainder of the Triangle will require a new pump station. The servicing of the Breadalbane Lane Road area can likewise be readily achieved through the spare capacity in the existing pump station.

It is expected that the servicing of the lower Hill area opposite the Triangle will be able to be achieved by gravity solutions without the need for localised pump stations. All wastewater will be intercepted in Middle Road and then pumped back into Havelock North via a new pump station.

Stormwater Detention

The stormwater solutions for the Triangle area of this development option will be the same as for Option 1. For the area to the east of Iona Road there would be a need for detention areas to contain excess water flows additional detention at a natural low point towards the intersection of Iona and Middle Roads is one option that is being investigated. Stormwater solutions are readily achievable for the development of this option.

Overall Conclusion – Option 3 - The Iona Triangle and Lower Hills area (HPUDS)

The purpose of this option is to maximize the number of sites achievable at the 15 dwelling per hectare density sought to be achieved by the Regional Policy Statement and Heretaunga Plains Urban Development Strategy while allowing additional time to consider the most appropriate options for the development of the Hill area which has the potential to have greater visual, landscape and rural character effects than that of the other two options.

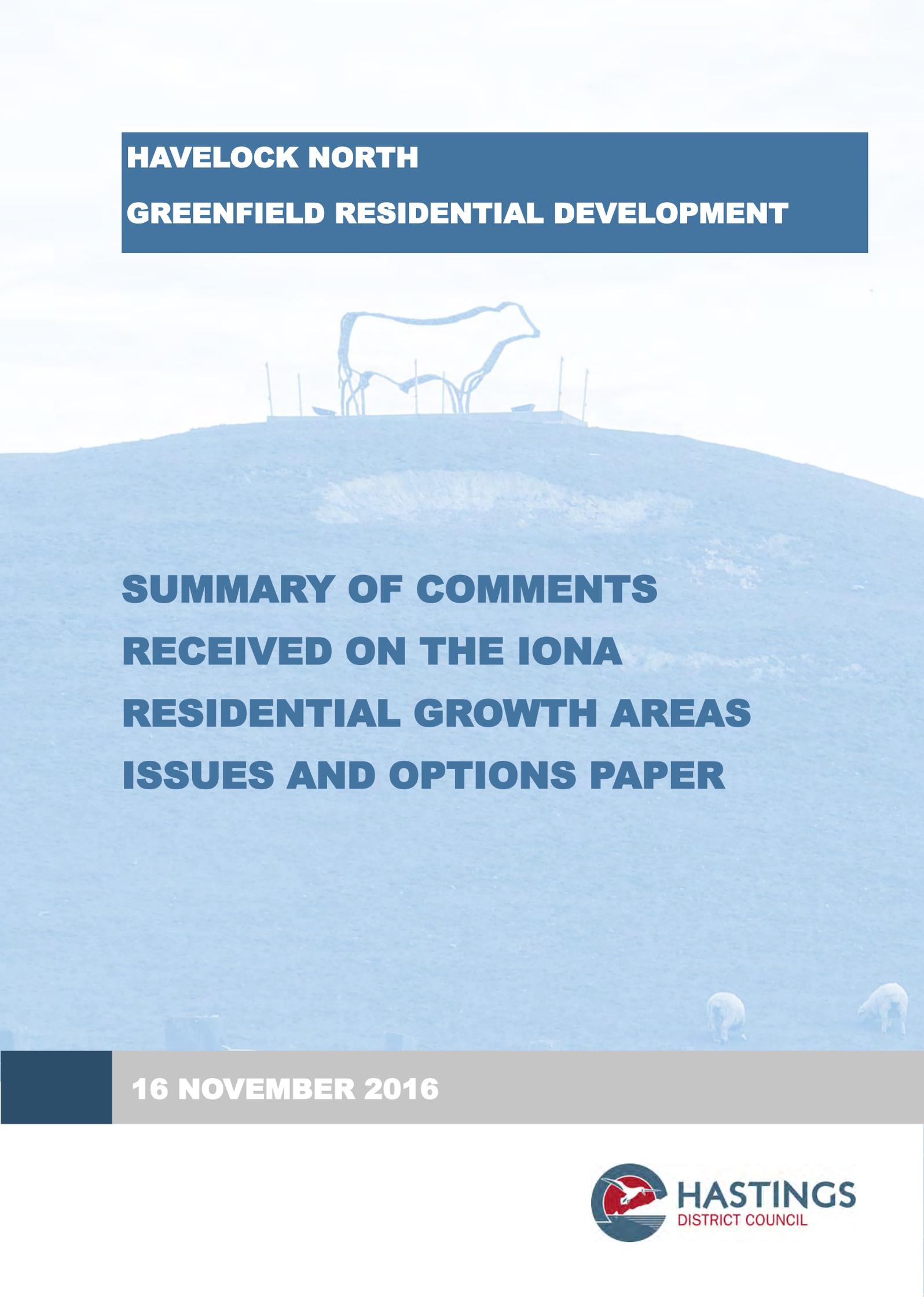
This option would provide a 10 year supply of residential land based on current development rates and will also allow for the more efficient use of land in the Triangle area by allowing for a change in the road alignment to achieve a better layout of sites.

This option provides benefits in terms of the ability to stage infrastructure provision and make land available in accordance with demand. It also ensures a range of residential section choice is available and allows time for planning and consideration of the appropriate development of the upper hill area, including time for any planting and landscaping carried out by the developer to mature.

This option provides benefits in terms of in terms of developing the lower slopes of the hill area first where the topography is gentler. This would ensure the efficient use and development of the land on the lower slopes of the south-western hills (i.e. both the Hill site and the remaining HPUDS areas) prior to the servicing and development of the upper slopes of the South Western Havelock Hills.

HAVELOCK NORTH

GREENFIELD RESIDENTIAL DEVELOPMENT



**SUMMARY OF COMMENTS
RECEIVED ON THE IONA
RESIDENTIAL GROWTH AREAS
ISSUES AND OPTIONS PAPER**

16 NOVEMBER 2016

Summary of Issues and Concerns Raised from Comments received on the Iona Residential Growth Area Issues and Options Paper

In July 2016 Council released, for public comment, an issues and options paper which outlined all of the potential issues associated with the development of this land. Three possible options for rezoning the land were put forward to stimulate discussion and obtain feedback. Council received comprehensive feedback from more than 34 individuals and groups.

This document provides a summary of the issues and concerns raised by the comments received on the Iona issues and options paper. This feedback is now being carefully considered by Council and will assist in determining a best option to rezone land in this area for housing. The extent of the rezoning area is yet to be determined and can't be finalised until a best option is identified and initial infrastructural investigations have been completed.

Once a best option is identified structure planning work can begin. The Structure Plan shows where main roads, reserves and infrastructure services will go and whether the development will be staged. The information in this summary will then also be used to inform any structure plan process:

Landscape Values	<ul style="list-style-type: none"> • Significant concerns that the landscape values currently associated with this area will be eroded by the sheer scale of development proposed to the extent that this area will lose the beautiful landscape character that makes it special. • Significant level of concern that the amount of earthworks needed to accommodate the number of dwellings proposed would irrevocably change the landscape impacting significantly on character and amenity.
Impact on Character of the Area	<p>The attributes that give this area its character include space, views, greenery (trees and plantings that have been developed by current landowners), bird life, peace and quiet and privacy. Part of the character of Iona is also the undulating nature of the road and surrounding land.</p> <ul style="list-style-type: none"> • Concerns raised that the proposed development will result in a loss or erosion of this character – including a loss of privacy, green landscape and trees, loss of peace and quiet, loss of space for tree planting, reduction in habitat for bee and bird life. • Concern that such urban development will destroy the desirability of the Iona area. • <i>“Small sections (650m²) provide no room to develop and build upon the green belt appeal that makes this area unique. The lifestyle properties contribute huge spillover benefits as they ensure plenty of flora and birdlife, but not the subdivisions of today”.</i> <p>Suggestions made from submitters of how the character of this area can be retained:</p> <ul style="list-style-type: none"> • Retain lifestyle character (larger sized sections) in the lower HPUDS areas fronting Iona Rd; • Retain existing vegetation within the development area including mature trees on land neighbouring Stapleford Park and fronting Middle Road as a reserve area; and • Minimum section sizes 700m² with larger sections of 1000m² on the road frontage (with smaller sections in behind) to give a feeling of space (in the Triangle Site).

Biodiversity / Bird life / Wetlands	<ul style="list-style-type: none"> • Concerns that the proposed level of development will result in a loss of bird habitat; • Concerns raised over the impacts of construction / earthworks on the existing birdlife (including harrier hawks, bellbirds, tui, pheasants, ducks, quail, finch, pukekos, starlings, fantails and blackbirds); • Significant concerns of the impact of a large number of new residents / dwellings on flora and fauna that have established in the area; • Seek retention of the ecology of the area, specifically the wetlands area which supports small creatures including frogs and eels; and • Conserve the wildlife habitat and feeding flight path of the native birds that exist in this area.
Views / Rural Outlook / Visual Effects	<p>Concern at the potential impacts on amenity of a loss of views / rural outlook / loss of rural and lifestyle amenity values attributed to the outlook of properties onto lifestyle blocks and rural farmland.</p> <ul style="list-style-type: none"> • The hill site is too steep to provide ideal residential development sites without a significant change to the landscape. Such earthworks will spoil the environment of the hills. • Suburban development of the Hill site will create a finger of urban scale development surrounded by rural residential properties. This finger or island of intense development would look out of place, with no ability for new houses to blend in with the existing surroundings thereby creating visual effects on the existing landscape. • Such development as proposed would seriously impact the stunning rural outlook.
Reverse Sensitivity	<ul style="list-style-type: none"> • Concerns at the potential conflicts between urban dwellers and rural residential properties owners and how these impacts can be managed. • Conflicts between the expectations of urban residential property owners and the everyday activities of any rural residential neighbours (effects and activities such as noise/spray drift/ stock/ smoke from rubbish fires / frost protection measures).
Productive Land Value	<p>Land between Middle and Te Aute Roads not economic for Plains Production purposes but could be suitable for residential development. Cannot get any contractor to lease this land as it is too small / not suitable for extensive horticulture eg, vegetables, as water bore of insufficient size – some landowners in this area are caught in this situation of economy of size.</p> <ul style="list-style-type: none"> • That the Middle Rd – Te Aute Rd area should form part of the structure plan. • Rural residential land in this area may not be as attractive or easy to lease if the development proposal goes ahead – more traffic making stock movement much more difficult on the surrounding roads.
Impact on wider village infrastructure Education facilities, village centre services	<ul style="list-style-type: none"> • Concern at the impacts of such development on local schools and their ability to cope with such an increase in population. Concern that increased population will place greater pressure on existing services or the need to provide additional or new services for a larger population – e.g. carparking in the village will need to be improved.
Impact on the Attractiveness of the Village as a Whole	<p>Development of this nature will impact on how the whole village is viewed and its attractiveness as a destination (effects on tourism).</p> <ul style="list-style-type: none"> • Concern that the amount of subdivision in Havelock North will result in a loss of identity for the Village. The original beauty of the village is due

	<p>to the large residential sites, the foot hill topography, which gave space for the planting and the establishment of beautiful gardens and established privacy; and</p> <ul style="list-style-type: none"> • Concern that the expansion of residential development in Havelock North will negatively impact its coveted village feel.
<p>Traffic Congestion</p> <p>Traffic Safety issues</p>	<p>Currently traffic congestion occurs through the village – Middle / Porter & Te Aute / Porter and Lucknow / Middle Roads - already there is a bottleneck of traffic flow from Havelock to Hastings at the above intersections and village roundabouts. Add hundreds more houses and cars and it could put significant pressure on the existing systems exacerbating traffic congestion. There is no arterial route able to easily cross through the village and access the route to Napier.</p> <ul style="list-style-type: none"> • Given the quantity of sections proposed and that most households have two vehicles how does the Council intend to facilitate a free flow of traffic through the village?; • Concern at the adequacy of the existing roading network that will immediately service the proposed development; • Concern at the narrowness of Lane and Gilpin Roads - currently an issue and could be exacerbated with an increased level of traffic; e.g. blind corners on Lane Rd make it dangerous for increased traffic and/or walking / cycling traffic; and • Concern that increased traffic on any accessways shared by existing property owners with the development area will further decrease the attractiveness of living in this location.
<p>Road Alignments / Treatments / and Options</p>	<ul style="list-style-type: none"> • Support for maintaining the existing road alignments with the possibility of a roundabout at the Middle / Iona intersection; • Option 4 supported by some but strongly opposed by others, particularly if private land needs to be taken as this has serious implications for the ability of landowners to continue to use their land for productive purposes; • Some support for roading Option 2 as this appears to be the least disruptive but there are also landowners in opposition to this option; • Some support for the alternative intersection design for Middle and Iona Roads as shown on Figure 9 (page 31) of the Issues and Options report; • Concern in respect of the potential location of roads behind existing residential properties adjacent to the triangle site; • Concern at the narrowness of Gilpin road and impacts of an increase in use as a result of proposed development - this road needs upgrading now as it is increasingly busy and used by heavy vehicles in preference to going through the village; • Concern from some residents that there will be road access from the Triangle development site onto Iona Rd. Other comments suggest that the extension of Reynolds Rd should connect to Iona rather than Middle Rd as Iona is not as busy; and • Any roading design should ensure ease of access for emergency services.
<p>Security and Adequacy of Water Supply / Water Pressure</p>	<ul style="list-style-type: none"> • Concern that water pressure may reduce as a result of further development;

Issues / Fire Fighting	<ul style="list-style-type: none"> • Many queried the ability to supply sufficient, adequate, and safe drinking water to the existing Havelock North Residential area, let alone to the additional population that such a development would cater for; • Concerns raised at proposed reduced water services - a lack of fire-fighting capacity for some parts of the development area; and • Concern that there will be an increased fire hazard risk because of the increase in population.
Stormwater Runoff Issues and Potential for Flooding	<ul style="list-style-type: none"> • Concern at the potential location of pipes (infrastructure) in relation to existing property boundaries adjacent to the Triangle site; • Stormwater runoff concerns for lower landowners (north-west of Middle Road to the Karamu Stream), already these properties are experiencing ponding after heavy rain from runoff uphill and have advised that the Gilpin Road drain is not functional currently; • Existing stormwater and flooding issues in this area would increase with more development – already regular maintenance is required of roadside drains to reduce blockages and reduce potential for flooding; • Some individual property owners in this location have serious concerns that stormwater will affect their property and their use of it for productive purposes; • Property owners in this area want more detail on how additional stormwater is proposed to be managed; • Suggestion from a current landowner that stormwater currently running under the middle road culvert be diverted to the existing open drain in Gilpin Rd to run downhill to a narrow culvert in Gilpin Rd; • Any stormwater arising from development can and should be managed appropriately by the landowner developing the land within their own landholdings; and • No support for land acquisition for stormwater detention in the vicinity of the Middle and Gilpin Road as this is not necessary nor is it an efficient infrastructure response.
Adequate wastewater servicing	<ul style="list-style-type: none"> • Some landowners are concerned about the location of any new pump station along Middle Rd and whether this will have an impact on the use of their property; • Queries from landowners of existing properties in Stapleford Park whether they can hook into any public sewer system; and • The larger area would provide efficiencies around the provision and staging of infrastructure.
Need for Residential Development / Develop Alternative Areas	<ul style="list-style-type: none"> • Query the need / demand for additional residential sections in Havelock North; • The larger area of land provides the greatest number of sections, thereby future proofing residential land supply; • Many comments seek that other areas such as Brookvale, Arataki or the Te Aute / Middle Rd area are developed instead of or ahead of the Iona area. • One comment questioned the merits of a piecemeal approach to the zoning of this area and suggested that all land within the growth area form part of the development of a single and comprehensive Structure Plan and subsequent variation to the District Plan to rezone the land. This will provide certainty to neighbouring landowners and ensure a comprehensive planning approach to consider how any potential impacts on the amenity of neighbouring properties can be managed.

Light and noise pollution	<ul style="list-style-type: none"> • From new residences impacting the character and amenity of the area.
Construction Effects / Earthworks / Dust / Visual and Noise Effects	<ul style="list-style-type: none"> • Noise, traffic, dust, and visual impacts – how this can be managed and over what length of time will this need to be endured; • The development as proposed will require the recontouring of land with existing natural watercourses and ponds being potentially adversely affected by soil movement and runoff; • The amount of earthworks will destroy the aesthetics of the landscape in this area; and • Potential for road damage by trucks during earthworks and construction phase.
Geotechnical Issues	<ul style="list-style-type: none"> • Concern at the potential for increased landslide risk given the amount of earthworks likely to accommodate the proposed density of development; and • Geotechnical investigations have been undertaken and the conclusions around land stability supported.
Development Costs	Concerns raised that the cost of developing the hill site could be prohibitive for Council and that there are other options which are more cost efficient (either rural residential or larger lot development where no public sewer is required or alternative areas such as Arataki or Brookvale).
Property Values	<ul style="list-style-type: none"> • Concern that small sections sizes will devalue surrounding land and area; • Concern that erosion of lifestyle character and landscape values will devalue existing properties; • Concern that high value and high amenity rural residential properties would be destroyed to create a standard suburban subdivision; • Concern that the proposed development could adversely affect the investment that existing property owners have made in creating and maintaining this landscape collectively (landscaping and planting, particularly around the wetland areas, and encouragement of bird life, managing spray programmes and regional council possum baiting programme) and individually in respect of improvements made to their own properties; and • Concern that the development would create increased costs for services to all ratepayers in this area (an overall rise in rates).
Density of Development	<ul style="list-style-type: none"> • Many concerns that the proposed development is too dense and not appropriate given the landscape / topography of the area; • Development proposals are too intense and widespread and as a consequence will negatively impact the stunning landscape; • Concern that smaller section sizes will impact on sunlight and views/ rural outlook of existing neighbouring properties (particularly those adjacent to the Triangle site); and • Similarly there is concern of the potential for two storey dwellings locating on neighbouring or surrounding properties which block sunlight / daylight.
Subdivision Design	<ul style="list-style-type: none"> • Concern that this proposal will result in typical suburban “estate” type housing throughout this area and that such a mass of this type of development will have a detrimental effect on the existing character and amenity of this area;

	<ul style="list-style-type: none"> • Suggestion that specific district plan rules, or covenants or design criteria be developed to ensure quality of potential housing design and that address matters such as dwelling height, size, colour and style appropriate for the landscape; • Suggestion that specific tailored zoning provisions be developed to recognise the planning issues for the Hill area. For example, the Council could consider a Deferred Zoning approach for the higher Hills land area, based around triggers associated with infrastructure servicing and the maturing of planted areas that can be put in place early to mitigate the effects on neighbours from the identified residential nodes in this higher area; • Some comments suggest a balance is needed between housing development and maintaining the special nature and character of the landscape and area as a whole; and • The importance of creating a high quality environment that focuses on good urban design that establishes a sense of community and makes connections to the existing residential environment is highlighted.
Reserve Areas and linkages	<p>Support for the area between the bull hill to the intersection of Gilpin/Iona and Middle roads) to be kept as a reserve (<i>“a unique piece of landscape that would be great set aside as a public area”</i>).</p> <ul style="list-style-type: none"> • Native planting suggested; • Bull hill considered an important feature that should be retained. This could be seen as providing ‘a gateway landmark to HN and provide a linkage between the triangle and foothill areas’; and • Support for pathways, cycleways and pedestrian linkages.
Commercial activities	<ul style="list-style-type: none"> • Many people commented that commercial activities such as dairies should not be allowed and one also commented that a dairy or commercial activity and playground would significantly affect or ruin the character of the area; and • One comment was received that supports a small commercial node in the vicinity of the proposed neighbourhood reserve on Iona to cater for a dairy / café style development and considers this would add to the residential amenity of the area.
Appropriate Zoning of the Triangle Site	<p>Many people commented that the character residential zoning of this land should be retained or that section sizes should be around 600-700m² or greater in the Triangle site.</p>
Planning Framework HPUDS Regional Policy Statement Hastings District Plan	<ul style="list-style-type: none"> • A number of comments from landowners and the community that are concerned that they were not aware of the review of HPUDS and that there was little time, if any to organise a comprehensive submission in respect of this process; and • There were comments that expressed support for development within these areas and that the Iona Growth area is supported by HPUDS and RPS and that it has been reconfirmed in the 2016 Draft review of HPUDS which is currently subject to the hearing of public submissions.
Overall Comments on Options 1, 2, & 3	<ul style="list-style-type: none"> • The majority of comments received were against development at a higher density than that currently allowed by the rural residential zone of the Hill areas; • A number of people commented that there was a precedent for development within the Triangle Site as Stapleford Park had already been developed but that development of this area should be staged over time and if development had to occur Option 1 was logical;

	<ul style="list-style-type: none">• Others thought that the Character Residential Zone portion of the Triangle (Option1) could be developed but that the deferred zone portion of the Triangle block should be set aside as a reserve area;• If development had to occur on the Hill site then many thought that site sizes in the range of 3000m² – 2 hectares would be suitable but that this would need to be coupled with a strong emphasis on landscape values and ecology and design sensitivity in terms of house placement, materials and design; and• Option 3 did gain support from a few landowners within these HPUDS identified areas on the lower slopes of the Havelock Hills including Breadalbane Avenue.
--	---

Feedback Received on the Draft Iona Structure Plan

INTRODUCTION:

Council received 55 responses to a request for feedback on the draft Iona Structure Plan. This feedback is being used to inform the Structure Plan and variation currently being drafted by Council to rezone the land at Iona. Once the Plan Variation is drafted it will be publicly notified and people will have an opportunity to submit on the proposed rezoning, and will also be given an opportunity to present their submissions to the hearings panel. For ease of reference, the feedback received has been arranged in tables by general and across neighbourhood comments and then by individual neighbourhood where the comments received are specific.

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY	OFFICERS COMMENTS
<p>Brookvale Road is a far superior option for the urban growth of Havelock North. Quicker access to Napier, less congestion in the village and closer to schools.</p>	<p>On September 24 2015, the Council resolved to prioritise the Iona area for structure planning and rezoning over the Arataki area given the significant odour issues associated with the mushroom farm neighbouring this area.</p>
<p>Until the water, roading congestion, schooling and health care facilities can cope with the current population, I'm not in favour of any further development in Havelock North. We arrived here from overseas two years ago and can't get a local GP in Havelock and are struggling to get our preschooler enrolled in a local school (we live between Waimarama and Havelock North and aren't in zone for any school). Until Havelock North's infrastructure supports its current population, don't add to it!</p>	<p>Two new mains water pipes between Hastings and Havelock North will significantly increase the amount of water able to be pumped to Havelock North. They will also provide an important back-up supply to the network and are expected to be in place by the end of 2018.</p> <p>Council will ensure roading levels of service are maintained.</p> <p>Council has been consulting with the Ministry of Education in terms of the impact on schools in the area and will continue to do so.</p> <p>In terms of health care, the Hawkes Bay District Health Board have been involved in the Regional Growth Strategy and its recent review.</p>
<p>Design to provide for an intergenerational approach. Maori names to be used and want to ensure that local Iwi have been consulted. Consideration of an all of life design which provides for an accessible community – if paving please include a solid concrete pathway so that it is wheelchair accessible and provide seating. Childs play area to be provided in the bull hill neighbourhood with accessible pathways.</p>	<p>Council has consulted and will continue to consult with Ngāti Kahungunu Iwi Incorporated, Te Taiwhenua O Heretaunga and local hapu.</p> <p>A playground is proposed within the Bull Hill Neighbourhood. While detailed design has not yet been carried out, Council is familiar with all of life design concepts and these will be considered in its design.</p>

FEEDBACK SUMMARY

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY	OFFICERS COMMENTS
<p>Love the development of more green spaces and walking tracks. May need to widen Gilpin Road as this will become a lot busier and is already a danger, especially at the small bridge. The proposed development will make this a busier thoroughfare being the main accessway to the expressway and Napier.</p> <p>Makes so much sense to start developing this end of Havelock North. Keep the trees and plant more in the Breadalbane Ave and Upper Plateau neighbourhoods. Love the walking tracks through the Middle Ridge area. Would be great to see a big park (playground) that utilizes the natural features in the bull hill neighbourhood.</p>	<p>We have noted your comments in respect of tree retention.</p> <p>Council will continue to monitor traffic volumes on Gilpin Road.</p> <p>A playground is proposed within the Bull Hill Neighbourhood. Early discussions have centred around the use of natural materials and features. However, detailed design work has not been carried out and we will pass your comments onto our parks and reserves team.</p>
<p>If the plan is to maintain the rural character of the area then you must address the sustainability of rural properties. They should be allowed some freedom to explore residential and tourist accommodation in tandem with small scale horticulture/farming. Present system is biased towards developers who have the money to canvass for their projects with lawyers whilst pragmatic solutions for long term rural residents are ignored or driven into the ground with red tape. Building costs should also be addressed. Present trend for million dollar homes favours banks and builders. Restrictive covenants to maintain character precludes young buyers. Encourage lending on land in preference to buildings and allow young families scope to build slowly and small initially. There are young people that want to take responsibility for their own housing in a sustainable manner.</p>	<p>The District Plan does allow flexibility for rural residential zoned properties in that supplementary dwelling units and visitor accommodation units are permitted activities provided that certain performance standards are met.</p> <p>Council has no control over building costs, or bank lending requirements. Nor does the Council have the ability to prevent developers placing restrictive covenants on section titles.</p>
<p>Fantastic news that new opportunities will be offered to people whom want to live in HN. HN house prices is extreme especially when one factors in the very low job opportunities and low wages! We had to move to Australia as we constantly battled to live in and around HN. Our daughters had to be uprooted from school and my husband find new work. This has caused us a lot of pain and stress. If land was offered at a reasonable price please let me know as we would love to live in HN and actually afford to live there! Thank you</p>	<p>The Hastings District has now been identified as a medium growth area under the National Policy Statement on Urban Development Capacity, which requires that Council show how it is providing sufficient development capacity to meet the needs of people and communities and future generations in urban environments. Council is monitoring and working to ensure that there is a sufficient supply of sections to meet demand in the Hastings and Havelock North areas.</p>
<p>Understand the need for expansion and the pink and yellow areas are bare grassland so not too much to lose there. The Breadalbane area is full of existing rural blocks which the owners have lovingly developed with plantings over many years. It is wrong that they should be forced to destroy all that for packed in sections around them. Come on HDC if you need the space take a bit more grassland further out, don't forcibly commandeer people's homes.</p>	<p>While the Council is proposing to rezone land within these areas to allow a greater number of sections to be created, it is up to individual landowners whether they choose to subdivide their land or not. Realising zoning potential is not compulsory.</p>

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY	OFFICERS COMMENTS
<p>Concerned about the pressure this subdivision will have on the infrastructure of Havelock North, most notably the over crowding of Kindergartens and schools and specifically given the newsletter received from Havelock Primary School detailing the overcrowding situation in all Havelock North Schools (attached). This is a problem for our community which should not be left in the hands of the bureaucrats in Wellington. The reason I live here is because it offers my family the ability to have a great education and lifestyle in an uncrowded environment. Concern development will put more pressure on the water supply and that this could cause us to have similar problems to last year. Concern about stormwater - District council have stated that the development will be stormwater neutral but the regional council have stated they will need to upgrade all the drains around the area and remove significant amount of trees to increase the drains capacity. This will have to be done through my land and will alter our outlook dramatically. We currently have a problem with storm water running into our lower land from neighbouring properties creating a significant wet area.</p>	<p>The Ministry of Education, has been consulted on the Regional Growth Strategy and this proposed rezoning. The Ministry has advised Council that there is sufficient provision within the Havelock North schooling network to accommodate “in zone” students living within the Havelock North catchment. The Ministry will continue to monitor the schooling network to ensure that its making best use of the network and providing for any future growth in the area, with a strategy review planned for 2018. Council will continue to liaise with the Ministry in the implementation of its’ Regional Growth Strategy.</p> <p>We note your concerns regarding stormwater and will contact you directly to discuss.</p>
<p>Street names in our area are all named after VC holders – suggests Willie Apiata. Also Kevin Milne and his family were one of the older residents – had an orchard there and his wife still lives there.</p>	<p>Thank you for your suggestions for street names. The street naming process is one that follows the rezoning. Your comments have been passed onto the property team so your suggestions can be considered at the appropriate time.</p>
<p>Have concerns about the adequacy of the reticulated water supply for the proposed development. Section 30.1 of the Proposed Hastings District Plan states that an anticipated outcome for subdivision and land development is the: <i>“provision of a water supply of suitable quality and quantity to meet the needs of likely or potential uses on the sites, including fire control and suppression. (SLDAO10)”</i>. It is important that the proposed development is consistent with this anticipated outcome of the District Plan.</p> <p>As noted in Section 30.1.4, the anticipated outcome will be implemented through the listed methods, including compliance with <i>“the New Zealand Fire Service Fire Fighting Water Supplies Code of Practice 4509:2008 for all new subdivision and development in all areas, for both reticulated and non-reticulated water supplies”</i>. Fire and Emergency NZ considers that it is necessary for the proposed development to be consistent with the requirements of the District Plan for firefighting water supply. Where firefighting water supply cannot be provided for through a reticulated network, an on-site potable system or other such system as referred to in the Code of Practice is required.</p>	<p>Council’s Engineers will check and ensure that the Code of Practice is met at Subdivision stage.</p> <p>There are options available to provide for firefighting capacity. A reticulated water supply is proposed to be provided to the Upper Plateau area with a link main to Lane Road. In terms of capacity there are options because of the size of the reserve area around the proposed new neighbourhoods and the proximity of stormwater detention ponds.</p>

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY

I do not support the plan to so intensively subdivide the land as described in the proposal. That area of Havelock North is attractive and rural. I would support a development with less intensification and with less than half the proposed sections. The main reason is that the plan provides no detail to show how the surrounding areas will be strengthened to cope with up to 400 additional households. Havelock North is known for its village feel. Already the streets and area around the village centre are stretched in weekends and all summer. There is no mention in the plan about the detrimental effects of such a large population increase on the lifestyle, look and feel and infrastructure in Havelock North. I don't see any planning for the pressure that will come on schools and other services of such an influx of families (try getting into a doctor in Havelock North for example and what does the DHB have in place for such a large population growth?) or for managing traffic flow around Havelock North. I would support a plan that was limited to what is proposed around Middle Ridge, the Upper Plateau and Breadalbane Avenue. I hope the plan will be modified to leave the South Western approach to Havelock North as a green and rural area. I do appreciate and support the proposal to include walking trails and recreational area in the Middle Ridge development.

Bull Hill Neighbourhood - Do not support intensive development with lots of homes (probably mostly too large for small sections). I do not want to see more development that looks like the subdivision at the bottom of Margaret Ave and Selwyn Road. So many additional households will place untenable pressure on infrastructure. The development at the Eastern end of Havelock North (Arataki etc) provides sufficient housing and section size of the same type that is proposed in this plan.

With all the extra housing in Havelock North there's been minimal to no expansion or development to the shopping village area. One small supermarket means no competition so high prices and a very busy shop (great for only the owners!) more development without investing in basic shops that every day people use will make an even busier village- when contradicts the appeal to having a village- surely something that is quaint and not very busy?! I'm also sick of tacky subdivisions where boring houses that lack design and architectural elements are built next to each other on small sections... they won't look "good" forever. When they are 30-40 years old they will be the houses no one wants.

OFFICERS COMMENTS

Currently there are only 9 sections available for development in Havelock North to meet a demand of approximately 60 sites per year. Council has an obligation to ensure there is a sufficient supply of residential land to meet demand in order to comply with the National Policy Statement for Urban Development Capacity. Part of the Bull Hill neighbourhood is already zoned for residential development and has been since 1990, the remaining triangle portion of this area has been identified for residential rezoning in growth strategies since 1993.

Council will address the size of house relative to section size in the bulk and location rules associated with any new zone. You will be able to comment on these as part of submissions on the formal variation process. In terms of your concerns regarding the pressure on existing infrastructure please refer to comments above regarding District Health Board, Ministry of Education and traffic concerns.

Your concerns regarding house design and the size of houses relative to section size are noted. Council will consider the most appropriate bulk and location rules for each particular neighbourhood taking into account their differing characteristics.

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY

OFFICERS COMMENTS

Like the fact you are retaining green areas for parks and recreation. Great idea to relocate Iona Road as the current corner of Middle and Iona Road is so dangerous. Would love to see as many current trees remain as possible as it will help retain the current vibe and feeling of the area. Would be good if covenants were put in place to prevent another "Arataki" subdivision, happening, i.e: no metal boundary fences, no squashing houses right up against each other, varying the sizes of sections available so you don't end up having a whole heap of houses on top of each other cluttering one piece of land like the 11-17 Margaret Ave block. You would be able to hear your neighbours conversation they are that close its ridiculous.

Try to get some visual variety in the houses rather than like "Arataki" where you drive up and down a street and all you see are garages at the front of the properties.

Please urge the land owners to consider pricing sections fairly to let families who want to live in this area have a chance at securing some land to build on. We are one of these families, our son has just started primary school and we sold our house last year so we could be ready to purchase land in this neighbourhood as soon as sections became available. We want around 800m² to build our home on and want to be living in and be involved in a great community. Whilst we understand there is a process to follow we hope the submission to fast track re-zoning has been submitted to the Minister and this neighbourhood can get underway sooner rather than later as there are great families waiting!

The overall plan is good. We like that no re-zoning or changes are being made to Lane Road.

The public open spaces will be a great for the community and visitors. The shop and cafe will also help give the area an identity.

We are worried that the current schools may not be able to accommodate the increase in numbers of students the development may bring.

One of the objectives for the development of this area was to avoid "cookie-cutter" subdivisions. The design outcomes for this area seek to ensure that the development complements the topography and existing landscape features of this area and thereby retain its special character and distinctiveness. Council will consider the best methods to achieve this.

Council has consulted with the Ministry of Education who has advised that there is sufficient provision within the Havelock North schooling network to accommodate "in zone" students living within the Havelock North catchment. The Ministry will continue to monitor the schooling network to ensure that its making best use of the network and providing for any future growth in the area, with a strategy review planned for 2018. Council will continue to liaise with the Ministry in implementing its regional growth strategy.

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY	OFFICERS COMMENTS
<p>This submission seeks to ensure that an adequate and secure supply of gas can be supplied to any new development. Powerco generally supports the development of the Proposed Iona Urban Growth Draft Structure Plan (PIUGDSP) but seeks to ensure that gas infrastructure, can be provided to developments in an appropriate and timely manner. To enable a more orderly and timely provision of gas supplies, the structure plan process and/or the subdivision provisions of the relevant District Plans need to facilitate the provision of services in concert with development.</p> <p>The objectives for PIUGDSP make no reference to infrastructure provision or network utilities and as such do not reflect objective 22.1.3 of the Proposed Plan. I would also refer you to the objectives and policies of the National Policy Statement on Urban Development Capacity, relating to “other infrastructure”, which includes gas:</p> <p><i>OD1. Urban environments where land use, development, development infrastructure and other infrastructure are integrated with each other.</i></p> <p><i>PA2: Local authorities shall satisfy themselves that other infrastructure required to support urban development are likely to be available.</i></p> <p><i>PA3: When making planning decisions that affect the way and the rate at which development capacity is provided, decision-makers shall provide for the social, economic, cultural and environmental wellbeing of people and communities and future generations, whilst having particular regard to:</i></p> <p><i>b) Promoting the efficient use of urban land and development infrastructure and other infrastructure;</i></p> <p>In summary, Powerco would like to remind Hastings District Council of the New Zealand Energy Strategy and the National Policy Statement (NPS) on Urban Development Capacity. We also seek an extra bullet point to be added to the objectives in the structure plan (see below), to ensure the NPS is given effect to, and that infrastructure development is undertaken in a coordinated manner:</p> <ul style="list-style-type: none"> • In order to give effect to the National Policy Statement on Urban Development Capacity, the structure plan shall ensure the planning and installation of development infrastructure and other infrastructure will be undertaken in an integrated and coordinated manner. 	<p>These matters can be addressed in the planning provisions which will be drafted as part of the variation to the District Plan to rezone the subject land. You will have the opportunity to comment on the detail of these provisions during that formal process.</p>
<p>The draft plan does not give enough detail of stormwater disposal. To mitigate adverse flooding on lower land a suitable diameter culvert pipe or pipes needs to run to the Karamu Stream from Middle Road. Flooding is now an issue on the neighbouring property due to the Stapleford Park housing.</p>	<p>More details regarding the management of stormwater will form part of the proposed variation to rezone the land for residential purposes. The community will have the opportunity to formally comment on these matters as part of that process.</p>

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY

OFFICERS COMMENTS

We do not have any objection to the Upper Plateau or Breadalbane Avenue structure plans but strongly object to the totally inadequate stormwater solutions proposed for middle road. As long term residents of 45 years, we can see the totally detrimental effects the development of Stapleford Park has had on the land directly across the road and next door to us. It now has a constant large area of land underwater that was not an issue previously. The idea that stormwater from a built up area can be left to current outlets with no prior soakage available is ludicrous, the lower lying land can only just cope with the rate of drainage as it is now. This is our land and our many years here give us the knowledge of the issues at hand. Any new subdivision must include piped stormwater drainage to both the Karamu Stream and the cross-country drain, anything less will render the land on the lower side of Middle Road a bog during winter months.

Your concerns are noted. More details regarding the management of stormwater will form part of the proposed variation to rezone the land for residential purposes. The community will have the opportunity to formally comment on these matters as part of that process.

The Fruitgrowers Association would like any plans to ensure the issues raised in the issues and options paper re water supply, stormwater and waste water management are addressed and sustainable solutions found. Where possible neighbourhood plans should allow for higher density to provide housing solutions for as many people and families as suits land capability. In the middle ridge neighbourhood – why limit the number of smaller sections if the land and infrastructure can support higher density. Remove the requirement to limit the number of smaller sections in each lane if the land and infrastructure can support higher density. Breadalbane Ave is adjacent to the Havelock North Character Zone with a 700m² minimum site size. Is there any reason why the land and infrastructure could not support the same minimum site size. Change the minimum site size to reflect the density in the Havelock North Character Zone.

Council has to balance the need to use land efficiently with the retention of landscape character and visual amenity values. In terms of Breadalbane Avenue, this area has a character that is different to the Havelock North Character Residential Zone and that requires a lower density of development to retain this special character.

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY

Supports the Draft Structure Plan in principle. We acknowledge the Iona Working Party process that has led to the development of the Structure Plan. Particularly supportive of the comprehensive approach to the Structure Plan in addressing the development area as infrastructure services can be planned in an integrated & efficient manner.

The identification of 'future residential neighbourhoods' with different characteristics and planning approaches for managing the effects of development, is also supported. The different neighbourhoods will result in a variety of residential development options becoming available to the market, from relatively compact residential housing, to large lots in areas of greater landscape sensitivity.

We support in full the bullet point outcomes set out under the 'Background Heading' of the August 2017 Newsletter.

While the Structure Plan helps to provide certainty as to the layout and nature of that development, it is also important that the district plan provisions provide for a degree of flexibility for (for example) adjustments in exact roading alignment and location following detailed technical design. In this regard district plan provisions requiring future subdivision design and layout to be 'generally in accordance' with the Structure Plan would be appropriate.

While the Structure Plan does not delve into the detail of potential rules for the Plan Change, the certainty of controlled activity subdivision status for fully compliant applications (i.e. those 'generally in accordance' with the Structure Plan and the general or specific performance standards set) is requested.

Bull Hill Neighbourhood:

A change is sought to avoid the boundary with the Middle Ridge neighbourhood being defined by a road. The change as illustrated below is therefore requested to show the boundary between the Middle Ridge and Bull Hill neighbourhoods being mid-block between indicative roads.



OFFICERS COMMENTS

Council understands the need for some flexibility in the road alignments and will provide for subdivisions to be in general accordance with the structure plan and the design outcomes that form part of the structure plan.

Council will consider the changes proposed to the Bull Hill boundary and acknowledges it is best practice to have land use development of a similar character on either side of a street.

Council will review the density limits within the Bull Hill neighbourhood. A 700m² minimum is considered the most appropriate minimum site size along the Middle and Iona Road edge of the development area. Development areas internal to the site are more able to accommodate smaller site sizes. Council will seek to identify these areas as well as specific areas where comprehensive residential development could occur at a minimum site size of 250m² subject to compliance with specific performance standards as well as the provision of an urban design assessment of the overall development concept.

Council will reconsider the location of the commercial node as a result of your comments and other feedback received on its proposed location.

Council will consider identifying a range of density bands within the Middle Ridge Neighbourhood to better provide for a mix of site sizes in this area.

Council is aware of the need to balance amenity considerations with the need to use land in an efficient manner. Council will consider the most appropriate methods to achieve this taking on board all feedback received.

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY

We have considerable concerns about our loss of privacy as a result of the proposed new housing in the middle ridge and bull hill neighbourhoods. While we appreciate having an open space area rather than houses adjacent to our property, we do not feel comfortable with the proposed walking track on or near the ridgeline. We strongly request that the walking track be at the base of the hill, away from our boundary and on the other side of any water course. This way the public are free to climb the hill but are not directed up there. The hillside would have a more natural appearance from the western side and no track along the ridgeline would mitigate the current feeling of being in public view both for ourselves and any other property affected in this way. An alternative would be to construct the track to the eastern side of the ridge below the ridgeline. We would like to see all existing trees on the open space retained, including the toi toi on our boundary. In the Middle Ridge neighbourhood we request that on all sections that the building platforms and building heights are such that they are below the sightline from our property so that we won't be immediately overlooked.

In the Bull Hill neighbourhood – the sections between Iona and Middle Ridge area look down on to our property. We are unaware of how excavations may affect the existing contours of land in this area but request that height restrictions be placed on buildings in this area so as not to jeopardise the privacy of ourselves and other affected parties. We would like a reduced density in the Bull Hill area between Iona Road and Middle Ridge neighbourhood with higher density reserved for the Iona/Middle Rd triangle. We endorse use of a rural type hooded street lighting in all the neighbourhood areas.

Stormwater – we are concerned that in winter stormwater isn't as easily absorbed into the ground, with surface water tending to be contained by the clay pan and travelling down through lower adjoining properties including ours. We would like confirmation that the stormwater would be contained in the pond and proposed reserve areas with no possibility of water leaching into lower properties, as we would not want further volumes of water directed to our property for disposal.

OFFICERS COMMENTS

The final location of walking tracks is still to be decided and needs to take into account features and proximity to the ends of lanes.

The dwellings in the Middle Ridge area will be located on the other side of the ridge to your property. The reserve area will act as a buffer to mitigate the effects of being directly overlooked. We will not be directing stormwater into your property for disposal as this is directly against the principles of the Resource Management Act.

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY

I appreciate the design work that has been undertaken to supply this draft structure plan but have grave concerns about the erosion of the feeling and spirit of this neighbourhood if this development occurs. Havelock North is an attractive suburb in which to live for many reasons – the heritage characteristics, semi-rural charm, and neighbourliness. These are likely to be seriously eroded should the proposed development proceed.

I am particularly upset about the small 900sq m section sizes proposed for the Middle Ridge neighbourhood. These should be reconsidered as well as restrictions placed to ensure single storey buildings here only (at the very least on the borders of the green space). 900sq m sections have no place in this development.

I see no provision for a primary school. Please explain this to me?

I am worried about the wastewater pump station placement as there is no indication of size or specifications for this. Could this also be explained? How will this be amalgamated into its surrounds? What noise are we likely to hear from it?

I am concerned at the many years of noise pollution, dust and detritus that will be our lives once this development progresses. What fencing and planting efforts will be taken PRIOR to any sod being turned to help mitigate this.

I believe the ENTIRE corner of Middle and Iona Roads should be redeveloped into green public use space, and NO building should take place here. That means that development of Bull Hill's new neighbourhood would stop at the Bull Hill itself. Any change made to this gorgeous area of Havelock North, with its lush landscape and views to the Peak, is irreparable. I'm concerned that other areas of Havelock North are not being adequately considered for development. This area should NOT be developed.

I am however a realist, and I do think this plan is a good start.

OFFICERS COMMENTS

Your comments on section size in the Middle Ridge neighbourhood are noted. However Council must balance the maintenance of landscape character and visual amenity values with the need to use land in an efficient manner.

For comments on schooling please see those above. Council has and will continue to consult with the Ministry of Education on the capacity of existing schools in the local area.

In terms of the size and scale of the wastewater pump station, most of the infrastructure is located below ground and noise is minimal (example below). Screen planting could be undertaken to the rear and sides of the pump station.



On 24 September 2017 the Council resolved to prioritise the Iona area for rezoning. There are other areas in Havelock North that have now become reserve areas in the HPUDS 2017 strategy which will be rezoned following Iona as more supply is needed

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY

What we like:

- Open space reserve and walkway / cycle linkages
- The general width and contours of Iona Road appear to be retained. This coupled with walkways / pathways on either side will maintain its open feel.

What we don't like:

- Number of roads exiting into Iona Road
- Increased traffic volume

What we would like to see:

- An attempt to minimise the impact on existing bird life (Tui, Bellbird, Morpork, etc)
- Public transport connections
- Speed limit reduction to slow traffic.
- During the development of the Middle Ridge and Upper Plateau neighbourhoods
- some restriction imposed on Heavy Traffic along Iona Road.

In Summary:

- Do something about Road no 1 above - Bull Hill neighbourhood
- Volume of traffic - eg increase traffic and speed when Margaret Ave increased
- Number of Road openings onto Iona Road - please reduce
- Ensure that Iona Road itself retains as much of its existing character as possible
- Facilities / car parking for reserve walks
- Existing tree bush for bird life around Breadalbane neighbourhood and generally
- Fences - height and variety
- Minimum sections sizes increased Breadalbane neighbourhood
- Effect of street lighting
- Heavy Traffic restrictions along Iona Road during development

CONTINUED OVER PAGE

OFFICERS COMMENTS

Council will reconsider the number of road access points onto Iona Rd and consider stopping the proposed road between Middle and Iona as shown on the image below:



The Upper Plateau neighbourhood area will not be gated as it will be accessed by a public road.

Council will consider carparking provision and facilities such as drinking fountains and seating facilities at the time the open space areas are designed.

Rural street lighting standards will be applied to the southern side of Iona Rd and the Middle Ridge and Upper Plateau neighbourhoods. The Bull Hill neighbourhood will have an urban standard of lighting.

For the Breadalbane neighbourhood Council is considering densities around the figures you have suggested in order to retain some of the existing characteristics of the area. Council will look at the provision of larger setbacks from existing development in this neighbourhood.

Within the Bull Hill neighbourhood Council will consider the most appropriate bulk and location provisions regarding fencing taking into account the characteristics sought to be achieved.

Current speed limits will be reduced as part of the carriageway works proposed in the Iona area and are reliant on residential development to meet the criteria.

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY

OFFICERS COMMENTS

CONTINUED FROM OVER PAGE

Bull Hill Neighbourhood:

Like the concept of large sections on the outside and more density inside - with a mix of housing types. Encourage variety and innovation. Also limit the height of fencing -discourage the walled corridor look and style of fence.



When examining the pattern of roads we do not understand the thinking behind the road running between Middle and Iona Roads [Road 1 image below].



To our thinking is that this serves no real obvious purpose and merely contributes to pushing traffic into Iona Road. We would hate to think that it could end up looking like the image that follows:



The roading pattern increases the number of road exits into Iona Road from what is essentially two at present to a total of 5. We are at a bit of a loss as to how this will do anything other than increase the volume of traffic on Iona Road.

CONTINUED OVER PAGE

GENERAL COMMENTS AND ACROSS NEIGHBOURHOOD'S SUMMARY

OFFICERS COMMENTS

CONTINUED FROM OVER PAGE

If the intention of Road Exit 1 is to service Lane Road it should be pointed out that residents living in Lane Road already use Breadalbane Road or travel to the southern end of Iona. Access to the Plateau and Ridge can be made via Roads 2 or 3 or Southern Middle Road entry. More generally we would hope that internally the Bull Hill neighbourhood could also do with some green space and possibly a playground / activity areas. Encourage movement by foot rather than car. There also needs to be provision for parking near the green / reserve areas. Consideration should also be made to providing toilet facilities near the larger of the reserve areas. Possibly also a playground area within the central area - incorporating drinking fountain(s). With regard to the commercial node rather than any permanent commercial structure, the provision could be made for a mobile supplier (ie coffee / food cart). Keep it versatile and consider providing seating etc. We doubt a full time business would get regular business. Summer more likely to be used. Most residents would still use the heart of the Village, and there is already a dairy on Middle Rd less than 1km away. We would also like to see careful consideration to limiting the amount of street lighting that is applied to the area. At present there is minimal lighting which allows for excellent night sky views. We would hate to see this greatly diminished. We do however acknowledge that there is a safety element to this aspect.

Middle Ridge Neighbourhood: How this area actually works is somewhat difficult to envision from the draft plan provided. This is especially true of Area B sections. However being flanked by the large public open spaces is a good idea. The walkways are also appreciated. Hopefully this approach will make these sections feel more part of the community.

Upper Plateau Neighbourhood: Please don't allow this area to be gated or made a private road.

Breadalbane Ave neighbourhood: Although it is stated that it is the intention to retain the rural treatment and protect some of the existing characteristics of the neighbourhood we are not sure this can be achieved by the suggested density proposal. We would like to see a greater minimum density of between 900 - 1400m². These sizes would be more in keeping with properties fronting Iona road. We also believe that the height of any proposed structures should be considered in relation to adjacent existing properties. In the case of our property we are on the downward part of the slope and believe that in order to retain some level of privacy any structure behind us, and our neighbours, should either be setback from our properties or have some sort of separation zone. This area is effectively a gentle slope down to Iona Road. We are happy to see that stormwater neutrality is required where development occurs. The one concern we do have however, is how this neutrality is to be measured. We and other surrounding properties already have small rivers running through our properties during heavy or prolonged rain events. In addition this water tends to pond at the front of the sections.

We hope that it is ensured the infrastructure (new / existing) of the area is sufficient to support the housing increase. This area is a great place to live and we don't mind sharing it just don't want to see it destroyed in the process. The aim should be to enhance the area for the enjoyment of all and provide an example of how development should be achieved.

BULL HILL NEIGHBOURHOOD

BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY	OFFICERS COMMENTS
<p>I am concerned about the small size of the sections proposed for the area just behind my house, could be 600 sqm. I would like to maintain the privacy and peace and quiet of my property. Larger sized sections should be located adjoining existing properties. I would like to see a buffer of dense high planting established between the perimeters of any new development and the existing houses in Stapleford Park. I would also love to see more detail around the supply of water for this huge number of new dwellings. Won't it put more stress on the current inefficient water delivery system?</p>	<p>We note your comments regarding section size however the Council has to balance these considerations with the need to use land in an efficient manner.</p> <p>Two new mains water pipes between Hastings and Havelock North will significantly increase the amount of water able to be pumped to Havelock North. They will also provide an important back-up supply to the network and are expected to be in place by the end of 2018.</p>
<p>The current roading network is not designed for this high density growth. With all the intermediate and high schools on the other side of Havelock North it will create a bottleneck at the Porter Drive intersections. The through traffic will also diminish the village atmosphere turning it into a congested nightmare.</p> <p>When this initial plan was proposed and we were assured that the area around our house would remain "character residential area" with large sections. Reading the plan it looks like this has been reneged on and that it will be high density or duplex, town housing. This is completely unacceptable as it will seriously degrade the value and aspect of our property. I find the rezoning of our immediate neighborhood from "Character Residential" to be unacceptable and there is no justification for the need to do this.</p>	<p>The initial traffic impact assessment has confirmed that the roading network will require minor upgrades of Middle and Iona Roads in order to maintain the required levels of service. The purpose of the Character Residential Zone was to retain the existing landscape character and amenity of these areas of established Havelock North. The land subject to this proposal is predominantly pastoral with no established garden character immediately adjoining Reynolds Road.</p>

BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY

OFFICERS COMMENTS

Our house backs onto the proposed Bull Hill neighborhood. We are resigned to losing our very unique “edge of town” outlook, but are heartened to see that the councils declared outcome is to “add value to Havelock North”. It is our aim to ensure this development does not devalue our property (our life-time investment). Our main concerns are:

1. Density allowances - We would respectfully suggest that sections backing onto Arcadia Lane sections should be approximately the same as Arcadia Lane sections (over 700m²) to demonstrate integration with the existing neighbourhood.

2. Building footprint and Height

Our building footprint coverage is 26%. Your council representative advised that the footprint for this development is likely to be 35 to 40%. This is very high & should be capped at 35%. - Coupled with this is our request that building are required to be at least 3 metres away from Arcadia Lane rear boundary. - Also, to try and preserve the quality of our environment, we request that sections backing onto Arcadia Lane properties are restricted to a single story

3. Rooding

We would like to add that we approve of the suggested road layout for the area backing onto our Arcadia Lane Property.

Your comments in respect of section sizes are noted but the Council has to balance this against the need to use land in the most efficient manner. Currently in all Havelock North Residential zones maximum building coverage rules range from 35%-45% depending on site size. Consideration will be given to the most appropriate bulk and location rules (such as building coverage and yards) for each of the neighbourhood areas taking into account these comments. Bulk and location rules will be included in the District Plan variation and you will have an opportunity to submit on these.

Our house backs onto the proposed Bull Hill neighbourhood (pink area). We are resigned to the fact we will be losing our rural outlook but heartened to see the councils declared outcome is to ‘add value to Havelock North’. It is our am to ensure this development does not de-value our property or surrounding properties. Our main concerns are:

1. Density allowances – Section sizes to be an average of 600m². We were advised that some sections could be as small as 350m². We would suggest that sections backing onto Arcadia Lane should be approximately the same as Arcadia Lane sections (over 700m²) to demonstrate integration with the existing neighbourhood

2. Building footprint and height - Our building footprint coverage is 26%. Your council representative advised that the footprint for this development is likely to be 35-40%. This is very high and should be capped at 35%. Coupled with this is our request that building are required to be at least 3metres away from Arcadia Lane boundary. Also to try and preserve the quality of our environment we request that sections backing onto Arcadia Lane are restricted to single story.3. Rooding - We would like to add that we approve of the suggested road layout. With sections rather than road backing onto our Arcadia lane property.

We note your comments regarding section size. However, Council needs to balance section size with the need to use the land in an efficient manner. Currently in all Havelock North Residential zones building coverage rules range from a maximum of 45% - 35% and the maximum height of 8m allows for two storey development. Consideration will be given to the most appropriate bulk and location rules (such as building coverage, height and yards) for each of the neighbourhood areas taking into account these comments. Bulk and location rules will be included in the District Plan variation and you will have an opportunity to submit on these.

BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY

Positives of the plan are:

Tree lined streets, varied lot sizes and layout, larger lots located on corners and Middle and Iona Rds.

More thought needs to be given to the adverse effects of light and noise on adjacent properties in Chestnut Court, Reynolds Rd, Arcadia Lane and Iona Rd. The proposed road running along our boundary between Iona and Middle Roads raises concerns of road noise and speed of traffic, light spill from street lights and use of the road as a through route. Currently Breadalbane Road is used as the main feeder route in this area and accordingly is a busy road with traffic often travelling at speed at all hours of the night. Therefore this new road should be designed with curves to slow down traffic and mirror the character of Havelock North. The draft structure plan shows no cycleway linkages or reserve areas east of the Bull Hill. The average section size of 600m² does not reflect the character of the surrounding neighbourhood. The following are some measures we hope will be considered:

- Traffic calming measures on the proposed feeder road between Middle and Iona Roads
- Consideration of low noise road construction materials – tar seal as opposed to chip seal
- A road design that reflects the character of the surrounding neighbourhood
- Careful placement and direction of street lighting
- More green space on the eastern side of the Bull Hill
- A wide grass and planted reserve strip area along the eastern boundary of the bull hill neighbourhood as a buffer between the existing residential area and the proposed road.

My house is off Breadalbane Rd, down a long driveway and backs onto the proposed Bull Hill Neighborhood. I understand that originally the subdivision size was to be approx quarter acre sections but there is now a proposal to reduce these to pocket handkerchief size sections (350 m²). I am very concerned this reduction in size sections and increase in house density. 1. Devaluation of my property (lifetime investment). 2. These section sizes will not demonstrate integration with the existing neighborhood which have sections of approx 700 m². 3. Loss of rural land and bigger building footprint. Increasing the building footprint from 26% to 35-40%, is what seems to be happening for this development. I request this remain at 26%. 4. Pressure of bulk extra houses on existing infrastructure and increased traffic on main routes which are already bottlenecks. 5. Closeness and height of buildings to existing boundaries. I would urge at least 3 meters and a single story height restriction to mitigate the risk of blocking out light and sun to existing dwellings and also to blend in with existing neighbourhood. 6.Noise level.

OFFICERS COMMENTS

Council will review the number of roads that access onto Iona Road and consider stopping the proposed road between Middle and Iona as shown on the image below:



Council will consider a planted road reserve along the eastern boundary of the Bull Hill neighbourhood where the proposed road abuts the existing suburban area.

Cycleway linkages will form part of the detailed road design for these areas. Your comments regarding section size will be taken into consideration as we develop the detailed District Plan provisions for this neighbourhood.

Your comments regarding section size are noted. However Council must balance amenity considerations against the need to use land in an efficient manner. Consideration will also be given to the most appropriate bulk and location rules for each of the neighbourhoods. Currently in the neighbouring Havelock North Character Residential zone maximum building coverage rules range from 35% - 45% depending on site size. The maximum height of 8m allows for two storey development in this zone.

BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY

Generally looks well put together/workable but my concerns apply to the residents/owners at Stapleford Park. We pay full rates as well as an extra monthly fee to have our sewerage pumped just down the road into the main sewer. It is now time to connect us up to the proposed infrastructure. We continue to pay full rates for a service that we don't receive from council and these rates have been increased. How is this going to be resolved and when?

Breadalbane Avenue seems to be well provided for.

OSA shows an area for a playground and walkway. Please consider a user friendly well resourced area for children and families. Havelock has some areas that could have been better thought out e.g. access for pushchairs from one area to another over water. Also if this is to be a park area the traffic speed should be restricted to 50km for safety reasons along Middle Road to the corner at Gilpin.

I seek clarification regarding storm-water construction and management, both during development and post-development given the location of my property on Middle Road and its pivotal position within the Bull Hill Neighbourhood. I am particularly concerned about management during construction in times of flooding / poor weather and want to ensure that my property is protected. I understand that pre- and post-development storm water modelling is to take place and I would like to view, and be able to comment on, storm water plans when this work is completed. I would like to be able to provide comment (via email) on lot size and location of two story homes as part of detailed plan of lot layout. I would not like to see two-storey dwellings positioned along my boundary as this would greatly impact on both sun and aspect which were critical factors in the positioning of my house. This would also de-value my own property.

Road safety for motorists and pedestrians is a big concern for me. I would like to see the speed limit reduced to 50km as soon as development commences.

We are concerned about the housing proposed for the Iona area. We don't mind this going ahead so long as the water that is going to go in the drain through our places is done properly. We have never been under water for over 40 years. We would like a guarantee that our properties won't get flooded out in the near future. We have great concerns as with 400 odd more houses being built water will always run downhill and we are in the line of it all.

OFFICERS COMMENTS

There will be an opportunity for residents of Stapleford Park to connect into the new infrastructure services once these are built. Development contributions might be payable but only apply on any new development or properties with no credit (credits exist for properties that are already connected to and place an impact on council services and infrastructure). An assessment will be undertaken prior to any connection occurring.

You are correct in that your rates pay for your sewerage to be pumped into the main sewer and taken to the wastewater treatment plant in East Clive. You don't pay for recycling or refuse collection currently.

More details regarding the management of stormwater will form part of the proposed variation to rezone the land for residential purposes. The community will have the opportunity to formally comment on these matters as part of that process.

There are existing rules in the District Plan that seek to ensure every property has an adequate amount of daylight and sunlight. These rules apply to your property and your neighbours' properties currently. These rules will be retained in any new zone applied to vacant land adjoining your property.

Current speed limits will be reduced as part of the carriageway works proposed in the Iona area and are reliant on residential development to meet the criteria.

More details regarding the management of stormwater will form part of the proposed variation to rezone the land for residential purposes. The community will have the opportunity to formally comment on these matters as part of that process.

BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY

From the Draft Structure Plan it is hard to envisage the exact location of where the new proposed roads will interconnect to the existing Iona and Middle Roads; in particular where Iona Road will now exit onto Middle Road. It is unfortunate that Iona Road has to be altered, to allow for more residential sections and which will now result in there being 'T' intersection. Personally I would like to see the Iona Road exit to be south of the existing stormwater culvert in Middle Rd. The further south of Outlet E towards the existing (Gilpin/Middle Rd) intersection the better. This would still allow for a row of house to be built. I would rather look at houses from our place than traffic and vehicle lights, which is understandable.

I question why it is with all other subdivisions the house owners are required to have rainwater draining tanks fitted for slow release of stormwater or other household uses.

I am concerned that the release of stormwater from the four proposed neighbourhoods is going to be based on existing ponds, swales and site detention, one of which will be a detention pond built opposite the subdivision on one of the Lowe properties situated to the northwestern boundary of Middle Road. Allowance needs to be made for an existing stormwater outlet which is not shown on the draft Structure Plan. This drain is inadequate as it runs uphill south of the outlet. The stormwater has nowhere to go other than to run onto our property at 166 Middle Rd. As a result it ponds. Prior to Middle Rd being upgraded the stormwater used to run down the eastern side of Middle Rd in a southerly direction, eventually to flood and run over the road into the existing drain on the opposite side of the road.

It does not appear any consideration has been given to rectifying the current problem, which if not, this will cause more of a problem in the future as it has already done since houses have been built on the Stapleford subdivision.

OFFICERS COMMENTS

One of the main outcomes of realigning Iona Road is so that it provides access to and visibility of the open space area around bull hill, creating an open feel to the neighbourhood. Moving the intersection further south would create the need for residential sections adjoining the open space area rather than a road. This would reduce the visibility and accessibility of the open space area and in turn reduce the open feel of the neighbourhood.

Your concerns are noted. More details regarding the management of stormwater will form part of the proposed variation to rezone the land for residential purposes. The community will have the opportunity to formally comment on these matters as part of that process.

BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY

We are happy that both of sides of Lane Road have been left out of the proposal and that there are some reserves included but the attention to this aesthetic has all been placed in the Middle Ridge and Upper Plateau neighbourhoods with the exception of retaining Bull Hill. The area along Iona Rd with existing properties, directly opposite the development, has been largely ignored as has the effect of the development on the existing property owners.

There are a number of elements in the proposal that we are not satisfied with:

1. While we understand the Council's need to provide new residential areas, developing this area for the "common good" of more housing and the commercial interests of developers needs to respect the preservation of our property and aesthetic values.
2. We are opposed to the proposed placement of the commercial outlet as there is a "dairy" not more than a Km away on Middle Road. A commercial hub will further erode the rural residential aesthetic that we enjoy and set out to achieve through our purchase of this property. This idea has not been fully developed and we request its removal from the plan.
3. We support our neighbours request that **IT IS VERY IMPORTANT TO PRESERVE EXISTING TREES AND VEGETATION** to the greatest degree possible, avoiding the "scorched-earth and then replant" notion of development. The existing trees are an important part of the landscape, which is otherwise fairly naked. These trees are also important weather buffers and provide habitat to a healthy birdlife population.
4. **GREEN BUFFER ALONG IONA ROAD:** We note that the Council want to maintain the rural feel of the area, therefore the existing hedging along the northern side of Iona Road (the Southern edge of the Bull Hill Neighbourhood) should remain, with houses and driveways being accessed from inside the development. If it cannot, the Iona road development out to the corner of Gilpin/Middle/Iona roads should include a green buffer/belt. This would: (i) preserve the outlook, privacy and environmental values of existing properties on the other side of Iona Road: (ii) provide privacy and a weather and noise buffer to the Bull Hill properties developed. Including a road-side vegetation belt here would take some land out of housing development, but would increase the values of existing and new properties. We would further request that specifically, there is no access to new properties on Iona Rd, directly opposite no. 125 and 117.
5. **DEVELOPMENT PROCESS.** We expect:
A commitment to reduce the 50Km/hr speed limit out to the Gilpin/Middle/Iona road intersection **BEFORE** development gets underway. This would, in the least, ensure that the increased traffic associated with the development will move more slowly and reduce engine braking and acceleration noise. Ensure that a cycle path is included along this road. That the Iona Road upgrade is completed before the development gets underway. The existing road has not stood up well to heavy traffic and its width and sidings are unsuitable to an increase in traffic. That standards of noise and dust control will be adhered to and enforced by Council.

CONTINUED OVER PAGE

OFFICERS COMMENTS

Council will consider moving the commercial node off Iona Road.

Council will consider the most appropriate bulk and location provisions for each neighbourhood area taking into account the characteristics sought to be achieved.

Iona Road will be upgraded with an urban treatment and character on the northern side and a more rural treatment on the southern side of the road. Pathways for walking, running and cycling will be included in this upgrade.

Current speed limits will be reduced as part of the carriageway works proposed in the Iona area and are reliant on residential development to meet the criteria.

BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY	OFFICERS COMMENTS
<p>CONTINUED FROM OVER PAGE</p> <p>6. BUILDING STANDARDS: Council may not be able to impose standards beyond those that exist, but we hope the developer can impose standards on the materials that can be used, the style of building and landscape development, and other aesthetics. Black Barn - is a great example of the benefits of doing so.</p> <p>7. WHAT BUILDING HEIGHT RESTRICTIONS ARE TO BE IMPOSED? Views are a very important part of the aesthetic of this neighbourhood, and for the proposed development, houses that fit into the landscape rather than being perched on it, will be important to the aesthetic. We feel that developments should be confined to single-storey building in order to maintain the look and feel of the neighbourhood.</p>	
<p>I have no complaints about the plan so far. Suggestion that the pink area (portion of Bull Hill Neighbourhood) should extend further up my driveway – it is 36 m wide – as there is no distinction north and south of the line drawn across it by you. It could be a bit better with the topography and boundaries if it extends another 40m or so south west.</p>	<p>Council will give consideration to the boundaries of the Bull Hill neighbourhood in this location.</p>
<p>We have been aware for some time of the intention to build houses in this area. However we have recently found out that a road is to be constructed next to the properties which border onto this area. Having looked at the plans we cannot really see the logic for this as there two other access roads onto Iona Road and two onto Middle Road. If this road which runs alongside our property goes ahead we will then be living on a corner which we are not very happy about as having lived on a corner previously we would not choose to do so again. We are also concerned about the negative effect this will have on the value of our property.</p>	<p>Council will review the number of roads that access onto Iona Road and consider stopping the proposed road between Middle and Iona as shown on the image below so that there would be housing adjoining your property:</p> 

BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY

The proposal has been sensitive to a number of major concerns we have had, and we are grateful for the consultative process and its emerging outcomes. Though, there remain significant elements that we are not satisfied with.

We remain, along with 68 and 117 Iona Road the most impacted property on the road. We will be facing directly all building sites opposite and are the ones on this road who will bear the brunt of the noise and disruption of all the work being done by both the developer and the council.

Positive:

- The omission of Lane Road within the proposal. This will at least maintain the Lane Road character.
- The reserves/ open spaces that have been included.

General Comment:

We, the existing dwellers, have all chosen to invest in these properties and to live as we do, because of the many and various values offered by this location. Developing this area for the “common good” of more housing and the commercial interests of developers needs to respect the preservation of our property and aesthetic values.

We are VERY concerned and opposed at the proposed placement of the commercial hub as there is a “dairy” not more than a Km away on Middle Road, there seems no real need for another one nor yet another café. The placement of a commercial outlet in this location will directly impact our property with increased traffic past our house and also the likelihood of people parking or turning on our frontage. We already have little privacy and this will only exacerbate the impact of this high density Bull Hill Neighbourhood on us. We think that the placement and rationale for the commercial hub has not been considered fully. We would like it removed as we feel that doing so will add value to the overall development.

IT IS VERY IMPORTANT TO PRESERVE EXISTING TREES AND VEGETATION to the greatest degree possible, avoiding the “scorched-earth and then replant” notion of development. These trees are also important weather buffers and provide habitat to a healthy birdlife population. There needs to be consideration of how to mitigate the impact on local wildlife.

GREEN BUFFER ALONG IONA ROAD: We note that the Council want to maintain the rural feel of the area, therefore the existing hedging along the northern side of Iona Road (the Southern edge of the Bull Hill Neighbourhood) should remain, with houses and driveways being accessed from inside the development.

If it cannot, the Iona road development out to the corner of Gilpin/Middle/Iona roads should include a green buffer/belt. This would: (i) preserve the outlook, privacy and environmental values of existing properties on the other side of Iona Road: (ii) provide privacy and a weather and noise buffer to the Bull Hill properties developed. Vegetative belts like this are a common solution in Northern Europe.

Including a road-side vegetation belt here would take some land out of housing development, but would increase the values of existing and new properties.

CONTINUED OVER PAGE

OFFICERS COMMENTS

Council will consider moving the commercial node off Iona Road.

Council will consider the most appropriate bulk and location provisions for each neighbourhood area taking into account the characteristics sought to be achieved.

Iona Road will be upgraded with an urban treatment and character on the northern side and a more rural treatment on the southern side of the road. Pathways for walking, running and cycling will be included in this upgrade.

Current speed limits will be reduced as part of the carriageway works proposed in the Iona area and are reliant on residential development to meet the criteria.

BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY

OFFICERS COMMENTS

CONTINUED FROM OVER PAGE

DEVELOPMENT PROCESS. The substantial truck traffic involved with the developers most recent development (Porter Hotel) imposed both road damage and significant noise and traffic nuisance to the neighbourhood and complaints to Council received absolutely no response. This directly affected our standard of living for over a year.

Any proposed development **MUST** be more mindful and respectful of the existing residents. We expect:

A commitment to reduce the 50Km/hr speed limit out to the Gilpin/Middle/Iona road intersection **BEFORE** development gets underway. This would, in the least, ensure that the increased traffic associated with the development will move more slowly and reduce engine braking and acceleration noise. It is illogical to have the existing open-road speed limits for this short stretch of road.

Ensure that a cycle path is included along this road. A good number of cyclists/ walkers use this road.

That the Iona Road upgrade is completed before the development gets underway. The existing road has not stood up well to heavy traffic and its width and sidings are unsuitable to an increase in traffic.

That standards of noise and dust control will be adhered to and enforced by Council.

BUILDING STANDARDS: Council may not be able to impose standards beyond those that exist, but we hope the developer can impose standards on the materials that can be used, the style of building and landscape development, and other aesthetics. Black Barn- another of the developers former projects- is a great example of the benefits of doing so. Such notions might not be common in NZ, but they are a very normal practice elsewhere (eg. Northern Europe), providing a more empathetic visual impact and harmonious development. One that inevitably improves property values in the longer term.

WHAT BUILDING HEIGHT RESTRICTIONS ARE TO BE IMPOSED? Views are a very important part of the aesthetic of this neighbourhood, and for the proposed development, houses that fit into the landscape rather than being perched on it, will be important to the aesthetic. We feel that developments should be confined to single-storey building in order to maintain the look and feel of the neighbourhood.

BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY

We have specific concerns regarding the road indicated in the image below.

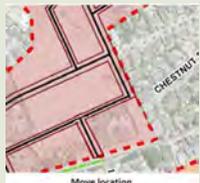
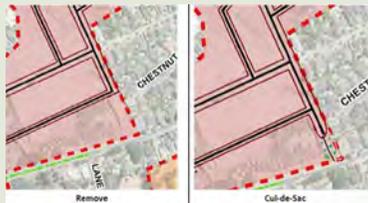


Concerns:

- This road was never flagged in earlier Proposal and has come as a surprise to us
- We really do not see any real purpose to this exit and would like the logic explained so we can better understand why it is there. Seems that all it will do is push more traffic into Iona Road. It is not needed to provide access to any properties as these either be via the internal Bull Hill neighbourhood or Iona Road
- It's proposed exit point is basically straight opposite two driveways - one of these being a shared driveway of three properties with another four properties exiting in close proximity.
- It is also located at the brow of a slope
- As a group we also have concerns about the increased volume of traffic on Iona Road

Possible Solutions

- Rather than straight through Road would like to see it either:
 - terminated roughly opposite Chestnut Road.
 - alternatively, it could become a cul-de-sac with pedestrian access through to Iona Road.
 - At the very least it should be pushed further to the South, although this is not our preferred solution.



OFFICERS COMMENTS

Council will reconsider the number of road access points onto Iona Rd and consider stopping the proposed road between Middle and Iona as shown on the image below:



BULL HILL NEIGHBOURHOOD COMMENTS SUMMARY

The proposal has been generally sensitive to a number of major concerns we have had. Positives include leaving Lane Road out of the rezoning area and retaining the rural character of this road and the middle ridge reserve area.

We have concerns over the following:

The eastern boundary of the middle ridge neighbourhood is unclear. The existing driveway onto Iona Rd would make a cleaner boundary albeit that it would remove area B from the rezoning proposal. This would help preserve our immediate landscape and outlook values. Northern boundary of Middle Ridge neighbourhood is not logical. Bring the Middle Ridge Neighbourhood Northern Boundary down to Iona Road.

Very concerned at the proposed placement of the commercial node. Having a commercial outlet in this location will exacerbate the impact of the high density Bull Hill Neighbourhood on our neighbours - higher traffic and traffic noise at that location. We want it removed and consider that doing so will add value to the overall development. Disagree with the notion of a playground being included in the development. There are multiple existing playgrounds for kids elsewhere in Havelock North and no clear case made for the need for another.

Very important to preserve existing trees and vegetation - we expect to see preservation and protection of existing vegetation. Green buffer along Iona road: the existing hedging along the northern side of Iona Road (the Southern edge of the Bull Hill Neighbourhood) should remain, or perhaps more practically if it cannot, the Iona road development out to the corner of Gilpin/Middle/Iona roads should include a green buffer/belt. The effects on neighbours during the development process are of concern. We expect:

- (i) a commitment to reduce the 50Km/hr speed limit out to the Gilpin/Middle/Iona road intersection BEFORE development gets underway. This would ensure that the increased traffic associated with the development will move more slowly and reduce engine braking and acceleration noise.
- (ii) Ensure that a cycle path is included along Iona road.
- (iii) that the Iona Road upgrade is completed before the development gets underway. The existing road has not stood up well to heavy traffic and its width and sidings are unsuitable to an increase in traffic.
- (iv) That standards of noise and dust control will be adhered to and enforced by Council. We understand that this will be a protracted development and we do not want to lose our peace and quiet during that time.

Building standards: Council may not be able to impose standards beyond those that exist, but I hope a discussion with the developer can include imposing standards on the materials that can be used, style of building and landscape development, and other aesthetics. Black Barn is a great example of the benefits of doing so. What building height restrictions are to be imposed? Views are a very important part of the aesthetic of this neighbourhood, and for the proposed development, houses that fit into the landscape rather than being perched on it, will be important to the aesthetic. Developments should be confined to single-storey building.

OFFICERS COMMENTS

Council will reconsider the zone boundaries but reducing the rezoning area is not supported.

Council will consider moving the commercial node away from Iona Road.

Current speed limits will be reduced as part of the carriageway works proposed in the Iona area and are reliant on residential development to meet the criteria. Detailed carriageway design work has not been carried out for the Iona area yet, but will incorporate cyclepaths.

We have noted your comments in respect of tree retention.

MIDDLE RIDGE HILL NEIGHBOURHOOD

MIDDLE RIDGE NEIGHBOURHOOD COMMENTS SUMMARY

While there are many positives to the existing plan, it is more intensive than we would like. We feel that we have been unjustifiably omitted from the rezoning, presumably to retain the rural landscape character of the Lane Road area. As it stands we are flanked on all sides by yellow, pink and orange zones. We are very concerned about this on our land value and our amenities - the 'pleasantness and attractiveness' of our property will lose its appeal. We are essentially a Lane road property and are therefore entitled to the amenity of the rural character landscape. We do not wish to see a multitude of dense housing on our flanks (from breadalbane and from our immediate neighbours). Notwithstanding this, our property should be included in the rezoning area to add more 'blue' transition lots (of 2000-4000 square metres each) between residential (pink, yellow, orange) and rural residential zones. Bull Hill neighbourhood - Retain as many trees as possible on the Lowe property. Please try and keep the beautiful hedge at the end of Lane Road. An off lead dog walk or childrens playground would be perfect in front of it. A dairy/cafe should not be placed on Iona Road in the middle of suburban areas - we suggest somewhere on Middle Road if necessary, but Birdwoods cafe and Middle road dairy would suffer. We would like to see an upgrade to lower Iona - lower speed limit, wider road corridor, and a wide footpath for running and walking. It is extremely unsafe at present. Middle Ridge Neighbourhood - If there is to be any further zoning of our immediate neighbours (153 Iona and 8 Lane Road) then we would absolutely expect to be rezoned with them.) If 153 changes to be 'yellow' or 'blue' then we would expect that also. If not we would lose all the amenity value of having a rural-residential zone on Lane Road. In simple terms, a dozen properties on each of 151 and 8 lane Road would simply destroy the rural landscape character area that the council are trying to respect.

Our preference would be that 153 Iona, 8 Lane Rd, and 151 Iona (us), to be zoned in the same way that the upper plateau has been zoned (blue areas), thereby acknowledging the desire to preserve the rural landscape character area of Lane Road and transitioning from the more intensive zoning areas. We favour a 2-4,000 additional blue lot near our southern boundary. This would serve as a transition zone (along with 153 Iona and 8 Lane Rd) between residential zoning and the Lane road rural landscape character areas further up Lane Road. Upper Plateau Neighbourhood - These are our preferred lot sizes to serve as a transition between residential and rural residential zones. Breadalbane Ave neighbourhood - If there is to be a restructure of this neighbourhood then we would prefer this area to be zoned blue so that it serves as a transition from residential to rural residential thereby acknowledging the rural character landscape area of Lane Road. Conclusion - At present 151 Iona Road sits in no man's land. We favour rezoning to allow subdivision of a 1 x blue site (small lot rural residential) of between 2-4,000 square metres to serve as a transition between residential and 1 hectare rural residential. If our immediate neighbours become blue, yellow, or even orange zones then we would expect the same zoning. However our preference is to become a blue zone as transition point to the rural residential zones on Lane Road.

OFFICERS COMMENTS

Council will give consideration to the rezoning boundary in this area however, one of the primary outcomes sought is the retention of the rural character of properties fronting Lane Road.

The location of the commercial node will be reconsidered.

Iona Road will be upgraded with an urban treatment and character on the northern side and a more rural treatment on the southern side of the road. Pathways for walking, running and cycling will be included in this upgrade.

Current speed limits will be reduced as part of the carriageway works proposed in the Iona area and are reliant on residential development to meet the criteria.

MIDDLE RIDGE NEIGHBOURHOOD COMMENTS SUMMARY

I oppose the development as I believe it will destroy the rural residential nature of the Iona Rd / Lane Rd neighbourhood. My ability to enjoy my property will be severely diminished because of substantially increased volumes of traffic and the proximity of many houses close to my boundary which will inhibit many activities associated with a rural lifestyle. Land to the east of Middle Road is a much more logical place to expand Havelock North. This land is flatter and more readily allows for an orderly lineal expansion to the south rather than a spearhead development poking into the rural residential area on both sides of Iona Road. I strongly oppose that the roadway running east / west between Middle and Iona Roads has an ingress / egress connection to Iona Rd. In my view this should be reconfigured so that the exit is to Breadalbane Rd via Chestnut Court or alternatively it should end in a cul-de sac short of Iona Road perhaps with a pedestrian access through to Iona Road. My objection to an entrance / exit on Iona Road is on the following basis:

- Increased traffic volumes immediately opposite my property;
- Noise;
- Headlights at night; and
- Safety.

OFFICERS COMMENTS

Council will reconsider the number of road access points onto Iona Rd and consider stopping the proposed road between Middle and Iona as shown on the image below:



MIDDLE RIDGE NEIGHBOURHOOD COMMENTS SUMMARY

Seek inclusion of these properties (153 Iona and 8 Lane Road) in the proposed rezoning area. Additional land area proposed to be included amounts to approximately 1.3ha.

Whilst the premise behind the eastern boundary line of the middle ridge area is supported the landowners question the proposed alignment which does not accurately reflect the apparent visual ridgeline as viewed from Lane Road, and it is submitted that there is capacity for the eastern zone boundary for this area to be located farther eastward. The location includes north facing 'basin' area comprising approximately 13000m². It is proposed that this area be added within the area identified for a density of 1000m². The map below shows the current draft structure plan boundary of the rezoning area in dotted red line with the dotted yellow line indicating the requested extension.



Based on the land area and the (1 dwelling per 1000m²) density standard the proposed re-alignment has the potential to support an additional three dwellings which will not be substantially visible from Lane Road due to the location of potential platforms east of the apparent (view shaft) ridgeline from the road. Should Council have concern that multi-level dwellings may be visible standard practice would suggest it appropriate to add planning controls to mitigate effects while enabling development – such as building height restrictions or simply requiring buildings to be single story.

The sites and surrounds have been investigated by Landscape Consultant Mr. John Hudson. In his assessment Mr Hudson has stated:

“Protection of the rural residential character up Lane Road has been a key consideration of the Structure Plan. Issues of ROW access would need to be addressed, but can be considered at a later date after the principle of boundary location has been considered. In my view, adjustment of this eastern boundary could be made while still maintaining the desired character of the adjacent rural residential zone”.

OFFICERS COMMENTS

Council will investigate and consider the rezoning of this land as part of the overall landscape assessment.

UPPER PLATEAU NEIGHBOURHOOD

UPPER PLATEAU COMMENTS SUMMARY	OFFICERS COMMENTS
<p>Thank the working group for their time and effort to get the structure plan to where it is now. Would like to ensure any street lighting has a rural character.</p> <p>Request a vegetation control area on lot 13 in the Upper Plateau area between the proposed building platform and our property boundary. We would like the building platform on this lot set further away from our boundary to ensure that the roofline of any new dwelling is hidden from our property. Request a covenant on the title of lot 13 to ensure that the floor level of the dwelling is at natural ground level and that the maximum height of the dwelling is taken from this level. A covenant on this title to state maximum height of dwelling (ie the pitch of the roof). Request a covenant on the maximum height of planting in the upper plateau neighbourhood.</p>	<p>Council will consider a vegetation control area for Lot 13 in the Upper Plateau area and reconsider the location of the building platform for this lot as part of the overall landscape assessment for this area.</p> <p>Council will consider the most appropriate mechanisms for ensuring single storey development on this lot and those others identified for single storey development only.</p>
<p>Our major concern is the upper plateau area. Density - Preference would be for proposed sites to be larger & less dense. -Proposed covenanted plantings would be considered a positive.-We would like the proposed vegetation control strip between our property at 142 Lane Rd & lots 14 & 15 widened from 15m to 20m & the length lengthened to cover the entire boundary between 142 lane Rd & lots 14 & 15. We have been advised that the owners of 142 lane will have a say in what is planted in the vegetation strip & we would request that this is the case. -We have engaged a property specialist to complete a rental appraisal of our studio apartment (detached from our main dwelling) on 142 Lane road on a 'as is basis' & once the proposed upper plateau development has been completed. The rental appraisal on the completion of the upper plateau decreased by \$40/night for short term stays & \$30/week for long term stays (documents can be supplied). This potential loss of income will have an adverse effect on the value of our property. To help mitigate this loss we would like a walking easement from 142 Lane Road through the boundary between Lots 14 & 15 to give us walking access to the road that ends at the top of the proposed upper plateau development.</p>	<p>Council will consider the alterations suggested to the proposed vegetation control areas on lots 14 and 15.</p> <p>Council will seek advice from our landscape architect on the most appropriate species to plant within these vegetation control areas.</p>

UPPER PLATEAU COMMENTS SUMMARY	OFFICERS COMMENTS
<p>As far as planting is concerned, we think this is an excellent idea and would request that the planting would be predominantly native and commence as soon as possible, giving trees time to establish and grow before development gets under way.</p> <p>Our submission relates to the Upper Plateau, in particular Lots 9, 10, 12, and 13. When Gavin Lister of Isthmus Group presented his concept to the Iona Working Group, and in particular as it related to the Upper Plateau, he was quite particular about retaining existing ridge lines, with minimal earthworks.</p> <p>As a consequence, the proposed platform sites, for the aforementioned lots, were to be situated on the eastern side of the ridge in question. This would assist in screening these house sites from the existing lifestyle blocks adjacent to them in Endsleigh Road. The Draft Structure Plan that we are now referring to (Iona Plateau 20 lots), shows the proposed building platforms for Lots 9, 10, 12 and to a lesser extent 13, situated very close to or crossing the ridge line in question. While provision has been made for tree planting on the western slopes of this ridge up from the western Endsleigh Road boundary, these plantings will have little or no effect on the screening of two-storied properties that may be built on the proposed platforms. We propose, and as discussed with the HDC Planners at our Havelock North Library Meeting at 4pm on 8 August 2017, these platforms have been incorrectly placed and should be shifted further east and lower down the eastern side of the ridge, thus providing a more natural screening with minimal human intervention. Another option in conjunction with the latter, would be to restrict Lots 9, 10 and 12 to be single storied.</p>	<p>Council will review the location of the building platforms for Lots 9, 10, 11 and 12 with our landscape advisor as part of the overall landscape assessment.</p>
<p>We would like to make a submission to apply for a zoning change to full residential status for our property at 84 Lane Rd, Lot 2 DP 336654. We know that you will be changing the zoning of the land for development on our boundary, and we would like you to consider allowing for the rezoning of 84 Lane Rd as well. We believe we are in a unique position for this request to be considered seriously in that we own a quarter share of Lot 9 DP 24404 which will form part of the subdivision and provide access to the recreational reserve part of the subdivision. We believe we have the potential to subdivide two very attractive sections from Lot 2 DP 336654, 1 with an access off our current drive way and 1 with an access off Lane Rd above our current house site. These 2 sections would be approximately 3,000m² each.</p>	<p>Council will investigate and consider the rezoning of this land as part of the overall landscape assessment.</p>

UPPER PLATEAU COMMENTS SUMMARY

In our original submission to the Council we object to this proposal to change of the rural residential zoning of the Iona hills area as we wanted to retain our magnificent green views and our distance from neighbours. We now seek to lessen the impact on us and to retain as much as possible of what we currently enjoy. Our concerns are with the Upper Plateau Neighbourhood particularly Lot 1 and Lot 2 which adjoin our property boundary. Our initial understanding was that the total area of these two lots was to be part of the green belt reserve and we think it would be best for this upper plateau neighbourhood if this was the case. These lots are too close to the ponds and wilderness area that is currently home to many species of birds – native and otherwise. The current proposal for houses to be built on these two lots on top of the ridge is unacceptable to us for this reason and because it will not be possible to screen these houses with trees. We ask that lots 1 and 2 are removed and this area be included in the green belt reserve. The ridge road coming off Iona Rd and the key hole streets – we accept that Council has worked to minimise the impact of new houses on neighbours but we cannot see how trees will screen this development from us or other properties on Endsleigh Road

OFFICERS COMMENTS

Council will have another look at the building platform locations for lot 1 and 2 in the Upper Plateau neighbourhood.

UPPER PLATEAU COMMENTS SUMMARY	OFFICERS COMMENTS
<p>I have been very impressed with the amount of planning and consultation work, especially the desire to retain many of the existing landscape features and minimise the impact on existing residents. However, as a Professional Engineer, I do not believe that the proposed plantings will be effective in screening the new buildings situated on the Western Boundary of the Upper Plateau.</p> <p>We do not believe that the planted areas will screen the new buildings from view for a very long time, if ever, due to the placement of the sites along the ridge and the steep gradient of the hills. We propose that the building platforms on Lots 9, 10, 12 and 13 be moved to the Eastern side of the ridge so that they are naturally screened by the hills.</p> <p>Analysis of the contour map reveals that the proposed building platforms are situated within metres of the ridgeline, and in some cases, cross a ridgeline. Single storey homes will rise above the ridgeline. Double storey homes will significantly rise above the ridgeline. This will interrupt the rural landscape making it difficult to screen new homes from existing properties.</p> <p>The Western slopes on Iona Hills Lots 9, 10, 12 and 13 rises over 20m in height from the property boundary to the crest of the ridges. The proposed tree and vegetation planting around the base of the hills will not provide any natural screening due to steep gradient of the hills. Native trees can take decades to grow to a height of 15 or 20 metres. Tall trees would need to be well established on the upper vegetation boundary in order to screen a double storey house situated near the ridgeline. In Council meetings attended by Lowe Family representatives and 274 Party representatives, it was agreed that ridges would be retained to provide a “blanket hills effect” to screen the new buildings from existing homes.</p> <p>I request that the building platforms on Lots 9, 10, 12 and 13 be moved from their current position so that they are screened by the hills in accordance with prior discussions.</p> <p>The landform itself will provide natural screening if the platforms are moved to the Eastern side of the ridge and the buildings limited to single storey.</p> <p>This solution does not require extensive planting or years of growth. It will maintain privacy for the affected rural residential lots and not interrupt the rural landscape and ridges.</p>	<p>Council will review the location of the building platforms for Lots 9, 10, 11 and 12 with our landscape advisor as part of the overall landscape assessment.</p>
<p>Is the stormwater to be piped to road or spilled into the existing water course on our property? Upper plateau neighbourhood - Iona draft structure plan states that the new residential areas will be screened from adjoining properties. That promise leads to several questions that we would like answered. What plants are planned? How long after planting will the new plants screen the new residential area given the steep slopes that the plants are proposed to be on. What action will be possible if the promised screening is not effective? We believe that the only way to effectively screen the proposed new residential area from the existing adjoining properties is to use natural screening i.e move the building platforms to an area where natural hills and valleys protect existing properties investments.</p>	<p>Stormwater is proposed to be conveyed by grassed swales to the outlets and detention areas as shown on the Structure Plan. The premise being that the development will be stormwater neutral (i.e. the rate that stormwater discharges from the site currently (pre-development) will remain the same post development.</p> <p>The buildings platforms have been predominantly located to use the existing landform to reduce the visibility of the new housing with the proposed planting adding to that visual screen.</p>

BREADALBANE AVENUE NEIGHBOURHOOD

BREADALBANE AVENUE NEIGHBOURHOOD COMMENTS SUMMARY	OFFICERS COMMENTS
<p>We wish to retain the large number of specimen trees on our property which are incredibly rare and have planted, maintained and nurtured to the state that they are now.</p> <p>We do recognise that the area is changing and the demands for land such as ours is going to increase over time. We would look to develop our land in a way that would not do any harm to the current tree plantings and in fact, would enhance the area. We would like to ask that our main house be kept as rural residential zone and the new lot which will house the development (if approved) be zoned the special character zone.</p>	<p>Consideration will be given to the rural residential and new residential zone boundaries in the Breadalbane Avenue area. However, Council are not supportive of the creation of an under size rural residential lot but would support a complying lot of 8000m², if the rezoning remains Rural Residential for that site.</p>
<p>Breadalbane Avenue was the original driveway up to the Campbell Homestead. In the early 1950s the property was sold and land divided up into the 6 now present sections. The land was planted with exotic trees in the 1950s and numerous other trees have been added since. The Avenue being a dead end road is a quiet oasis and retains the village appeal. Our wish to retain as much of the feel of the Avenue as is possible. We see a less structured approach to roading and fencing than might apply in other subdivisions and where practicable the retention of established trees. A varied size of sections so that we can provide sites that complement the area and create a more diverse demographic of residents. The challenge is to provide suitable site sizes that can be melded into the Avenue environment with established trees and create that community feel. We see a layout having a more casual approach to roading and limited use of fencing. This includes strategically placed trees for privacy and some fencing / trellis to screen outdoor living areas and the placement of sites that promotes outdoor living. We believe the section sizing should be varied to allow for placement of plots to retain suitable existing trees and enhance the mix of generations. The landscape and topography lends itself to creative thinking, not always simple with established features but achievable with thought. We believe a site size of 1000m² average with a 700m² minimum is appropriate and allows us to create the community we envisage.</p>	<p>Council is looking at densities greater than a 700m² minimum as the Breadalbane Avenue area has an existing character that sets it apart from the surrounding Havelock North Character Residential Zone.</p>

BREADALBANE AVENUE NEIGHBOURHOOD COMMENTS SUMMARY

OFFICERS COMMENTS

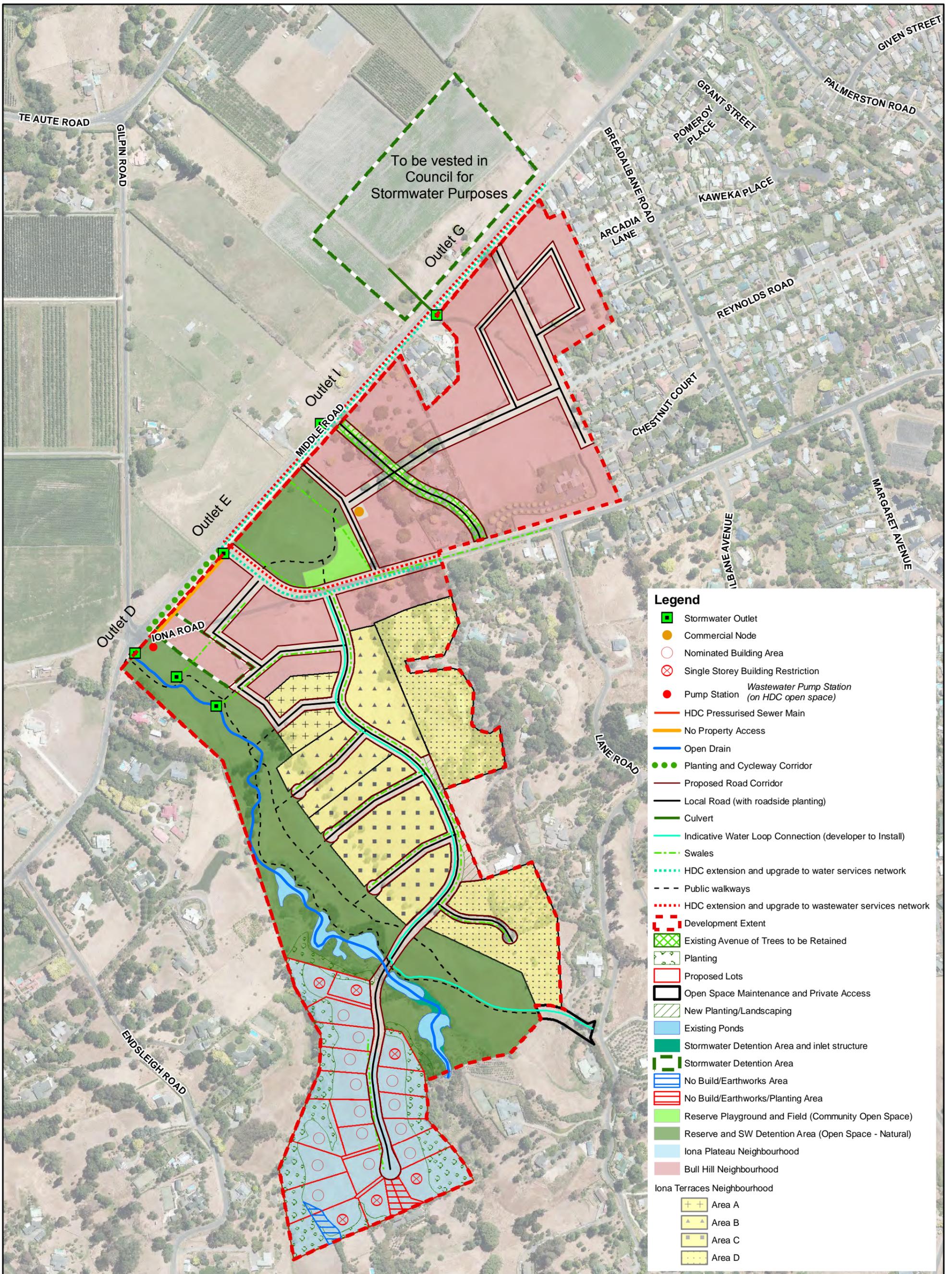
To summarize, as mentioned the three owners started work on this project over two years ago and had spent several thousands of dollars evaluating site design and water run off when a change in zoning was first mooted. We do appreciate there is a need for an overall plan but we do find that we have been caught up in a much larger topic, that of the development of the Iona Triangle which is a very different issue. Ours is simply a small fill in project much closer to town, similar to Margaret Road or Rochfort Terraces. We would like approval for our area to proceed with lot size of 700 sq m min, 1000 sq m average independently and ahead of Iona, as we do not believe it sets any precedent for Iona which is a very different type of development, a complete new housing suburb on farm land versus a small fill in project close to town. There is continued demand for new home sites, which is not being met, and to incrementally bring new sections and housing on to the market in smaller infill locations, close to town will meet this need.

Council is looking at densities greater than a 700m² minimum as the Breadalbane Avenue area has an existing character that sets it apart from the surrounding Havelock North Character Residential Zone.

Council is not supportive of separating out the rezoning areas at this stage. If you wish to proceed ahead of the Council rezoning timeline you have the option of applying for a non-complying activity resource consent for your subdivision.

The process by the owners of (withheld) has been underway for several years with consultation from professional engineers, surveyors, landscape architects, and other specialists. We support the view that it would be desirable to retain the environmental nature of the environment, and provide for a range of section sizes to complement that. It would certainly be our intention to retain an appropriate number of the existing and mature trees on our current property. With regard to section size we suggest that 700m² should probably be the minimum, to suit the environment, with an average of 1,000m². I believe that we would probably be disadvantaged economically by having the rezoning delayed so as to coincide with the other Iona Residential Growth Area. The effect of all the rezoned land coming on the market at one time could create a “market flood”, as opposed to a staggered process. As already indicated, the engineering/surveying process has been underway for several years, the principle requirements have been determined by Council, and no progress can now be made until the rest of the unattached process is completed.

Council is looking at densities greater than a 700m² minimum as the Breadalbane Avenue area has an existing character that sets it apart from the surrounding Havelock North Character Residential Zone.



- Legend**
- Stormwater Outlet
 - Commercial Node
 - Nominated Building Area
 - Single Storey Building Restriction
 - Pump Station *Wastewater Pump Station (on HDC open space)*
 - HDC Pressurised Sewer Main
 - No Property Access
 - Open Drain
 - Planting and Cycleway Corridor
 - Proposed Road Corridor
 - Local Road (with roadside planting)
 - Culvert
 - Indicative Water Loop Connection (developer to Install)
 - Swales
 - HDC extension and upgrade to water services network
 - Public walkways
 - HDC extension and upgrade to wastewater services network
 - Development Extent
 - Existing Avenue of Trees to be Retained
 - Planting
 - Proposed Lots
 - Open Space Maintenance and Private Access
 - New Planting/Landscaping
 - Existing Ponds
 - Stormwater Detention Area and inlet structure
 - Stormwater Detention Area
 - No Build/Earthworks Area
 - No Build/Earthworks/Planting Area
 - Reserve Playground and Field (Community Open Space)
 - Reserve and SW Detention Area (Open Space - Natural)
 - Iona Plateau Neighbourhood
 - Bull Hill Neighbourhood
- Iona Terraces Neighbourhood**
- Area A
 - Area B
 - Area C
 - Area D



Iona Structure Plan

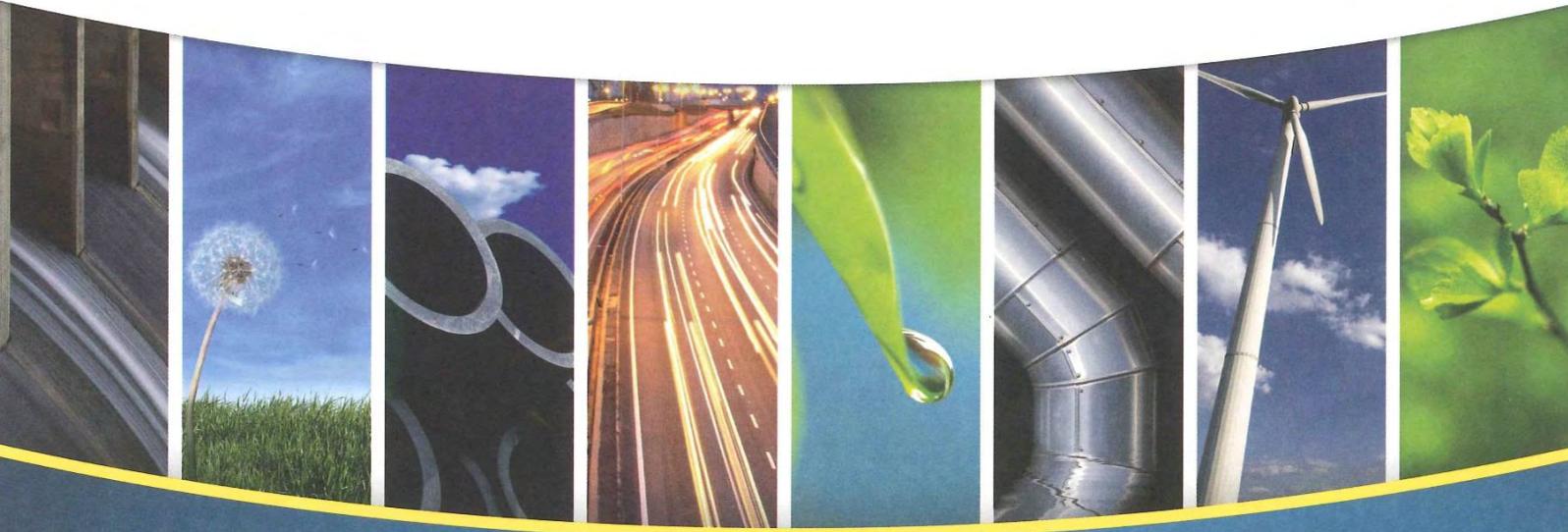
Scale 1:5,000



MIDDLE ROAD/IONA ROAD GROWTH AREA – TRANSPORT ASSESSMENT

Prepared for Hastings District Council

April 2016



MWH[®]

BUILDING A BETTER WORLD

This document has been prepared for the benefit of Hastings District Council. No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other person.

This disclaimer shall apply notwithstanding that the report may be made available to other persons for an application for permission or approval to fulfil a legal requirement.

QUALITY STATEMENT

PROJECT MANAGER

Joanna Davenport

PROJECT TECHNICAL LEAD

Gavin O'Connor

PREPARED BY

Matt Soper and Rob Batt27/04/2016

CHECKED BY

Alan Gregory27/04/2016

REVIEWED BY

Gavin O'Connor 27/04/2016

APPROVED FOR ISSUE BY

Des Parkinson  27/04/2016

HAWKES BAY

1st Floor, 100 Warren Street South, Hastings 4122
 PO Box 1190, Hastings 4156
 TEL +64 6 873 8900, FAX +64 6 873 8901

REVISION SCHEDULE

Rev No	Date	Description	Signature or Typed Name (documentation on file).			
			Prepared by	Checked by	Reviewed by	Approved by
1	15/03/16	Draft for Comment	MS	DC	GOC	DP
2	23/03/16	Second Draft	MS	AG	GOC	DP
3	27/04/16	Final	MS	AG	GOC	DP

Hastings District Council

Middle Road/Iona Road Growth Area - Transport Assessment

CONTENTS

1	Introduction.....	1
2	Policy Context.....	4
2.1	Local Planning Policy.....	4
2.2	Relevant Design Guidelines	5
2.3	Local Transport Strategies.....	6
3	Existing Conditions	8
3.1	Overview.....	8
3.2	Safety	9
4	Future Conditions	11
4.1	Traffic Growth	11
4.2	Trip Generation.....	11
4.3	Future Year Trips.....	12
5	External Road Network Optioneering	14
6	Subdivision Road Network.....	17
6.1	Opportunities	17
6.2	Constraints	17
6.3	Indicative Road Layouts	18
7	Summary	23

LIST OF TABLES

Table 3-1: Historical Traffic Data	8
Table 3-2: Intersection Analysis Threshold	9
Table 3-3: Historical Crash Data	9
Table 4-1: Local Residential Trip Rate.....	11
Table 4-2: Trip Generation Estimates	12
Table 4-3: Iona Road/Middle Road/Gilpin Road intersection – Forecast Turning Volumes	12
Table 4-4: Iona Road/Middle Road/Gilpin Road intersection – Sensitivity Test Volumes	13
Table 5-1: Transport Options Assessment.....	14
Table 6-1: Internal Road Layout Details	18
Table 6-2: External Road Connection Details	19

LIST OF FIGURES

Figure 1-1 : Project Area	3
Figure 2-1 : Proposed Hastings District Plan – Zoning Map	4
Figure 3-1: 2011-2015 Crash Locations.....	10
Figure 4-1: Iona Road/Middle Road/Gilpin Road - Turning Movement ID.....	13
Figure 5-1: External Road Network Options	16
Figure 6-1: Existing/Option 1 - Indicative Road Network No.1	20
Figure 6-2: Option 2 - Indicative Road Network	21
Figure 6-3: Option 4 - Indicative Road Network	22

APPENDICES

Appendix A	HDC District Planning Maps
Appendix B	HDC Road Design Standards
Appendix C	Site Visit Photographs
Appendix D	2016 Traffic Survey Data
Appendix E	Trip Distribution Assumptions
Appendix F	Level of Service Criteria
Appendix G	Landowner's Vision

1 Introduction

Background

Hastings District Council (HDC) are currently preparing a structure plan for an area which encompasses both the Iona Triangle¹ and land parcels south of Iona Road, referred to as the Middle Road/Iona Road growth area. Ultimately the area may provide up to 448 residential dwellings². MWH have been commissioned by (HDC) to undertake a high-level traffic impact assessment for this area.

The primary objective of the assessment is to establish the traffic generation of the development and to undertake an initial evaluation of the alternative road network options. HDC have indicated that the development will be staged, with the precise nature of the staging to be determined at a later date and informed in part by this assessment.

Development

HDC have broken the Middle Road/Iona Road growth area into the following zones:

- **Deferred Zone.** This area covers approximately 7.5 hectares and will provide between 90 and 110 dwellings. Access to this area will be provided from Middle Road, Reynolds Road and Iona Road. This zone is currently undeveloped aside from a small number of rural residential lots in the south-east corner and includes a small knoll (approximately 10m in height) which HDC have suggested may be retained as a feature within a reserve area.
- **Character Zone.** This area covers approximately 9.2 hectares and will provide between 110 and 138 dwellings. The area is located adjacent to the Deferred Zone, with future access provided via Middle Road, Iona Road and Reynolds Road.
- **Iona Hill.** This area covers approximately 27.1 hectares and will provide between 90 and 160 dwellings. The area is located immediately south of Iona Road. Development plans include the construction of a cycleway/walkway (and limited vehicle access) to Lane Road.
- **Remaining HPUDS Land.** This remaining area covers approximately 32.8 hectares and is earmarked to provide an additional 25 to 40 dwellings.

All zones are either currently zoned as residential areas or included within the Hastings Proposed Urban Development Strategy (HPUDS) as future growth areas.

Project Area

This traffic assessment is limited to the evaluation of the impact of the future development to the immediately surrounding roads; namely Gilpin Road, Middle Road and Iona Road. A satellite image of the project area, inclusive of the proposed development zones, is provided as Figure 1-1. The figure also includes further zone boundaries as defined by the landowners (i.e. the Iona I-III areas):

Landowners Vision

The landowners of the Character Zone, the Deferred Zone and the Iona Hill area are:

- Graeme Lowe Properties Ltd;
- J E Lowe; and
- Lowe Family Holdings Limited.

At present, the main landowner (Graeme Lowe Properties Ltd) is in the process of subdividing the Deferred Zone, Character Zone and Iona Hill areas. An earthworks consent for re-contouring the southern end of the Iona Hills area (Iona III) is already in place, which identifies the intent to 'smooth' off the steeper sections of the block rather than 'flattening'.

¹ The Iona Triangle refers to the area of land bound by Iona Road, Middle Road and Breadalbane Road

² HDC high density estimate

The most recent information relating to the landowners intentions is detailed within the '*Iona Road – Design Concept and Principles Report (Isthmus, February 2016)*'. The key points to this report are as follows:

- Proposed realignment of Iona Road to Middle Road as a means of improving safety and enhancing the layout.
- The retention of the existing main waterway, located within the southern end (Iona III) of the Iona Hills area, as a 'green corridor'.
- Introduction of two 'spine' roads. The first being the continuation of Reynolds Road, terminating at the aforementioned knoll and the second from Iona Road running south along the existing gully and terminating at the end of the Iona III area.
- The proposed internal 'spine' roads are noted as being fixed with the configuration of the east-west 'side' streets being flexible.

There are various owners of the remaining HPUDS areas and the existing pocket of residential land located along on Middle Road.

Purpose of this Report

This report provides an outline of the required changes to existing intersections and HDC's roads as a means of facilitating the development. To adhere to the project objective, the following information is presented within this report:

- A review of relevant local planning and design guidelines;
- A summary of the existing road network conditions;
- A review of the crash data;
- A trip generation estimate for the Middle Road/Iona Road growth area;
- An assessment of alternative external road network options that could potentially facilitate the development; and
- Identification of potential internal road networks.

This report will form part of an overarching infrastructure options report that will assist HDC in planning for the future residential expansion within this Havelock North area.

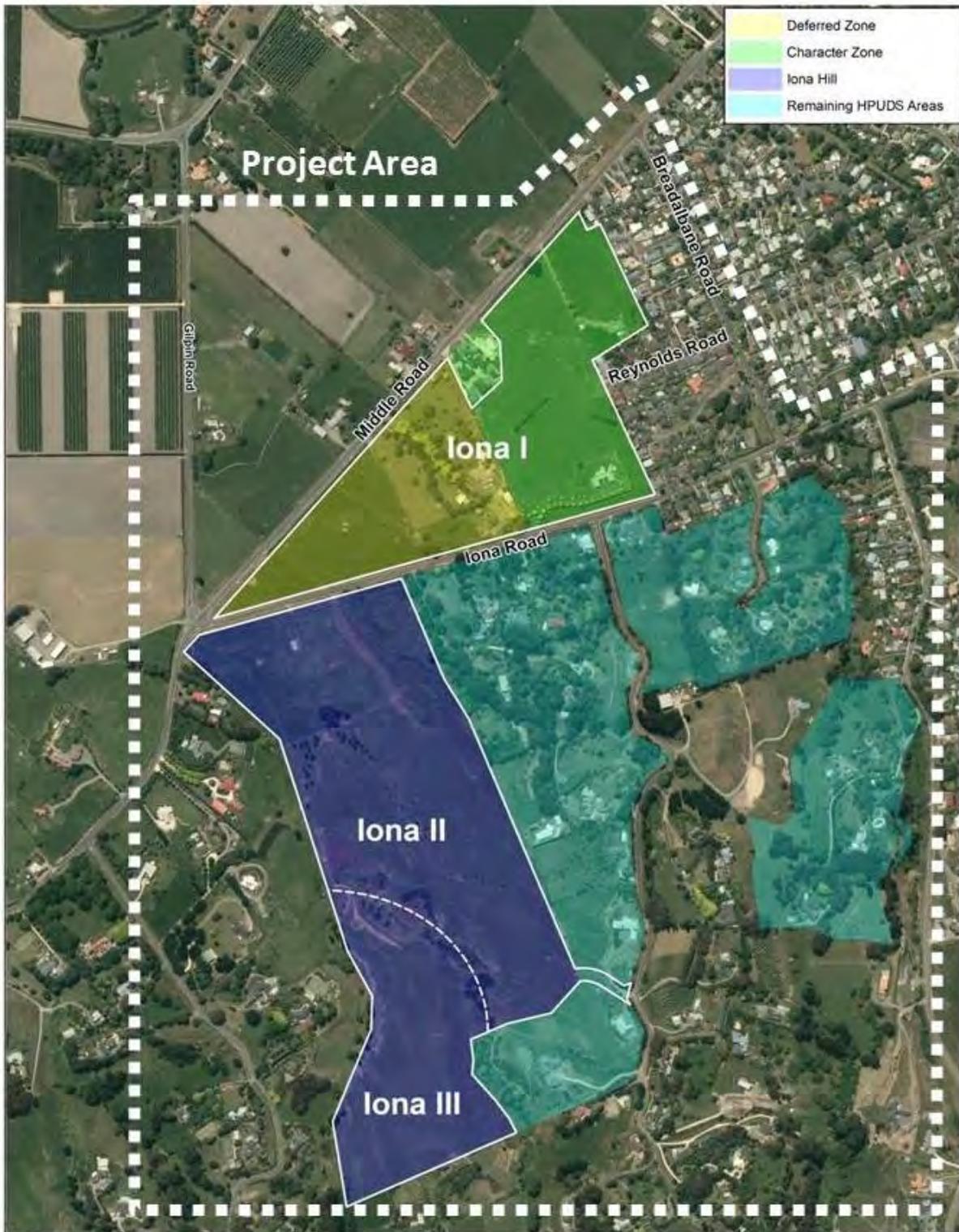


Figure 1-1 : Project Area

2 Policy Context

This section of the report provides a review of the local and regional strategies which relate to transport infrastructure and sub-division developments.

2.1 Local Planning Policy

This sub-section provides an overview of the relevant information from the following regional planning documents:

- 'Proposed Hastings District Plan', HDC, November 2013.
- Regional Land Transport Plan 2015-2025, Hawkes Bay Regional Council (HBRC), 2015.
- Regional Public Transport Plan 2015-2025, HBRC, 2015.

Proposed Hastings District Plan (PHDP)

The PHDP outlines the means for managing the effects of the use, development and protection of the local natural and physical resources. Figure 2-1 provides the PHDP land use zoning for an area south-west of Havelock North, encompassing the project area. The map identifies that the Iona Hills area is zoned as Rural Residential.

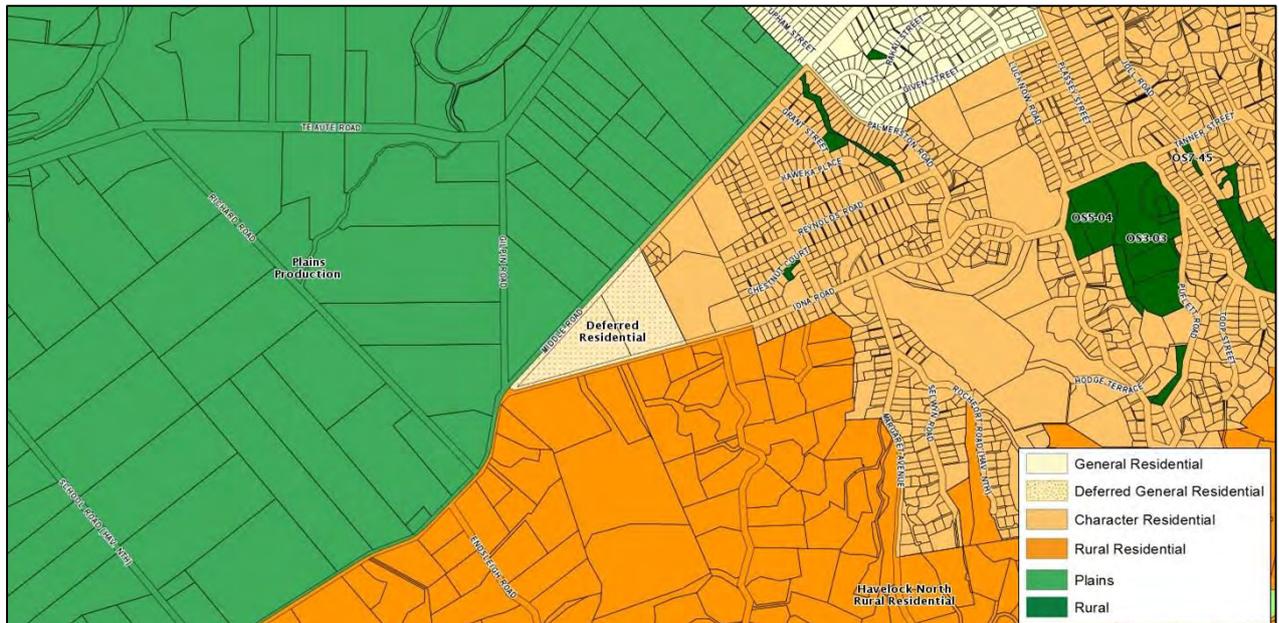


Figure 2-1 : Proposed Hastings District Plan – Zoning Map

Appendix 1 of the PHDP identifies the project to be within a residential urban growth area. A map of the growth areas for both Havelock North and the wider Hastings District are provided in Appendix A.

The PHDP also outlines the roading hierarchy across the district, identifying Middle Road as an arterial, Iona Road as a collector and Gilpin Road as a local road. The Plan notes³ that the adoption of the hierarchy is important as it enables landowners and other users to identify road function, likely traffic volumes and any associated environmental effects that will be accepted for different roads within the hierarchy.

³ PHDP, Section 2.5.2.1

Transport Strategy

The PHDP provides specific information in regard to the transportation strategy for the district and emphasises the importance of how an effective transportation network plays a key role in facilitating mobility and helping the local economy grow. The Plan also notes that inappropriate levels of development and poor access to and from the road network can compromise the functional efficiency and safety of the network.

The transport strategy is anticipated to achieve the following outcomes:

- Reduced intrusion of unnecessary vehicular traffic into residential streets.
- Establishment of an effective arterial and collector roading system to manage vehicle flow and provide attractive routes for heavy vehicles and inter-regional traffic.
- Improved use and integration of environmentally sustainable transportation forms through the urban area and cross the Heretaunga Plains.

Regional Land Transport Plan 2015-2025 (RLTP)

The RLTP describes Hawkes Bay's strategic objectives for the transport system over the next ten years and sets out the funding request from HBRC to the New Zealand Transport Agency (NZTA). One of the main objectives of the plan is to achieve a resilient and efficient transport system that supports economic development and wellbeing.

The Plan includes the following points that are relevant to the development of subdivisions:

- Cycle numbers have increased where network improvements have been made. One of the main priorities of the Plan is to ensure that the region becomes a major centre for cycling.
- The Hawkes Bay region (in particular rural areas) sees a disproportionate number of crashes per vehicle km travelled on local roads when compared to many other regions.
- Other than at peak times, road traffic congestion is minimal.

Regional Public Transport Plan 2015-2025 (RPTP)

The RPTP aims to promote a modal shift to public transport by lessening the reliance on private motor vehicle travel and contributing to reduced congestion and carbon emissions on the road network.

The report identifies that bus patronage across the region has risen steadily, with total passenger trips rising from 480,244 in 2009/10 to 799,845 in 2013-14 (an increase of just over 66%). This rise is likely to be heavily associated with the substantial investment into public transport improvements the HBRC have made over recent years. As such, the Plan outlines that Council is unlikely to provide any additional funding for further improvements over the next three years.

Currently no bus routes pass by the proposed subdivisions. The closest service is Route 21 (operating from 6.50am till 5.30pm) which runs every 30 minutes during peak periods and every hour during the off-peak.

2.2 Relevant Design Guidelines

This sub-section provides a summary of the relevant information from the following standards which are applicable to a residential subdivision development within Havelock North:

- 'Hastings District Council Engineering Code of Practice', HDC, 2011.
- 'Subdivision and Infrastructure Development in Hastings District – Best Practice Design Guide', HDC, 2009.

Hastings District Council Engineering Code of Practice

The HDC Engineering Code of Practice acts as a guideline for the engineering of subdivision and land developments within the Hastings District. Part 3, Section 3 of the document outlines the general transportation requirements. Of particular relevance, the document notes:

- Provide all lots in the land development or subdivision with safe, sustainable and stable road access;
- Provide effective and sustainable linkages and connectivity; and
- Provide safe and sustainable transport systems, compatible with the surrounding environment.

Schedule C of the document outlines the requirements for urban and rural roads⁴ in the Hastings District. The schedule notes that where additional traffic from a new development is likely to have an adverse effect on the agreed Level of Service (LOS) of the network, Council may require a traffic study to determine the effects and possible mitigation options. Appendix B provides the minimum road design standards for urban and rural roads for the Hastings District.

Subdivision and Infrastructure Development in Hastings District – Best Practice Design Guide

The purpose of the document is to give developers and subdivision designers best practice design guidance. Potential outcomes of implementing the guidelines are considered to be provision of street calming through narrower carriageways, the implementation of low impact urban design techniques and potentially reduced costs of construction and long term maintenance. The document outlines the following guidelines in regard to subdivision connectivity and street design:

- The creation of direct connections between roads and pathways exponentially increases the number of route choices available when compared to what is possible with a traditional cul-de-sac design.
- By creating a dense network of roads, typically using an 80-100m grid (with variations for topography, waterways, orientation, nodes and destinations), travel distances are greatly reduced.
- Desirable elements of collector roads (such as Iona Road) are:
 - A carriageway wide enough to allow oncoming vehicles to pass without having to yield/slow;
 - Separate 2.0m wide (minimum 1.5m wide for a 50kmph zone) cycle lanes; and
 - In residential areas, footpaths on both sides of the road to be separated from traffic by a minimum 2m wide grassed / landscape berm.

2.3 Local Transport Strategies

This sub-section provides an overview of the local transport policies:

- 'Towards Better Cycling – The Hastings Cycling Strategy', HDC, 2001.
- 'Hastings Walking Strategy', HDC, 2004.

Towards Better Cycling – The Hastings Cycling Strategy

This document sets out a five year plan aimed at achieving its vision of making Hastings a safe, convenient and accessible district for cycling. The plan includes the proposed Hastings Cycle Network⁵, which identifies Middle Road and Gilpin Road as secondary cycle routes.

It is acknowledged that this document is out-of-date and therefore may not necessarily reflect the current views of HDC. The 2015 Hawkes Bay Regional Cycle Plan does not include any of the roads within the project area as part of the long term regional cycle network.

⁴ Rural roads are those which have posted speed limits greater than 70 km/hr

⁵ As at September 2008

Hastings Walking Strategy

The Hastings Walking Strategy was developed alongside the Cycling Strategy, with the same objectives of encouraging and promoting healthy and alternative travel. Relevant goals of the strategy include:

- Ensure new subdivisions provide recreational reserves and direct walking tracks that are well connected and visible.
- Subdivision roads to be constructed with minimum footpath widths of 1.5m.
- Ensure that all Council roading projects and road upgrades consider and provide for pedestrians, and that all new pedestrian facilities are designed and constructed to best practice and recognised standards.
- Ensure new subdivisions are planned in a manner that integrates walking paths that lead to destination points, particularly schools, shopping centres and recreation areas.

As per the Hastings Cycling Strategy, it is acknowledged that HDC may consider the Hastings Walking Strategy to be out of date. HDC have indicated to MWH that there are no current walking or cycling projects proposed for roads within the close vicinity of the project.

3 Existing Conditions

3.1 Overview

Land Use

Havelock North is a primarily residential suburb of Hastings, with only a relatively small industrial and commercial centre. As such, the majority of the approximate 13,000⁶ residents commute into either Hastings or Napier. Similar travel patterns would be expected for future residents of the Middle Road/Iona Road growth area.

Road Network

Iona Road and Middle Road are two lane (two-way) roads with posted speed limits of 100kph. Neither road provides footpaths along sections adjacent to the proposed development areas. During site visits a number of pedestrians were observed walking/jogging along the grass berms of each road. All intersections within the vicinity of the proposed subdivision operate with give-way controls. On-road cycle lanes are currently in place along Middle Road, between Palmerston Road and Porter Drive⁷.

Appendix C provides site visit photographs which highlight the existing road conditions.

Traffic Volumes

In order to gain an understanding of the historical traffic conditions and growth within the vicinity of the proposed subdivisions, historical traffic data has been sourced from the RAMM database. Table 3-1 provides a summary of the available combined two-direction peak hour and average daily traffic (ADT) counts.

Table 3-1: Historical Traffic Data

Road	Location	Year	Volume	
			Peak Hour ⁸	ADT
Middle Road	NE of Iona Road/Gilpin Road intersection.	2010	140	1,220
		2009	146	1,240
		2007	137	1,293
		2006	158	1,264
Middle Road	SW of Iona Road/Gilpin Road intersection.	2009	88	580
Iona Road	Between Middle Road and Lane Road.	2009	143	1,160
Gilpin Road	Between Middle Road and Te Aute Road.	2014	109	738
		2011	99	713
		2009	101	663

The RAMM data has identified that volumes along each of the roads that bound the development areas have been low and relatively consistent over the past 10 years. This reflects the stagnant nature of development within the local area during that time.

2016 Counts

MWH undertook a traffic count at the Iona Road/Middle Road/Gilpin Road intersection on the 28th January 2016 as a means of understanding the latest conditions and for informing the traffic assessments. The survey covered a total of 9 hours, encompassing the morning (06:00-09:00), middle of the day (10:00-13:00) and afternoon / evening (15:00-18:00) peak periods. Appendix D provides volume diagrams for the 2016 AM and PM peak periods.

⁶ 2013 census

⁷ <http://www.havelocknorthnz.com/wp-content/uploads/2010/05/Havelock-North-Map-and-Trails.pdf>

⁸ Peak hour consistently 16:00-17:00 for all roads

The traffic surveys correlate closely with the historical counts (identified from the RAMM data), with combined two-direction volumes in the order of 160 and 100 vehicles for Middle Road and Gilpin Road respectively.

Analysis Requirement

The Austroads Guide to Traffic Management⁹ sets out thresholds for intersection volumes below which capacity analysis is unnecessary. These thresholds are provided in Table 3-2 below alongside the corresponding volumes for the Iona Road/Middle Road/Gilpin Road intersection. Major and/or minor road volumes for an intersection which are higher than those outlined within the table correspond to a need for traffic analysis.

Table 3-2: Intersection Analysis Threshold

Approach	Peak Hour Volume (Two-Way)			Iona Road/Middle Road/Gilpin Road Intersection
	Threshold #1	Threshold #2	Threshold #3	
Two-Lane Major Road	400	500	650	164
Minor Road	250	200	100	102

*Middle Road (SW approach) = major road; Gilpin Road = minor road.

The table above identifies that given the low volume on both the minor and major approaches, analysis of the Iona Road/Middle Road/Gilpin Road intersection is not required based upon the existing (2016) volumes. It can therefore be inferred that the intersection is currently operating with an acceptable level of service (likely to be overall LOS A or B).

Mode Choice

A review of 2001, 2006 and 2013 census analysis has identified that within Havelock North around 91% of people used a private car to travel to work. The remaining proportion of employees either walked (5%) or cycled (4%).

3.2 Safety

Crash data for all roads within the project area has been obtained for the most recent five year period (2011-2015) using NZTA's Crash Analysis System (CAS). A summary of the accident data is presented within Table 3-3 below, whilst a diagram highlighting the location and type of each crash is provided as Figure 3-1 on the next page.

Table 3-3: Historical Crash Data

Severity	2011	2012	2013	2014	2015	Total
Fatal	0	0	0	0	0	0
Serious	0	0	0	0	0	0
Minor	1	0	0	0	3	4
Non-Injury	0	2	1	1	2	6
TOTAL	1	2	1	1	5	10

The data has identified that between 2011 and 2015 there were a total of 10 crashes, of which four resulted in minor injury. One of the minor injury crashes occurred at the Middle Road/Gilpin Road intersection and was due to a vehicle failing to give way to through traffic. The other three minor injury crashes occurred at the Te Aute Road/Gilpin Road intersection. The most common cause of accidents was due to error caused by a driver under the influence of alcohol (40%).

As identified by Figure 3-1 the most common crash site was at the Te Aute Road/Gilpin Road intersection, where four of the total of 10 crashes occurred. Furthermore, six out of the total 10 crashes occurred during the evening (dark conditions) which potential suggests a need for improved lighting; particularly once the subdivisions are developed.

⁹ Part 3: Traffic Studies and Analysis, Table 6.1

In accordance with NZTA's 'High-Risk Rural Roads Guide', as only one serious injury accident occurred over the five years, it is not appropriate to calculate the collective or personal risk for the area immediately surrounding the proposed development¹⁰.

Overall the risk at the Gilpin Road/Iona Road/Middle Road intersection is considered to be low as only one crash has occurred at this intersection in the last five years which wasn't as a result of alcohol intoxication of a driver.

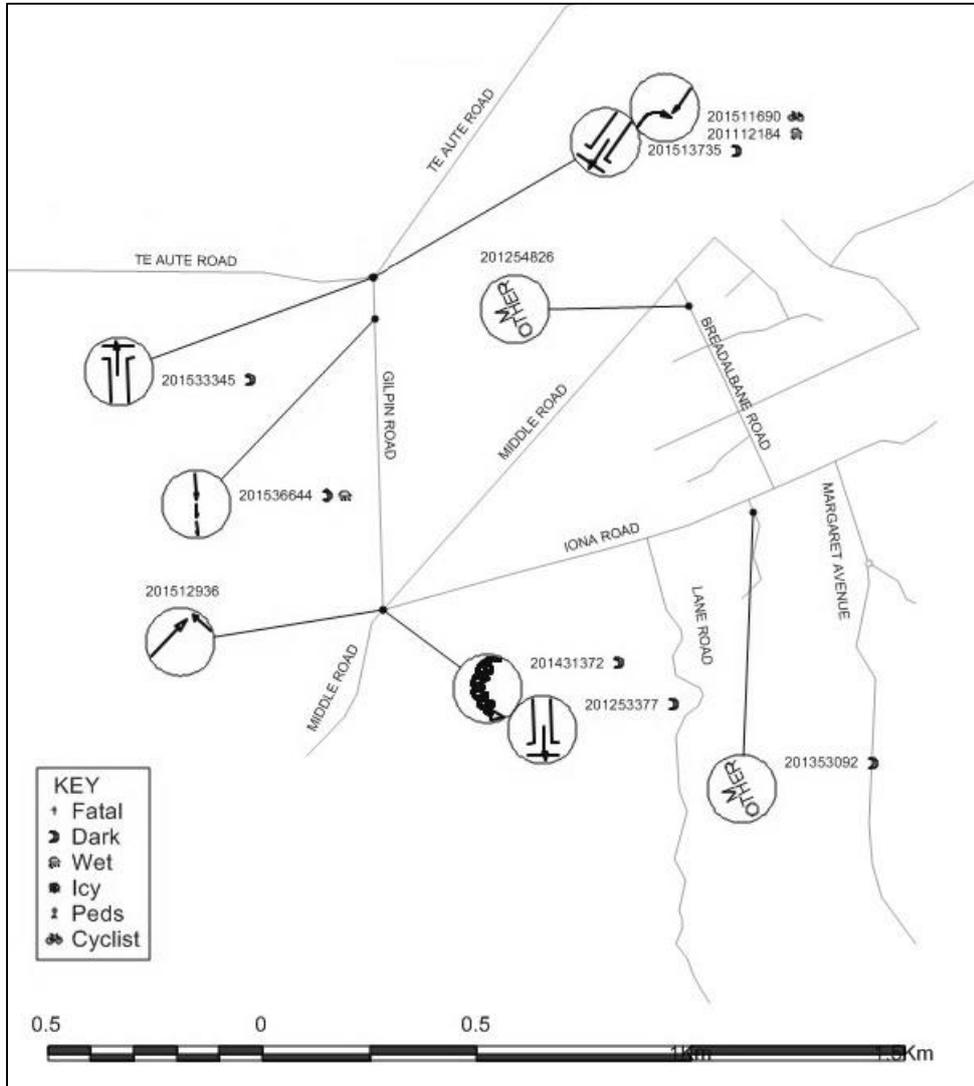


Figure 3-1: 2011-2015 Crash Locations

¹⁰ To be defined as a high-risk rural road there must be 3 or more high-severity crashes over a 5-year period or 5 or more high-severity crashes over a 10-year period.

4 Future Conditions

This section of the report provides an overview of the expected background traffic growth and development trip generation. Estimations have been undertaken for the five year (2021) and ten year (2026) horizons.

4.1 Traffic Growth

As referenced previously, the RAMM data has indicated that within the immediate surrounds of the project area, the volume of traffic has remained relatively consistent. However, a review of population data (from the NZ Census) has identified that usual residential population has risen by around 1.7% per annum since 2001. Therefore, for robustness of assessment, a 2.0% growth rate has been applied to the background traffic volumes¹¹. Where applicable, an uplift factor has been applied based upon the RAMM data as a means of representing peak traffic conditions.

HDC have confirmed that there are no other known proposed developments (residential or otherwise) within the vicinity of the proposed subdivisions.

4.2 Trip Generation

Trip Rates

The 'Transit New Zealand Planning Policy Manual (2007)' and 'NZTA Trips and Parking Related to Land Use Research Report (2011)' provide standard trip rates for residential dwellings. These guidelines identify rates of 10.1-10.4 daily trips per dwelling unit (1.2-1.4 for peak periods). However these rates may not be appropriate given that the standard rates are typically determined from surveys with in more urbanised areas (such as Auckland). These rates may therefore not be applicable for rural residential developments.

A more representative trip rate for the area was therefore established using historical count data for local roads¹² which provide only one access point with the external road network. Table 4-1 provides a summary of the traffic volumes, the number of dwellings¹³ and inferred trip generation rate for each road.

Table 4-1: Local Residential Trip Rate

Road	Dwellings	Volume ¹⁴		Trip Rate	
		Peak Hour	ADT	Peak	Daily
Margaret Avenue	187	188	1,563	1.0	8.4
Busby Hill	65	76	555	1.2	8.5
Kingsgate Avenue	74	62	532	0.8	7.2
Palmbrook Avenue	81	67	540	0.8	6.7
Average	-	-	-	1.0	7.7

As identified within Table 4-1, a peak hour rate of 1.0 vehicle trip per dwelling is currently observed. This rate has therefore been applied for the purpose of the traffic assessment. The inbound/outbound distribution of trips has been taken from the standard rates from the ITE Trip Generation Manual (9th Edition) for single family homes.

¹¹ The 2016 survey counts represent the baseline background volumes.

¹² Margaret Avenue, Busby Hill, Kingsgate Avenue and Palmbrook Avenue.

¹³ Determined from aerial photography.

¹⁴ Average volume for all available counts between 2006 and 2015. It has been assumed that the total number of dwellings has remained consistent during this period.

Development Rate

HDC have indicated that should the Middle Road/Iona Road growth area be utilised as the next greenfield development site in Havelock North, then the area is likely to be fully developed within four years (from the start of construction). This premise is based upon existing data for the Greenfield areas of Arataki, Northwood and Lyndhurst, which identifies an average development construction rate of 70 dwellings per year.

Trip Generation

The yields for infrastructure modelling were provided by HDC. A summary of the trip generation (based upon the maximum number of total dwellings less the existing number of dwellings) is summarised within Table 4-2.

Table 4-2: Trip Generation Estimates

Zone	New Dwellings	Trip Generation			
		AM Peak		PM Peak	
		Inbound	Outbound	Inbound	Outbound
Character Zone	128	31	92	77	45
Deferred Zone	108	26	78	65	38
Iona Hill	160	38	115	97	57
Remaining HPU DS Land	18	4	13	11	6
Total	414	99	298	250	147

The development trips as above have been assigned to various parts of the road network in accordance with the diagram provided within Appendix E.

4.3 Future Year Trips

A summary of the turning movement volumes for the Iona Road/Middle Road/Gilpin Road intersection for the existing (2016) and future year (2021 and 2026) scenarios is provided within Table 4-3 below. The volumes are inclusive of the application of background growth and development trips. The turning movement reference ID can be identified within Figure 4-1 on the next page.

Table 4-3: Iona Road/Middle Road/Gilpin Road intersection – Forecast Turning Volumes

Scenario	Peak Hour	Movement												Total
		A	B	C	D	E	F	G	H	I	J	K	L	
2016	AM	16	44	1	1	55	13	7	58	5	2	11	4	217
	PM	10	62	4	1	6	9	17	56	11	9	50	16	251
2021 (inc. development)	AM	28	54	39	113	80	25	12	66	5	3	19	8	452
	PM	17	71	99	57	17	14	28	67	12	9	72	26	489
2026 (inc. development)	AM	30	59	39	113	87	26	13	73	6	3	20	8	477
	PM	18	79	99	57	17	15	30	73	13	10	78	28	517

The analysis has identified that, inclusive of the development trip generation, the 2026 forecast volumes for Iona Road/Middle Road/Gilpin Road intersection still do not satisfy the minimum threshold for intersection assessment (as per Table 3-2)¹⁵. Therefore, from an operational perspective the existing intersection would be expected to operate to an acceptable level once the Middle Road/Iona Road growth area has been fully developed. One of the main reasons for this is because a large proportion of the trips from the new developments will be heading to/from Hastings and Havelock North and will not need to negotiate the intersection.

¹⁵ Maximum two-way volume for the major road = 354 (2026 PM scenario).

Notwithstanding this, the realignment of Iona Road or an upgrade of the intersection may still be desirable as a means of addressing perceived safety risks and/or for providing effective integration with the new internal road layouts.

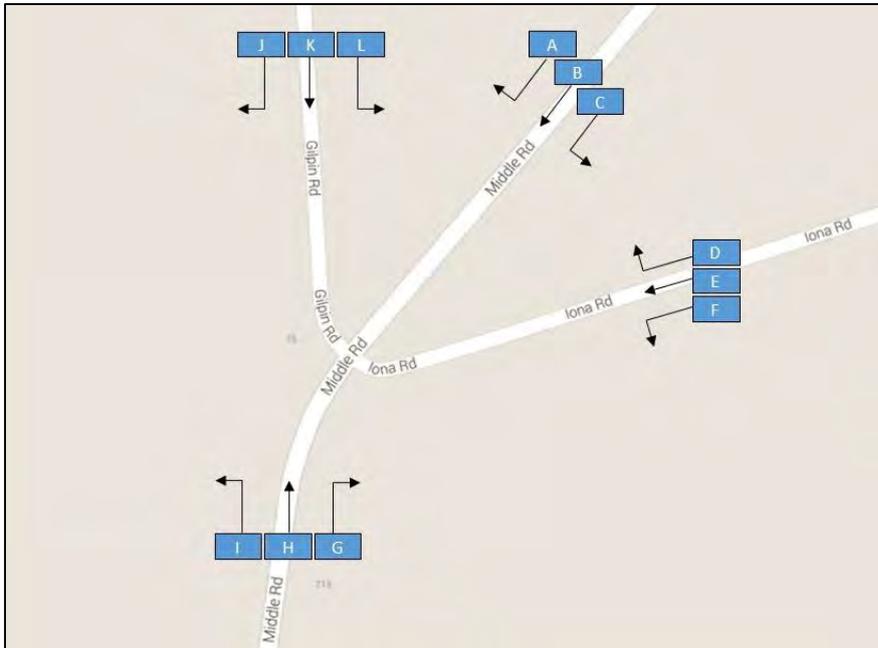


Figure 4-1: Iona Road/Middle Road/Gilpin Road - Turning Movement ID

Sensitivity Analysis

For robustness, an assessment of the Iona Road/Middle Road/Gilpin Road intersection has been undertaken based upon the application of the higher New Zealand standard trip rates – namely 1.4 peak hour trips per dwelling house. An operational assessment of the intersection has been undertaken using the SIDRA 6.1 analysis tool. Level of Service (LOS) has been used as a guide to assess the performance at both the overall intersection and worst movement levels. The definitions of LOS, as defined by the Highways Capacity Manual (2010), are provided within Appendix D.

The assessment has been undertaken for the scenario with the highest estimates for traffic volumes, namely '2026 inc. Development – PM peak'. Table 4-4 provides a summary of the forecast volumes for the aforementioned scenario based upon the standard¹⁶ and local¹⁷ trip rates.

Table 4-4: Iona Road/Middle Road/Gilpin Road intersection – Sensitivity Test Volumes

Scenario	Trip Rate	Movement												Total
		A	B	C	D	E	F	G	H	I	J	K	L	
2026 PM (inc. development)	Local	18	79	99	57	17	15	30	73	13	10	78	28	517
	NZ Standard	20	80	142	82	22	18	34	75	13	10	86	32	614

The SIDRA analysis identifies that, even with the application of the higher trip rates, that the Iona Road/Middle Road/Gilpin Road intersection would be expected to operate with LOS A (average delay = 4.6 seconds) during the 2026 peak hour (including development trips).

Note the impact of the development upon traffic along Gilpin Road is likely to be minimal.

¹⁶ 1.4 peak hour trips per dwelling.

¹⁷ 1.0 peak hour trips per dwelling.

5 External Road Network Optioneering

This section of the report provides an assessment of five alternative road network options, covering Gilpin Road, Middle Road and Iona Road. The assessment (summarised within Table 5-1) has considered the implications in terms of road safety, accessibility and constructability/cost.

Figure 5-1 diagrammatically identifies the five alternative options under consideration, noting that Options 1 to 4 were developed at the project inception with HDC. The potential impacts of each option have been colour coded to identify whether they are likely to have a positive (green), neutral (amber) or negative (red) effect when compared with the existing road network.

Given the low level of forecast future year traffic, negligible levels of queuing and delay across the local road network would be expected for each option.

Table 5-1: Transport Options Assessment

Opt	Safety	Accessibility	Constructability / Cost
1	Roundabout acts to slow vehicles upon approach to the intersection. A roundabout will also reduce the number of conflict points for vehicles approaching from Gilpin Road and Iona Road.	No change from the existing situation.	Additional land take may be required. Considering the low volume to traffic, the cost of construction may outweigh the safety benefits. Slight realignment of approaches may be required.
			Retaining a triangular shape may be considered as a less efficient use of space when developing the residential area.
2	Reduced number of conflict points at the Gilpin Road/Middle Road/Iona Road intersection.	Reduced accessibility as vehicles travelling between Gilpin Road and Iona Road would have to negotiate two intersections. Vehicles travelling from Gilpin Road to the Iona Hills will have to negotiate three intersections.	Additional cost of realigning Iona Road (although likely to be relatively minimal).
	Creation of an additional intersection with Middle Road creates another area for vehicle conflict.		Aids the more efficient use of land for the construction of residential dwellings. Integrates effectively with internal roads that follow gullies.
3	Reduced number of conflicts at the Gilpin Road/Middle Road/Iona Road intersection.	Enhances accessibility through both areas and between the Iona Hills and Middle Road.	May be difficult to align connections with an internal road network that follows gullies.
	Creation of an additional intersection with Middle Road. However, regardless of the external network configuration, this would be required to provide access to the Deferred Zone.	Reduced accessibility as vehicles travelling between Gilpin Road and Iona Road would have to negotiate two intersections. Iona Road will act as a minor approach. However, this will effectively see Iona Road (collector road) give-way to a local road and create discontinuity for the road hierarchy.	Removal of a section of Iona Road. New link between the areas could be considered as part of the internal road network. Similar cost to Option 2.

Opt	Safety	Accessibility	Constructability / Cost
4	Roundabout acts to slow all drivers down upon approach and reduce the potential conflict points for vehicles approaching from Gilpin Road and Iona Road.	Enhances accessibility through both areas and between the Iona Hills and Middle Road and through to Te Aute Road.	Retaining triangular shapes may be considered as a less efficient use of space when developing the residential area
			Additional land take may be required to construct the roundabout and realign Gilpin Road.
			May provide stormwater benefits for primary and secondary conveyance. This will depend on the road design and levels; especially at the roundabout for the secondary flow to be effective.
5	Reduced number of conflict points at the Gilpin Road/Middle Road/Iona Road intersection.	Vehicle travelling between the Iona Hills and Middle Road would be required to divert around the Deferred Zone and negotiate both the Iona Road/Middle Road and Gilpin Road/Middle Road intersections.	Retaining triangular shapes may be considered as a less efficient use of space when developing the residential area
	Creation of an additional intersection with Middle Road creates another area for vehicle conflict.	A similar diversion is required for vehicle travelling between Iona Road and Gilpin Road.	Integrates effectively with internal roads that follow gullies. Additional land take may be required to realign Gilpin Road.

Recommendations

One of the key considerations is the ease for which the internal road layout can be aligned with an external network. From an engineering perspective, providing roads along gullies (low spots) lends support to associated drainage works and introducing secondary flow paths. For this reason, Option 3 has been excluded from consideration at this stage.

Option 5 is not desirable primarily from an accessibility stand point, as vehicles travelling from the Iona Hills area heading towards Middle Road or Gilpin Road will have to negotiate an additional intersection and take a more convoluted route (when compared to other options).

With reference to the above, we recommend that the following options should be further considered and evaluated as part of the development of the subdivisions:

- Retention of the existing network;
- Option 1;
- Option 2; and
- Option 4.

We consider that one of the distinct advantages of Options 2 and 4 is that the realignment of Iona Road helps to create a gateway entrance to the area which could incorporate some additional recreational green space.


Existing

Option 1

Option 2

Option 3

Option 4

Option 5
Figure 5-1: External Road Network Options

Design

Minimum road design standards are outlined within the HDC Engineering Code of Practice (provided within Appendix B alongside potential cross-sections). The standards outline that for a rural local road serving fewer than 150 dwellings a minimum road reserve of 15m is required (without provision for a cycle lane). For a rural collector road, such as Middle Road and Iona Road, the standard minimum road reserve width is 20m (including cycle lanes). In practice, the preferred cross-section for roads across the development may be a hybrid of the cross sections and road widths outlined within the HDC Engineering Code of Practice.

6 Subdivision Road Network

This section of the report outlines the process undertaken to identify indicative internal road layouts for the Middle Road/Iona Road growth area.

6.1 Opportunities

The indicative internal road layouts have focussed on utilising existing topography with the key internal collector roads following valleys and low-lying land (excluding major watercourses).

Beneficially, the majority of these low-lying areas run north to south, which ties in with HDC's Best Practise Design Guide. Internal connectivity is not seen as a significant issue in the Deferred Zone or Character Zone as the topography of the land is reasonably gentle. Development of an internal road layout for the Iona Hills area is however more challenging, but achievable with re-contouring.

There are no major barriers to internal connectivity for walking (besides some water features), although roads and cycle routes are slightly more restrained by the topography of the Iona Hills area. However, sympathetic re-contouring through earthworks would likely solve most issues relating to vehicular internal connectivity¹⁸.

6.2 Constraints

Deferred Zone

The topography and shape of the proposed triangle shaped area between Iona and Middle Road is considered to have the following constraints to development:

- The narrow shape of the triangle at the junction of Middle Road and Iona Road is likely to be difficult to develop for access, noise and shape reasons.
- It has been assumed that the mound, central within the block, will be retained by way of reserve which will further reduce the land area.
- The area is currently subject to overland flows from the catchment above.

Aside from the mound, much of the area has gentle relief and so has the potential to be intensively developed. However the constraints identified are likely to reduce the yield from the block.

Character Zone

The area slopes steadily to the north and is similar in relief to neighbouring developed residential land. There are no obvious or significant constraints for servicing. Typically back lots in this area are accessed via a right of way rather than an extensive internal road network. This has a tendency to reduce the intensity of development and is reflected in the average lot size of 700m².

Iona Hill

The southern end of the Iona Hills area (Iona III) is characterized by a series of small gullies and ridge features, with steeper slopes and sharper relief than for the northern end of the area. Key constraints impacting on the scope for significant further residential development include:

- The steeper relief and slopes restricts the availability of suitable building platforms.
- Many existing lots have long, narrow access ways with some shared rights of way.
- Existing amenity ponds and planted areas have been constructed within the gullies.

¹⁸ It is noted that the Isthmus report also has a flexible approach to the 'side' roads.

6.3 Indicative Road Layouts

Internal Layout

Three indicative road layouts (presented as Figure 6-1 to Figure 6-3) have been developed in line with the recommendations of the external connections optioneering assessment – namely forward consideration of the Existing, Option 1, Option 2 and Option 4 road networks. Note that Figure 6-1 integrates with both the “Existing” and “Option 1” external network options.

The options presented within this section are intended as a starting point for discussion only.

Further details regarding the decision making process for developing the road networks are provided within Table 6-1. Details listed are applicable for all potential internal road layouts.

Table 6-1: Internal Road Layout Details

Link	Details
C6 – D1	<ul style="list-style-type: none"> The alignment predominantly follows a natural gully. Alignment not ideal for creating regular rectangular shaped lots unless neighbouring land to the east is developed in conjunction. Multiple options to connect internally to other roads.
C7 – D2	<ul style="list-style-type: none"> Follows a natural gully to intersection and then another gully into a high area. Would require some re-contouring to achieve suitable grades.
C7 – D3	<ul style="list-style-type: none"> Follows a natural low gully to the intersection and then up a small saddle before crossing a creek and up a second gully before ending in a high area. Would require some earthworks to achieve suitable gradient to the high area (Iona III).
B1 – A3	<ul style="list-style-type: none"> To become, in effect, a continuation of Reynolds Road. No grade issues. Position of the A3 junction can be moved without issue.
B1 – A1	<ul style="list-style-type: none"> Road follows a small gully to Middle Road. To avoid following the gully, the watercourse could probably be re-directed or piped to Middle Road and the land re-contoured.
B1 – A2	<ul style="list-style-type: none"> The A2 junction could be positioned in a number of locations (dependent on existing driveways, and landowner’s discretion). Indeed, the A2 connection may be considered to be non-essential.
B1 – C5	<ul style="list-style-type: none"> Position of C5 highly dependent upon the existing building and driveways.

It should be noted that the final internal road layout for the Deferred and Character Zones will in part be at the discretion of the landowner, as ultimately they will need to decide how the internal road network integrates with existing trees, dwellings and other structures. The development of the Iona Hills area is partly dependent upon whether the landowner carries out the earthworks that have already been consented.

External Connections

Physically, there appear to be no major obstacles (such as grade/visibility) in regard to connection between the Deferred and Character zones and the external road network. The exact locations of the connections will be a function of the internal road layout and traffic design requirements.

In line with HDC’s ‘Best Practice Design Guide’ four potential external connections have been identified for the Iona Hills area with Lane Road and Endsleigh Road. Table 6-2 provides further details in regard to the decision making process for the external connections.

Table 6-2: External Road Connection Details

Connection	Details
D1	<p>The basis for D1 is to connect the internal road to an existing right-of-way (ROW) which in turn connects onto Lane Road. From a physical perspective, it is likely that the existing ROW would need to be widened and re-graded to produce a gentler gradient that would be more suitable for a local connector road.</p> <p>From a legal perspective some, or all, of the following would be required in order to introduce this connection:</p> <ul style="list-style-type: none"> • Landowner's agreement (including ROW users); • Council 'buy-out' of the land; • 'Land acquisition' utilising the Public Works Act or Local Government Act.
D2	<p>The D2 connection onto Lane Road already exists and is on land which is partly owned by the Lowe family. Physically there would appear to be few obstacles in constructing this connection besides some re-contouring. However, from a legal perspective, some or all of the constraints listed for D1 (see above) would apply.</p>
D3	<p>D3 is similar to D1 in terms of concept and the legal perspective. Physically, it is likely that the existing ROW would have to be widened and re-graded to produce a gentler gradient suitable for a local connector.</p>
D4	<p>Physically, D4 would likely require either a bridge or culvert and an embankment. Legally, there would be only one landowner to deal with.</p>

From a connectivity point of view the introductions of the D2, D3 and D4 external connections would be desirable for the following reasons:

- They act as natural endpoints (D1 could still be connected internally); and
- They create direct connections to other roads providing additional route choices, reduced impact at the major intersection with Iona Road and reduction in the need for cul-de-sacs.

In terms of physical access, D2 would appear to be the easiest to construct. It is likely the existing carriageways for D1 and D3 would have to be widened and re-graded. D4 would likely require a structure or culvert embankment to span the existing gully. In terms of legalities, the D4 connection would have the fewest number of interested parties, followed by D2, then D1 and D3.

It should also be noted that Endsleigh Road, Lane Road and Margaret Avenue adjacent to the study area are all 'dead-ends'. The landowners plan also appears to be developing 'dead-end' spine roads. This is not consistent with the planning objectives and guidelines.

The provision of external connections such as D1 and D2 enhances the accessibility of the area, not only for vehicles, but for pedestrians and cyclists. This would be particularly beneficial given the presence of schools (Iona College and Woodford House Girls High School) to the east of the proposed development area. Indeed some external linkages may be provided for pedestrians and cyclists only.

Comparison with the Landowners Vision

With reference to the landowners vision for the area (provided within Appendix G), the indicative internal road layouts identified by MWH present the following similarities and differences:

Similarities

- Position and extension on Reynolds Road;
- Position of the spine Road through the Iona Hills area; and
- Layout largely dictated by topography of the area.

Differences

- External connections.

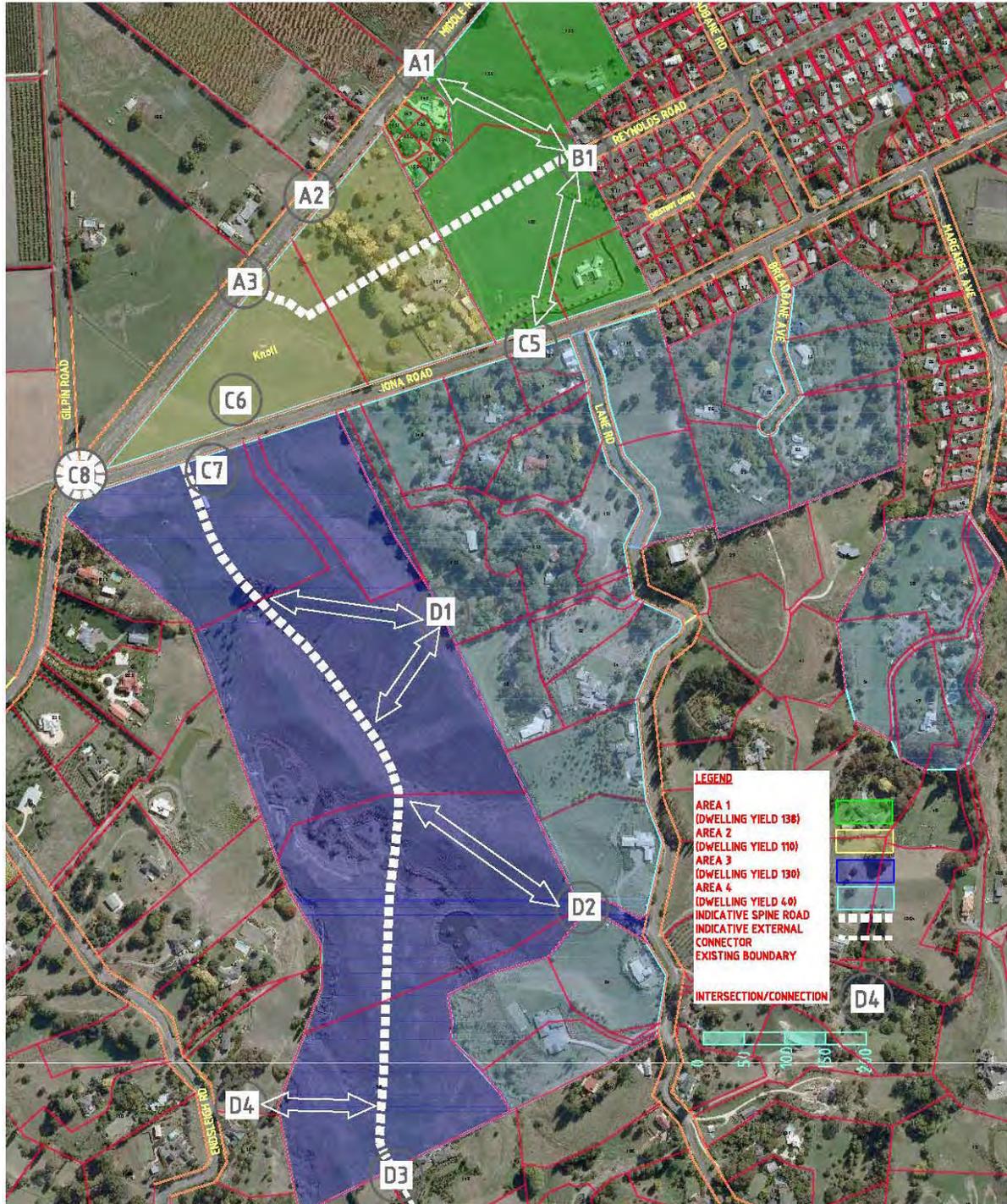


Figure 6-1: Existing/Option 1 - Indicative Road Network No.1

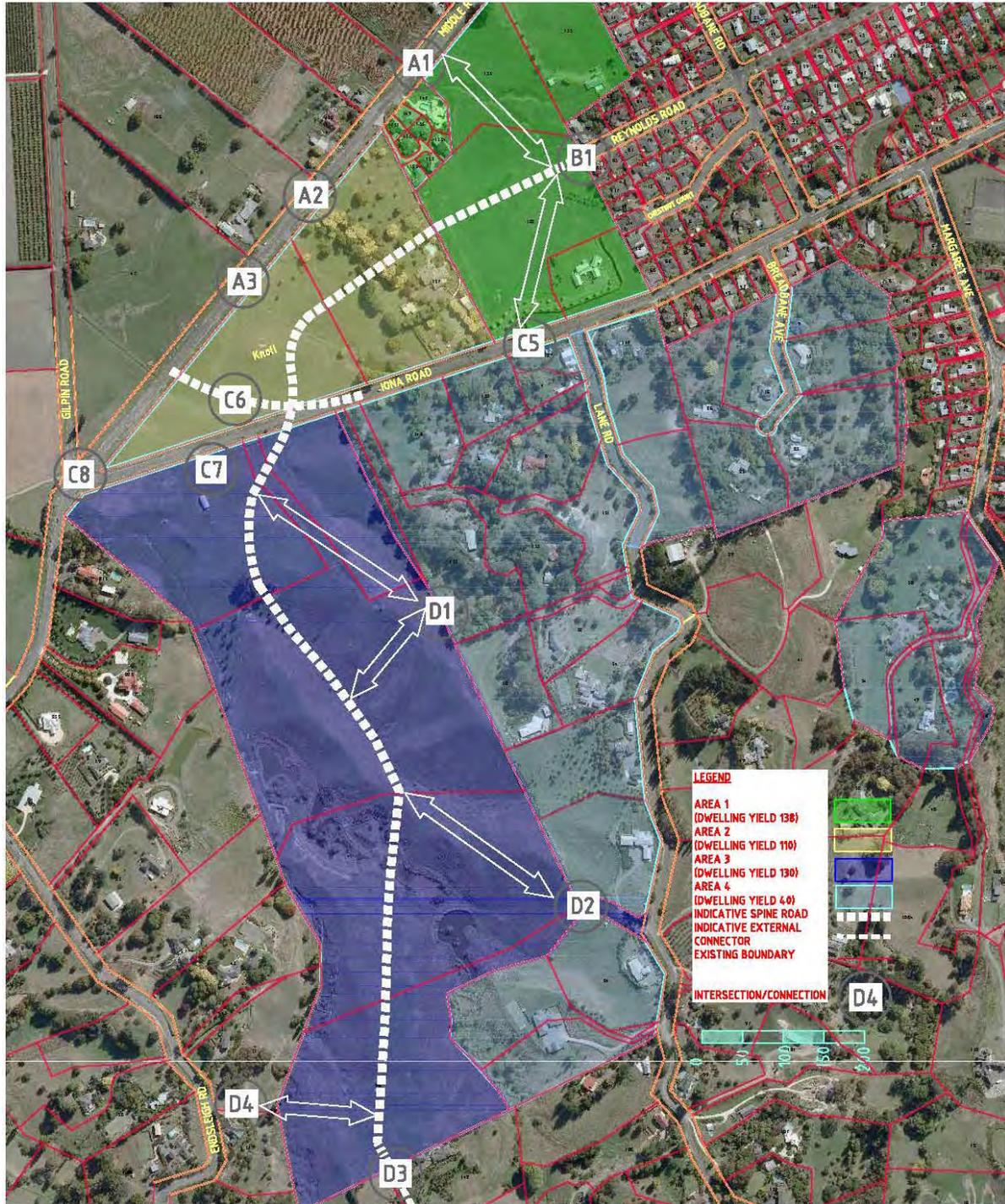


Figure 6-2: Option 2 - Indicative Road Network

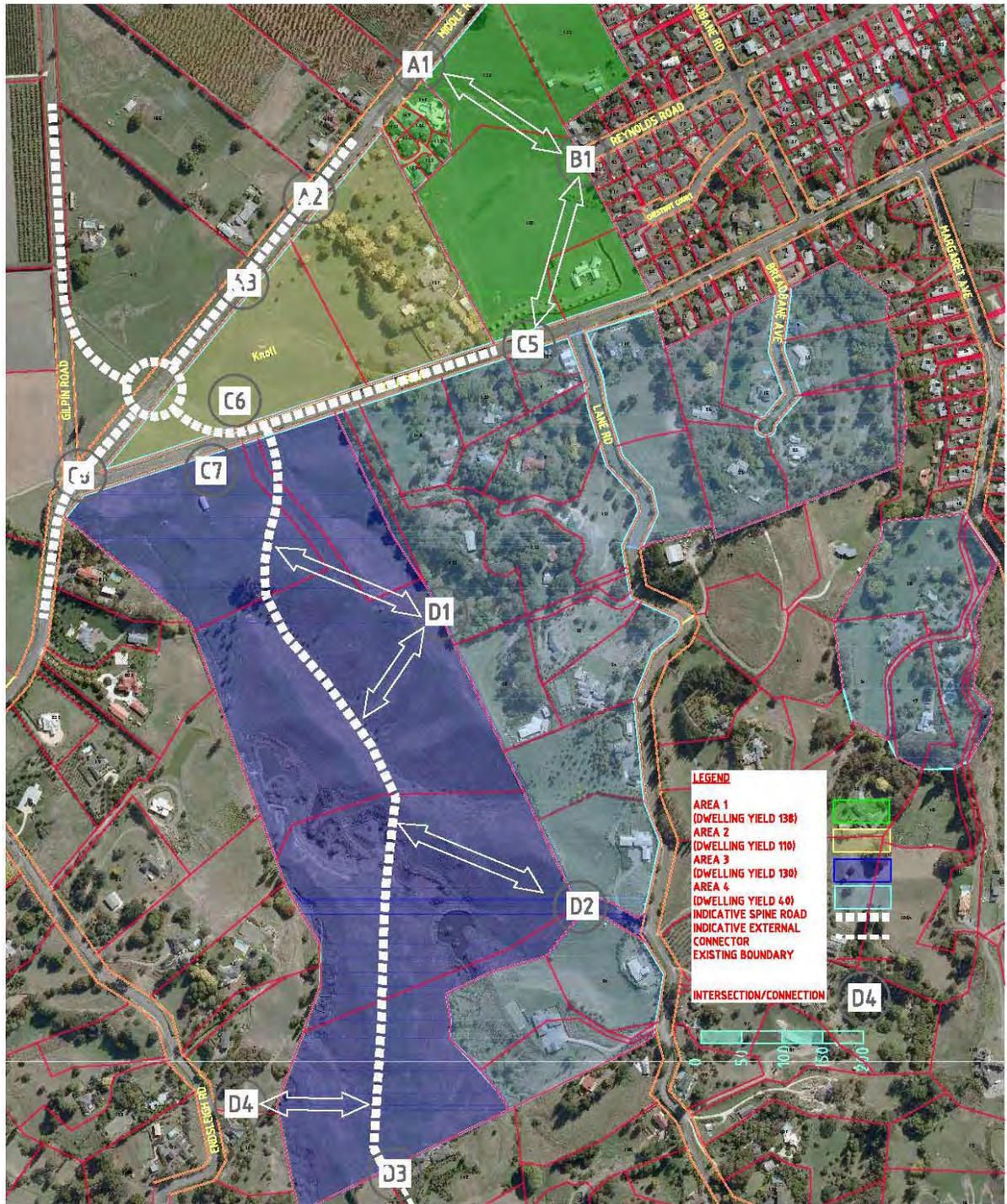


Figure 6-3: Option 4 - Indicative Road Network

7 Summary

This report provides an overview of the likely traffic impact of the proposed Middle Road/Iona Road growth area and outlines the process undertaken for developing initial road network options which could facilitate the introduction of the development.

Given the rural setting on the outskirts of Havelock North, the local road network carries only a relatively low volume of traffic during peak morning and afternoon periods. Although the introduction of the proposed residential development will bring additional trips, the impact in terms of traffic operation at a mid-block and intersection level is expected to be minimal. The design of the road network therefore does not need to be driven by any need to provide additional intersection capacity.

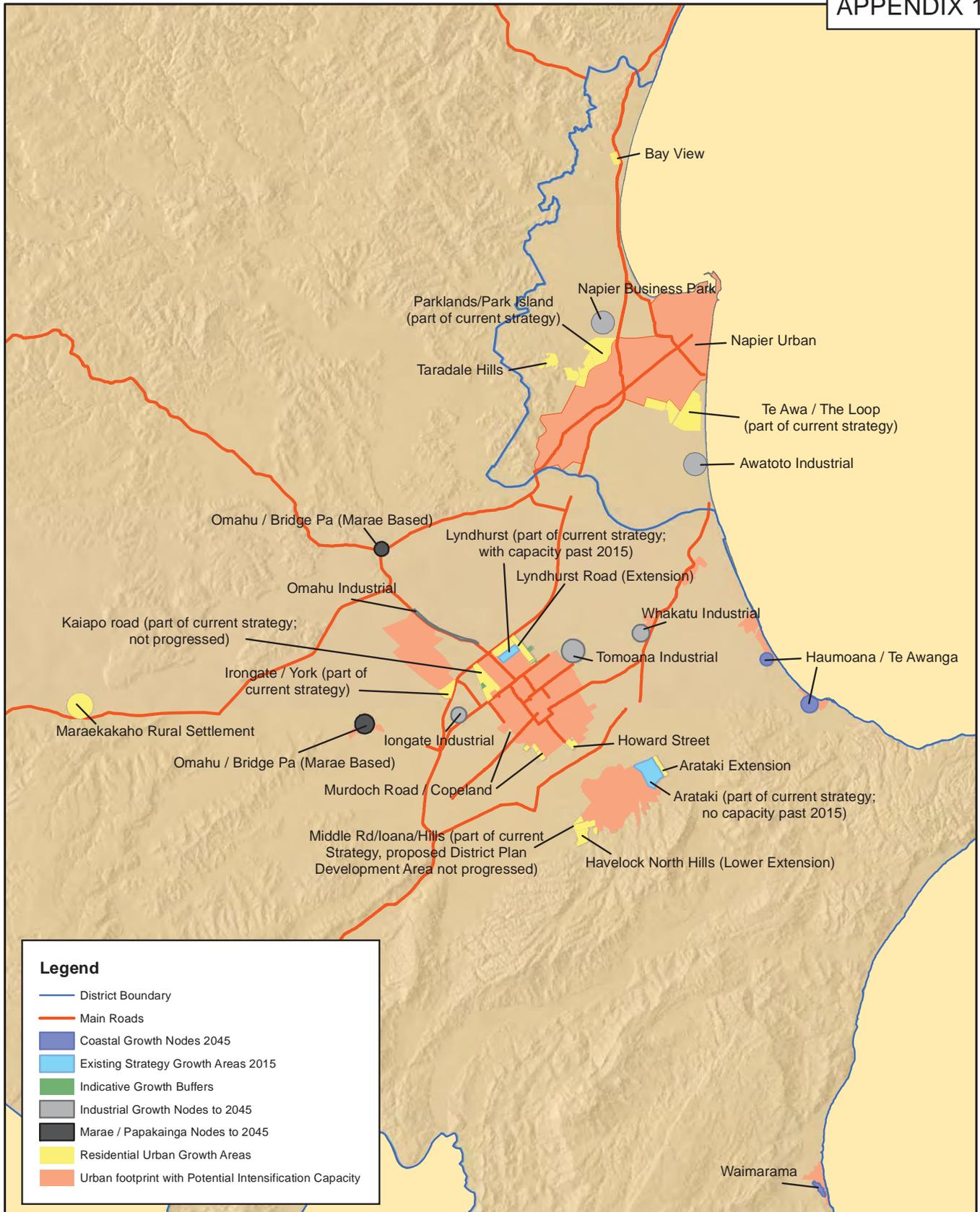
In terms of the external network, the following options are considered to be the most suitable:

- **Existing:** Retention of the existing road network.
- **Option 1:** Introduction of a roundabout at the Middle Road/Iona Road/Gilpin Road intersection.
- **Option 2:** Realignment of Iona Road to create a T-intersection with Middle Road.
- **Option 4:** Realignment of Iona Road and Gilpin Road plus the introduction of a roundabout at the Middle Road/Iona Road/Gilpin Road intersection.

Three indicative road layouts have been developed in line with the recommendations of the external connections optioneering assessment and have been focussed upon the utilisation of existing topography, with the key internal collector roads following valleys and low-lying land (excluding major watercourses).

The options presented within this report are intended as a starting point for discussion with the key project stakeholders including HDC and the landowners. The options should be developed further during the next stage of the design process, with consideration given to factors such as amenity and visual impact.

Appendix A HDC District Planning Maps



Legend

- District Boundary
- Main Roads
- Coastal Growth Nodes 2045
- Existing Strategy Growth Areas 2015
- Indicative Growth Buffers
- Industrial Growth Nodes to 2045
- Marae / Papakainga Nodes to 2045
- Residential Urban Growth Areas
- Urban footprint with Potential Intensification Capacity

Heretaunga Plains Urban Development Strategy (HPUDS) Figure 1: Identified Growth Areas



Version: As Adopted Date: 19 Sept 2013

Scale 1:219,000

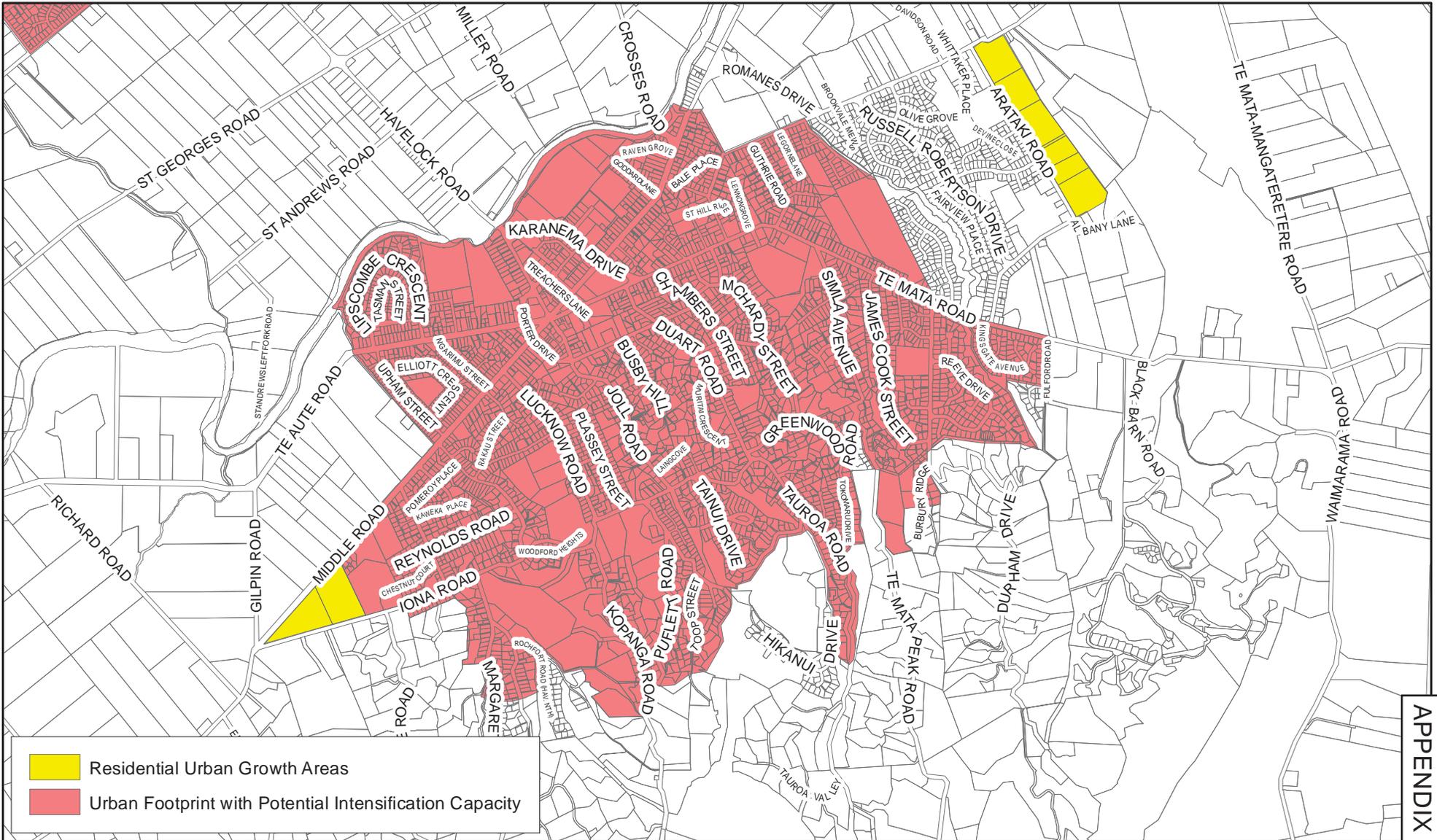
Projection: NZTM
Datum: D_NZGD_2000

Date PDF: Monday, 9 September 2013

DATA SOURCE: Cadastral information derived from the Land Information New Zealand's Core Record System (CRS).
CROWN COPYRIGHT RESERVED

COPYRIGHT: Copyright in this drawing is owned by the Hastings District Council. Any unauthorised copying or adaptation of the whole or a substantial part of the work in two or three dimensions is an infringement of copyright.

DISCLAIMER: The Hastings District Council cannot guarantee that the data obtained from third party companies and shown on this map is 100% accurate.



HASTINGS
DISTRICT COUNCIL

Map Produced using ArcMap

Areas that may meet Greenfield Needs within the Life of the Plan
Figure 2: Havelock North

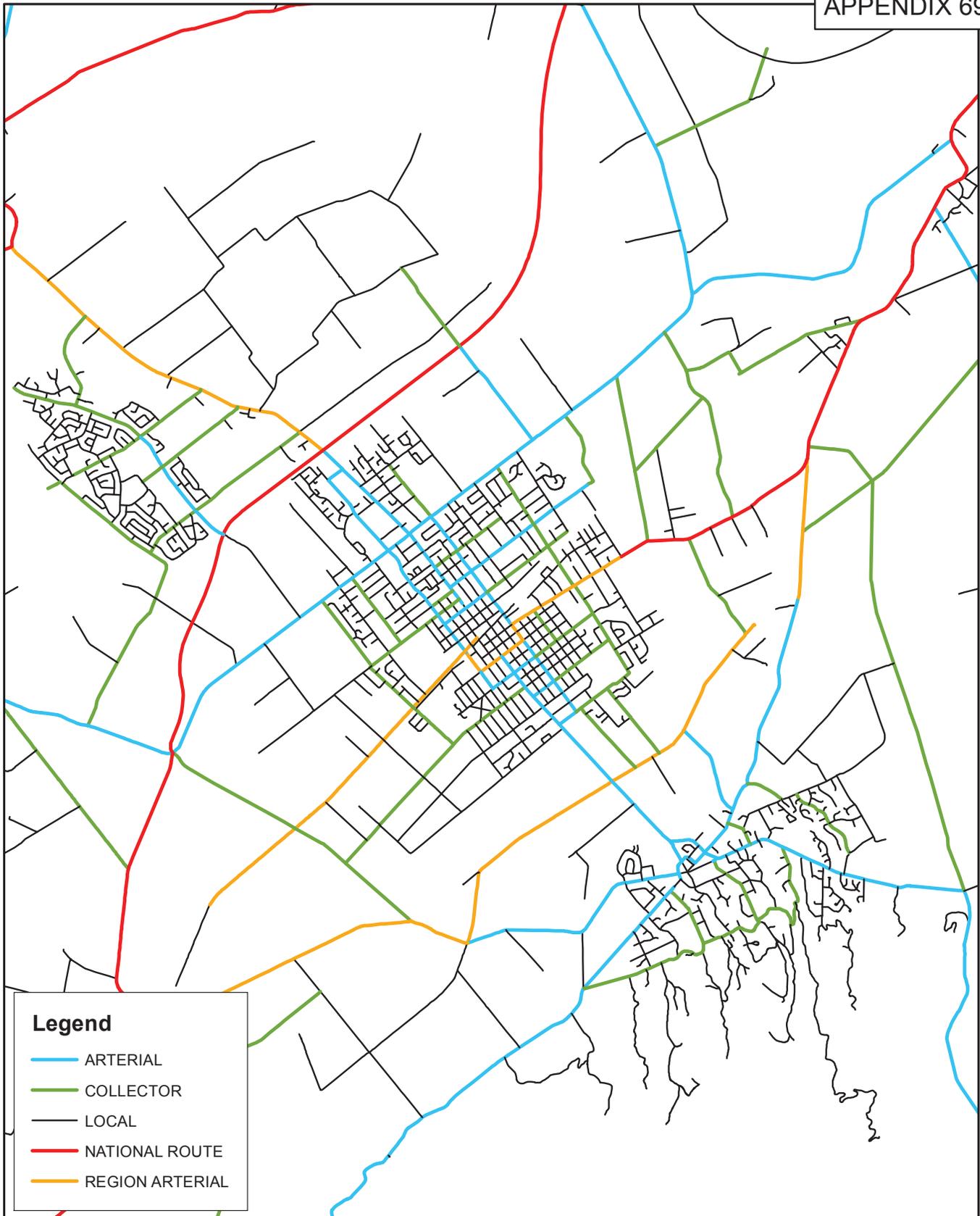
Version: As Adopted Date: 19 Sept 2013

Projection: NZTM Datum: D_NZGD_2000 Scale 1:25,000 Date PDF: Monday, 9 September 2013

DATA SOURCE: Cadastral information derived from the Land Information New Zealand's Core Record System (CRS). CROWN COPYRIGHT RESERVED

COPYRIGHT: Copyright in this drawing is owned by the Hastings District Council. Any unauthorised copying or adaptation of the whole or a substantial part of the work in two or three dimensions is an infringement of copyright.

DISCLAIMER: The Hastings District Council cannot guarantee that the data obtained from third party companies and shown on this map is 100% accurate.



Legend

- ARTERIAL
- COLLECTOR
- LOCAL
- NATIONAL ROUTE
- REGION ARTERIAL

Hastings District Roding Hierarchy Figure 2: Urban Areas



HASTINGS
DISTRICT COUNCIL

Map Produced using ArcMap

Version: As Adopted Date: 19 Sept 2013

Scale 1:70,000

Projection: NZTM
Datum: D_NZGD_2000

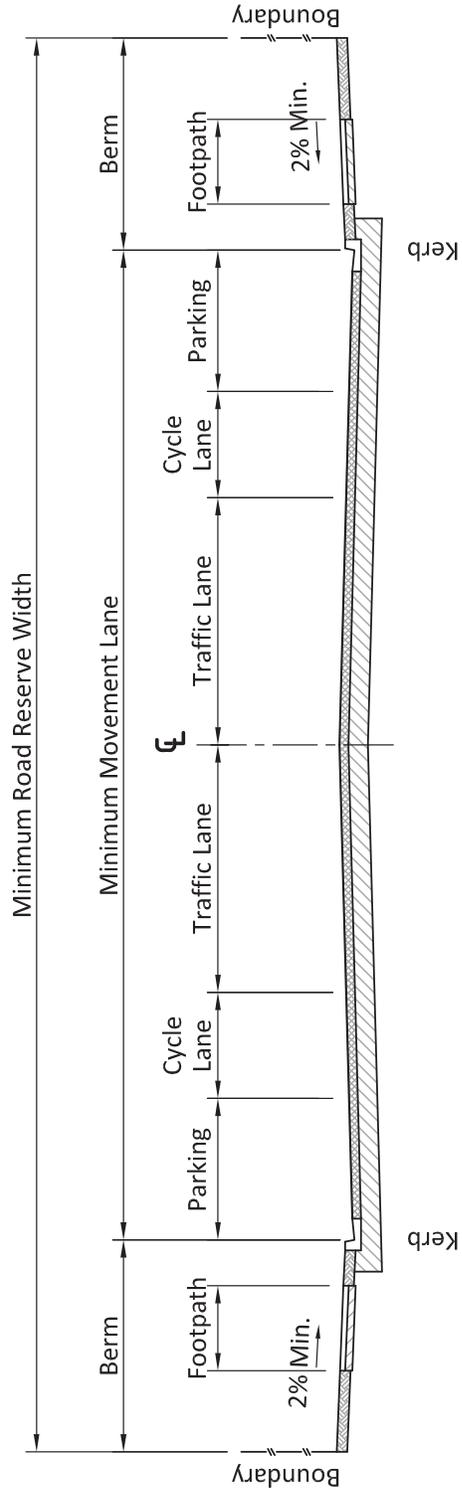
Date PDF: Tuesday, 10 September 2013

DATA SOURCE: Cadastral information derived from the Land Information New Zealand's Core Record System (CRS).
CROWN COPYRIGHT RESERVED

COPYRIGHT: Copyright in this drawing is owned by the Hastings District Council. Any unauthorised copying or adaptation of the whole or a substantial part of the work in two or three dimensions is an infringement of copyright.

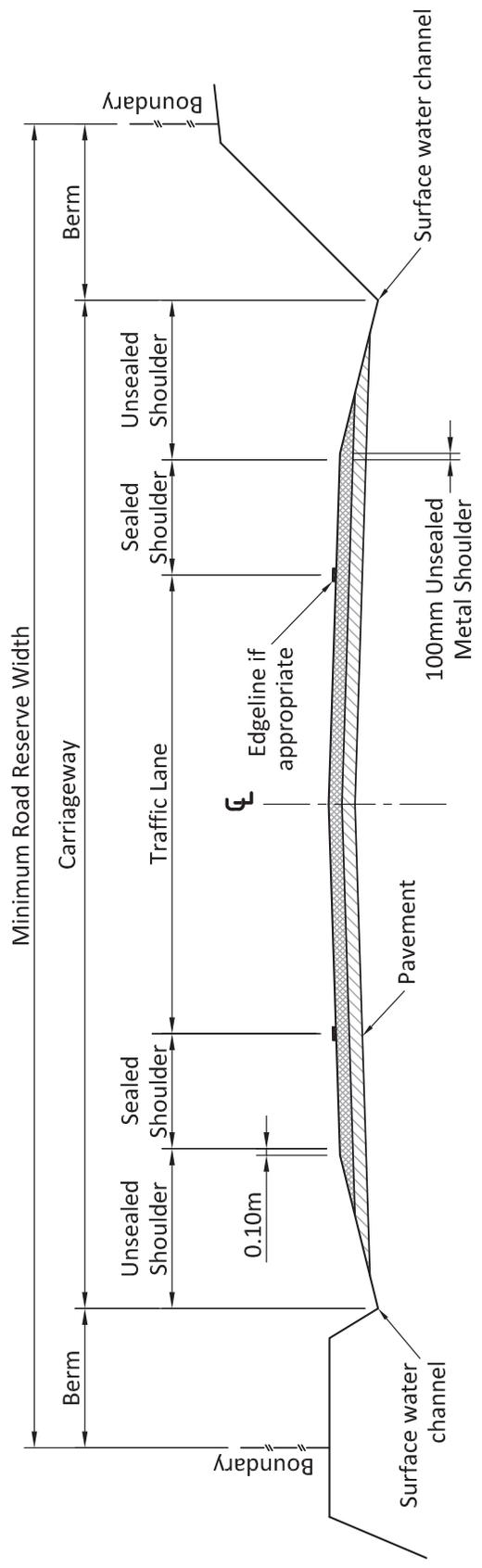
DISCLAIMER: The Hastings District Council cannot guarantee that the data obtained from third party companies and shown on this map is 100% accurate.

Appendix B HDC Road Design Standards



Refer To Table C4 For Dimensions

 <p>Copyright in this drawing is owned by the Hastings District Council.</p> <p>Any unauthorised copying or adaptation of the whole or substantial part of the work in two or three dimensions is an infringement of copyright.</p>	<p>ROAD CONTROLLING AUTHORITY</p>		Scale	Drawing No.
	<p>SEALED URBAN ROAD TYPICAL CROSS SECTION</p>		N.T.S	C 1
			Issue	July 2011
			Trim Reference	Manuals\CoP



Refer To Table C4 For Dimensions

 <p>Copyright in this drawing is owned by the Hastings District Council. Any unauthorised copying or adaptation of the whole or substantial part of the work in two or three dimensions is an infringement of copyright.</p>	ROAD CONTROLLING AUTHORITY		Scale N.T.S	Drawing No. C 2
	SEALED RURAL ROAD TYPICAL CROSS SECTION		Issue July 2011	Trim Reference Manuals\CoP

Table C4: Minimum Road Design Standards – Urban and Rural Roads

Place Context		Typical Classification		Design Environment			Link Content				
Area	Land Use	Hierarchy	Traffic Volume (Max vpd)	Locality Served	Target operating speed	Minimum Road Reserve Width (m)	Max Grade	Pedestrians (See Note A)	Passing, Parking, Loading & Shoulder	Cyclists (See Note A)	Minimum movement lane (excluding shoulder) (See Note E)
Urban	Live & Play (Residential & Home Occupation)	Lane	100vpd	1-10 du (Public) or 1-6 du (Private)	10	4.5	20%	Shared (in movement lane)	Allow for passing every 50m,	Shared (in movement lane)	2.75
		Lane	200vpd	Side or rear service access, up to 100m in length, (1 - 20 lots)	10	6	12.5%	Shared (in movement lane)	shared parking in the movement lane	Shared (in movement lane)	2 x 2.75
		Lane	200vpd	1-20 du	20	12	16%	1.5m one side where more than 100m in length	shared parking in the movement lane	Shared (in movement lane)	2 x 2.75
		Local	2000vpd	1 - 200 du	40	15	12.5%	1.5m one side or 1.5m each side where more than 20 du or more than 100m in length	shared parking in the movement lane up to 100 du. Separate parking required over 100m in length	Shared (in movement lane)	2 x 2.75
		Collector /Arterial	8000vpd	All other integrated activities in this land use not specified in this table	40	20	10%	1.5m each side	Parking, Public Transport, Turning	1.5m Network in accordance with cycle network strategy	2 x 3.0
	Shop and Trade (Commercial & Industrial)	Lane	200vpd	Side or rear service access, (1 - 20 lots)	10	6	12.5%	Shared (in movement lane)	loading bays	Shared (in movement lane)	2.75
		Lane	200vpd	1 to 20 lots	10	15	10%	1.5m one side or 1.5m each side	parking	Shared (in movement lane)	2 x 2.5
		Local	2000vpd	1-200 lots	30	20	10%	3m each side	parking + loading bays.	Shared (in movement lane)	2 x 2.75

Place Context		Typical Classification		Design Environment			Link Content				
Area	Land Use	Hierarchy	Traffic Volume (Max vpd)	Locality Served	Target operating speed	Minimum Road Reserve Width (m)	Max Grade	Pedestrians (See Note A)	Passing, Parking, Loading & Shoulder	Cyclists (See Note A)	Minimum movement lane (excluding shoulder) (See Note E)
Urban continued	Work and Learn	Lane	200vpd	Side or rear service access, (1 - 20 lots)	10	6	12.5%	Shared (n movement lane)	loading bays	Shared in movement lane)	2 x 2.75
		Lane	200vpd	1 to 20 Lots	10	15	10%	1.5m one side or 1.5m each side where more than 100m in length	parking	Shared in movement lane)	2 x 2.75
		Local	2000vpd	1-200 lots	30	20	10%	1.5m each side	loading bays.	Shared in movement lane)	2 x 2.75
		Local	2000vpd	1 -200 lots	30	20	10%	1.5m each side	parking	Shared in movement lane)	2 x 2.75
Centre	Mixed Use	Collector/Arterial	8000vpd	Neighbourhood Centre, 200 - 800 lots	50	20	10%	2.0m each side	Parking, Public Transport, Turning	1.5m Network in accordance with cycle network strategy	2 x 3.5
		Lane	200vpd	Side or rear service access, (1 - 20 lots)	10	6	10%	Shared (n movement lane)	Loading bays (shared in movement lane)	Shared in movement lane)	5
		Lane	200vpd	1 to 20 Lots	20	15	10%	2 x 2.5	Parking	Shared in movement lane)	2 x 2.5
		Local	2000vpd	1-200 lots	30	20	10%	3m each side	Parking	Shared in movement lane)	2 x 2.75
		Collector/Arterial	8000vpd	Urban Street, 200 - 800 lots	40	20	10%	3.0-3.5m each side	parking	1.5m Network in accordance with cycle network strategy	2 x 3.0

Table C4: Minimum Road Design Standards – Urban and Rural Roads Continued.

Place Context		Typical Classification		Design Environment			Link Content				
Area	Land Use	Hierarchy	Traffic Volume (Max vpd)	Locality Served	Target operating speed	Minimum Road Reserve Width (m)	Max Grade	Pedestrians (See Note A)	Passing, Parking, Loading & Shoulder	Cyclists (See Note A)	Minimum movement lane (excluding shoulder) (See Note E)
Rural	Live & Play - (Residential & Home Occupation)	Lane	100vpd	1-10 du (Public) or 1-6 du (Private)	20	6	20%	Shared (on shoulder & Berm)	Allow for passing every 50m, total shoulder 0.5m, sealed	Shared (in movement lane)	3
		Lane	200vpd	1-20du	30	9	16%	Shared (on shoulder & Berm)	Total shoulder 0.5m, sealed	Shared (in movement lane)	2 x 2.75
		Local Road	1000vpd	1-150du	70	15	12.5%	Shared (on shoulder & Berm)	Total shoulder 1.0m, sealed shoulder 0.5m	Shared (in movement lane)	2 x 2.75
	Make and Move	Local	500vpd	Low level agricultural activity	up to 100	20	10%	Shared (on shoulder & Berm)	Total shoulder 1.0m, sealed shoulder 0.5m	Shared (in movement lane)	2 x 2.75
		Collector	1000vpd	Medium level agricultural activity	up to 100	20	10%	Shared (on shoulder & Berm)	Total shoulder 1.0m, sealed shoulder 0.5m	Shared (in movement lane)	2 x 3.0
		Minor Arterial	2500vpd	Medium / high level agricultural activity + medium through traffic	up to 100	20	10%	Shared (on shoulder & Berm)	Total shoulder 1.5m, sealed shoulder 0.5m	Preferred on sealed shoulder.	2 x 3.5
		Major Arterial	>2500vpd	High/medium level agricultural activity + high level through traffic	up to 100	20	10%	Shared (on shoulder & Berm)	Parking and loading. Total shoulder 1.0m, sealed shoulder 1.0m	Preferred on sealed shoulder.	2 x 3.5

Appendix C Site Visit Photographs



Iona II Development Area



Iona Road

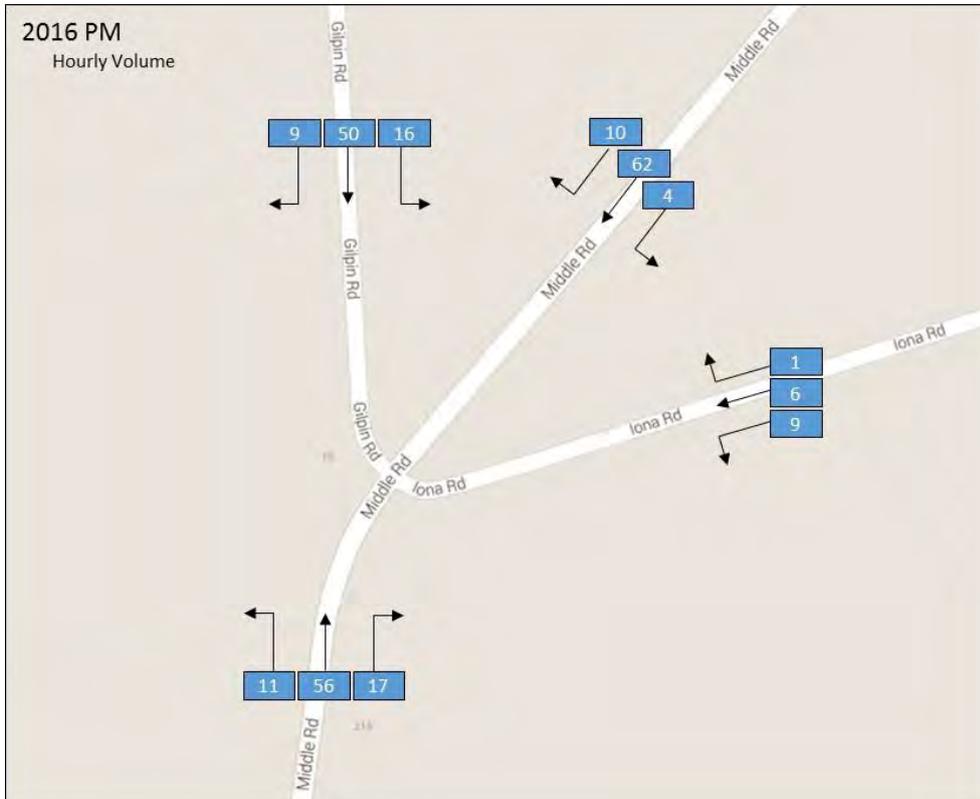
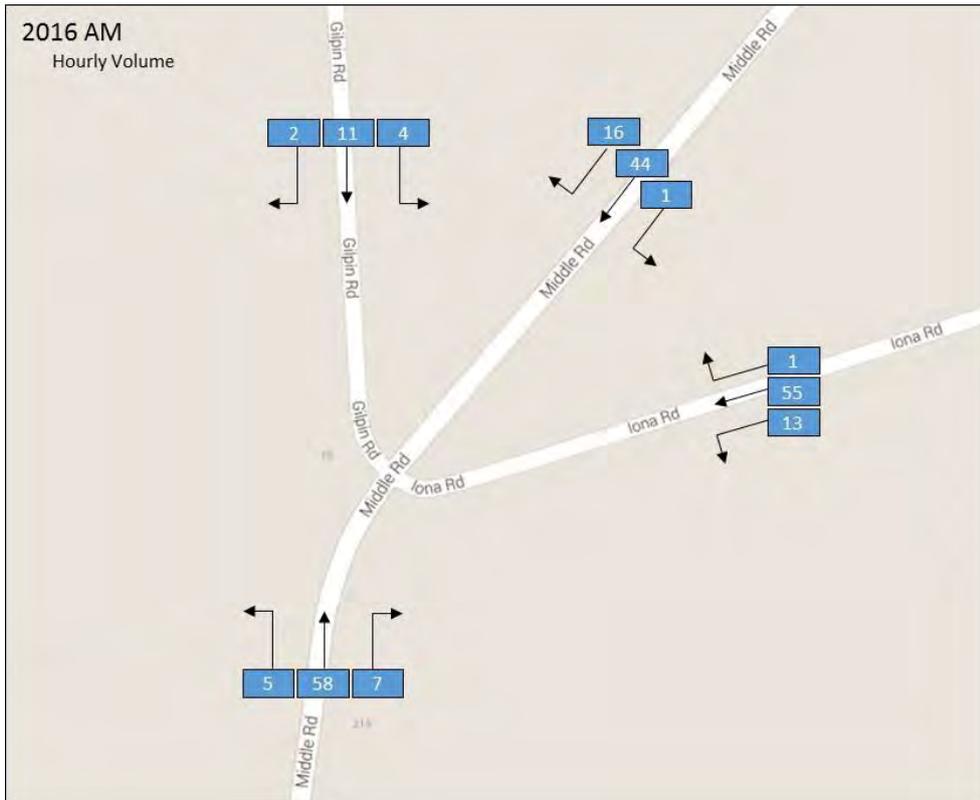


*Iona Road/Gilpin Road/Middle Road Intersection
(Looking North-East)*

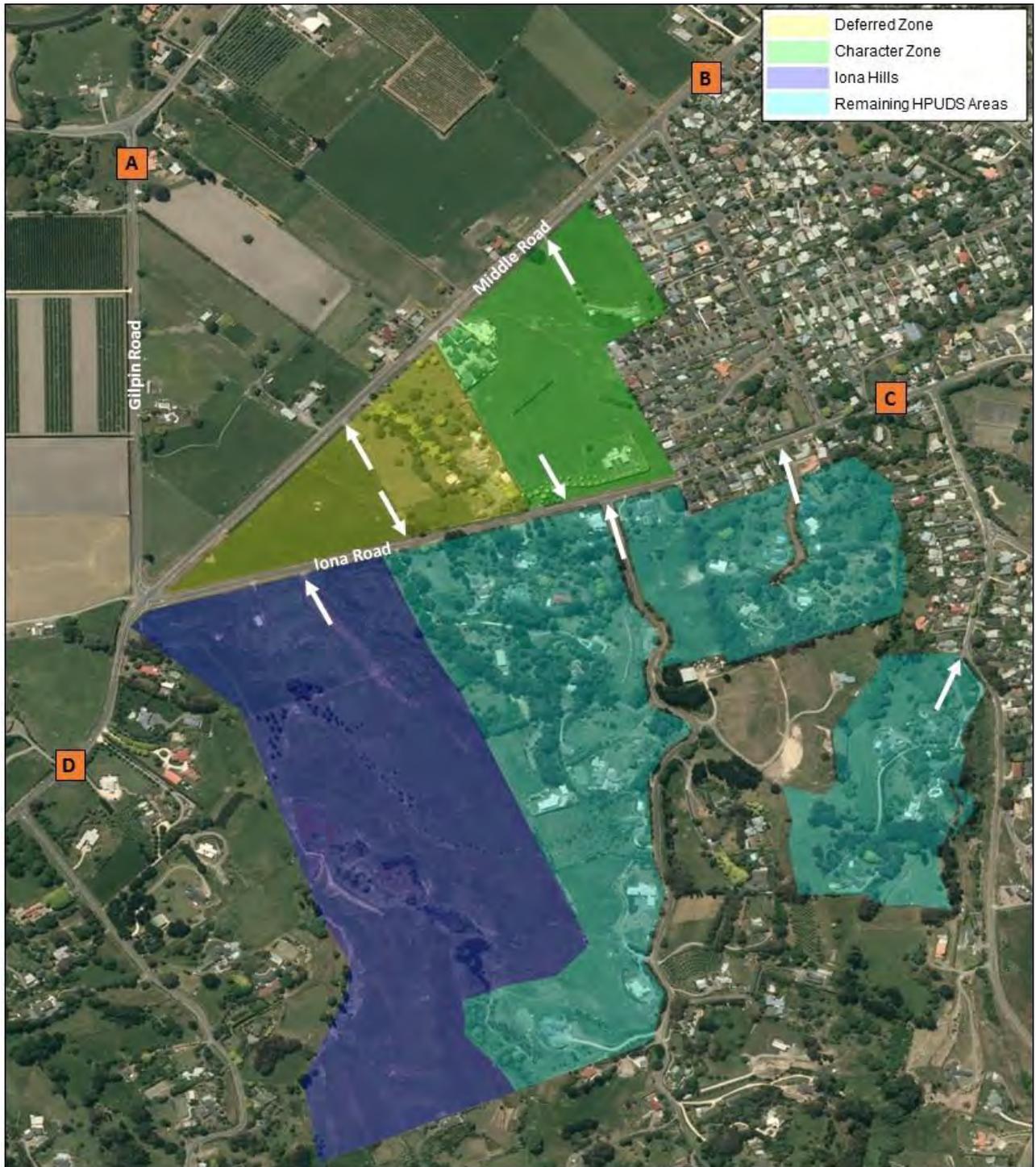


*Iona Road/Gilpin Road/Middle Road Intersection
(Looking South-West)*

Appendix D 2016 Traffic Survey Data



Appendix E Trip Distribution Assumptions



Trip Distribution Ratio

	Zone A	Zone B	Zone C	Zone D
Character Zone	10%	60%	25%	5%
Deferred Zone	10%	60%	25%	5%
Iona Hill	10%	60%	25%	5%
Remaining HPUDS Land	10%	50%	35%	5%

Appendix F Level of Service Criteria

Definitions of Level of Service

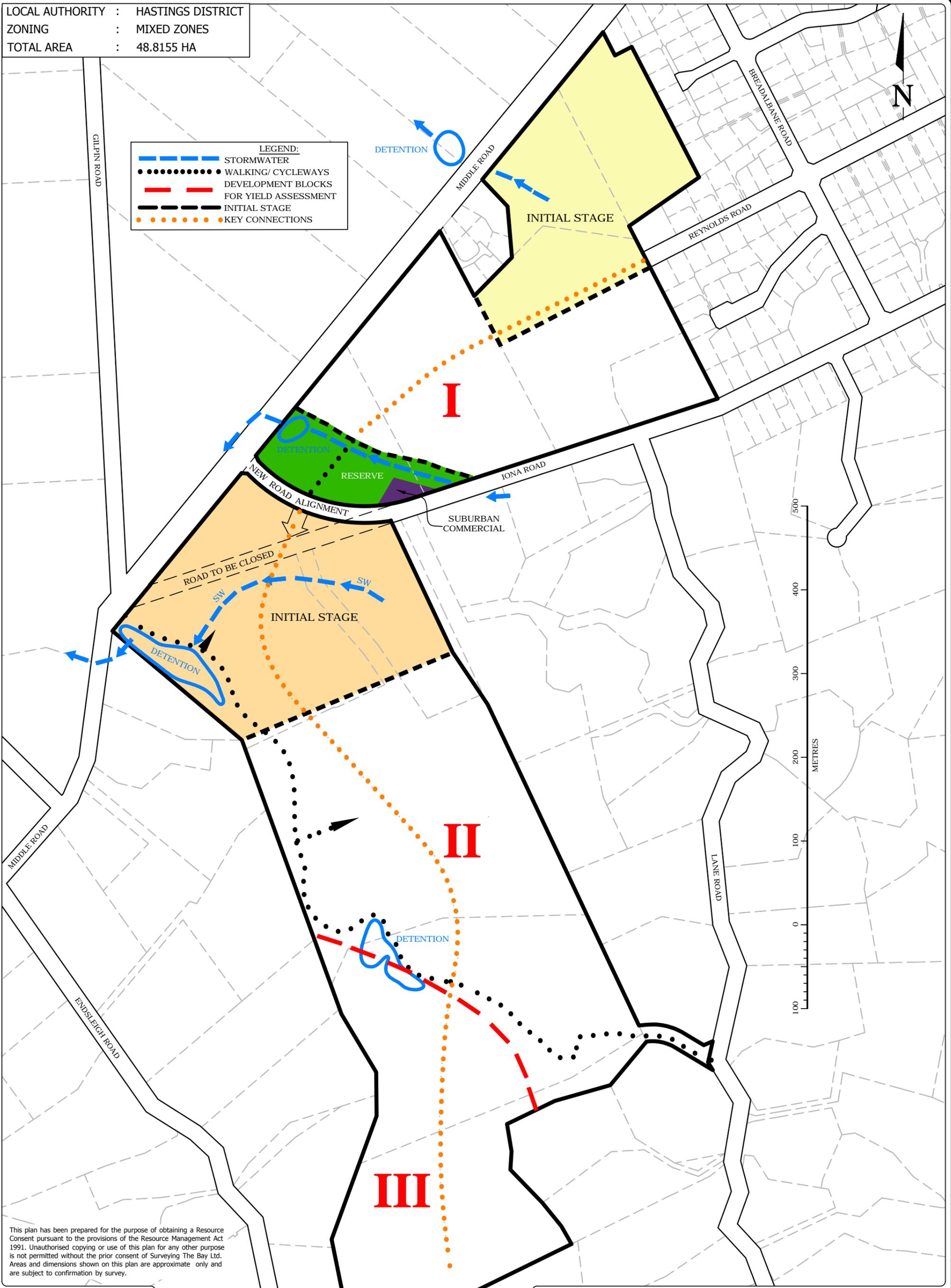
LOS	Delay (sec)		Definition
	Roundabout	Priority	
A	$d \leq 10$	$d \leq 10$	Free-flow conditions with unimpeded manoeuvrability. Stopped delay at signalised intersection is minimal.
B	$10 < d \leq 20$	$10 < d \leq 15$	Reasonably unimpeded operations with slightly restricted manoeuvrability. Stopped delays are not bothersome.
C	$20 < d \leq 35$	$15 < d \leq 25$	Stable operations with somewhat more restrictions in making mid-block lane changes than LOS B. Motorists will experience appreciable tension while driving.
D	$35 < d \leq 55$	$25 < d \leq 35$	Approaching unstable operations where small increases in volume produce substantial increases in delay and decreases in speed.
E	$55 < d \leq 80$	$35 < d \leq 50$	Operations with significant intersection approach delays and low average speeds.
F	$80 < d$	$50 < d$	Operations with extremely low speeds caused by intersection congestion, high delay, and adverse signal progression.

Appendix G Landowner's Vision

LOCAL AUTHORITY : HASTINGS DISTRICT
 ZONING : MIXED ZONES
 TOTAL AREA : 48.8155 HA

LEGEND:

- STORMWATER
- WALKING/ CYCLEWAYS
- DEVELOPMENT BLOCKS FOR YIELD ASSESSMENT
- INITIAL STAGE
- KEY CONNECTIONS



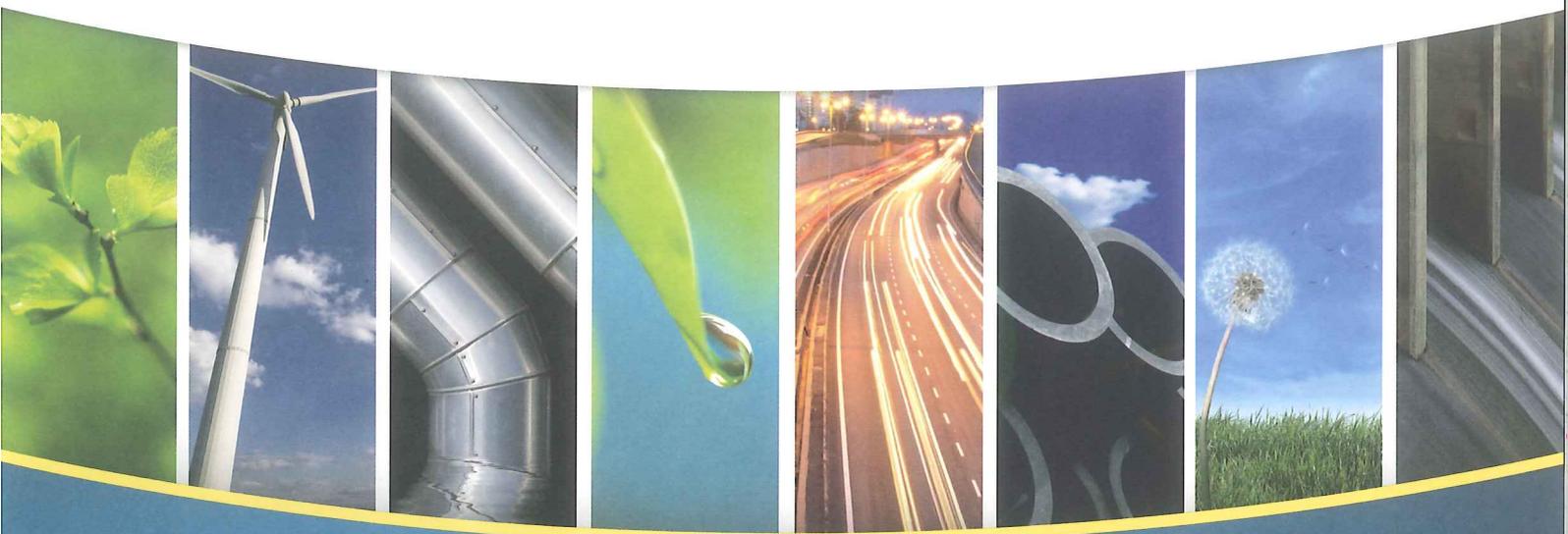
This plan has been prepared for the purpose of obtaining a Resource Consent pursuant to the provisions of the Resource Management Act 1991. Unauthorised copying or use of this plan for any other purpose is not permitted without the prior consent of Surveying The Bay Ltd. Areas and dimensions shown on this plan are approximate only and are subject to confirmation by survey.

SURVEYING THE BAY
 HAWKES BAY | NEW ZEALAND
 PO Box 611, Hastings, NZ
 Phone: +64 6 870 4048 or 0800 787 842
 Fax: +64 6 870 4042

LOWE FAMILY
 MIDDLE ROAD AND IONA ROAD
 HAVELOCK HPUDS

TITLE: DRAFT CONCEPT PLAN
SCALE: 1: 4,000 @ A3
DATE: DECEMBER 2015
DRAWING NO: 3858-10 | **SHEET:** 1/1
DRAWN BY: PT

HAWKES BAY
1st Floor, 100 Warren Street South, Hastings 4122
PO Box 1190, Hastings 4156
TEL +64 6 873 8900
FAX +64 6 873 8901
www.mwhglobal.co.nz



In New Zealand we provide services covering these disciplines:

- Asset Management
- Business Solutions
- Civil and Structural Engineering
- Energy Generation
- Environmental Science and Management
- Geoscience and Geotechnical
- Mechanical, Electrical and Building Services
- Planning, Policy and Resource Management
- Programme Management
- Roads and Highways
- Solid Waste
- Stormwater
- Surveying
- Transport Planning
- Water Resources
- Water Supply
- Wastewater



MWH[®]

BUILDING A BETTER WORLD

MEMORANDUM

File Ref TR-8-18-9303

To: Anna Sanders
From: Sarath Kuruwita
Copy to: Rowan Wallis
Date: 5 February 2018
Subject: Iona/ Middle Road Development – Traffic Impact on the Havelock North CBD

In response to your query about whether additional traffic from the Iona/ Middle development, arriving in the village centre at peak hours will result in a lower level of service (LoS), the following information is provided.

Trip generation estimates and the trip distribution pattern indicated in the MWH April 2016 Report on Middle/ Iona Road Growth Area – Transport Assessment are used to determine the arrivals at the Havelock North City Centre. The traffic from the development is likely to feed the centre of Havelock North via Middle Road and Iona Road. The impact of the extra arrivals at the Porter Drive/ Middle Road intersection will form the answer to your query. The RAMM database provided information on the pre development (current) traffic on the three approaches of the Porter Drive/ Middle Road intersection.

To analyse the worst case scenario, all the traffic generated by the development is assumed to arrive at the city centre without any dispersal. By following the normal tendency of the traffic to follow the shortest route, all traffic generated would be expected to arrive at the Porter Drive/ Middle Road intersection (See figure 1 in appendix 1 for likely routes from Development to the City Centre).

An extract from the MWH April 2016 Report on Middle/ Iona Road Growth Area – Transport Assessment showing the trip generation estimates and the trip distribution pattern is reproduced below:

Trip Generation

The yields for infrastructure modelling were provided by HDC. A summary of the trip generation (based upon the maximum number of total dwellings less the existing number of dwellings) is summarised within Table 4-2.

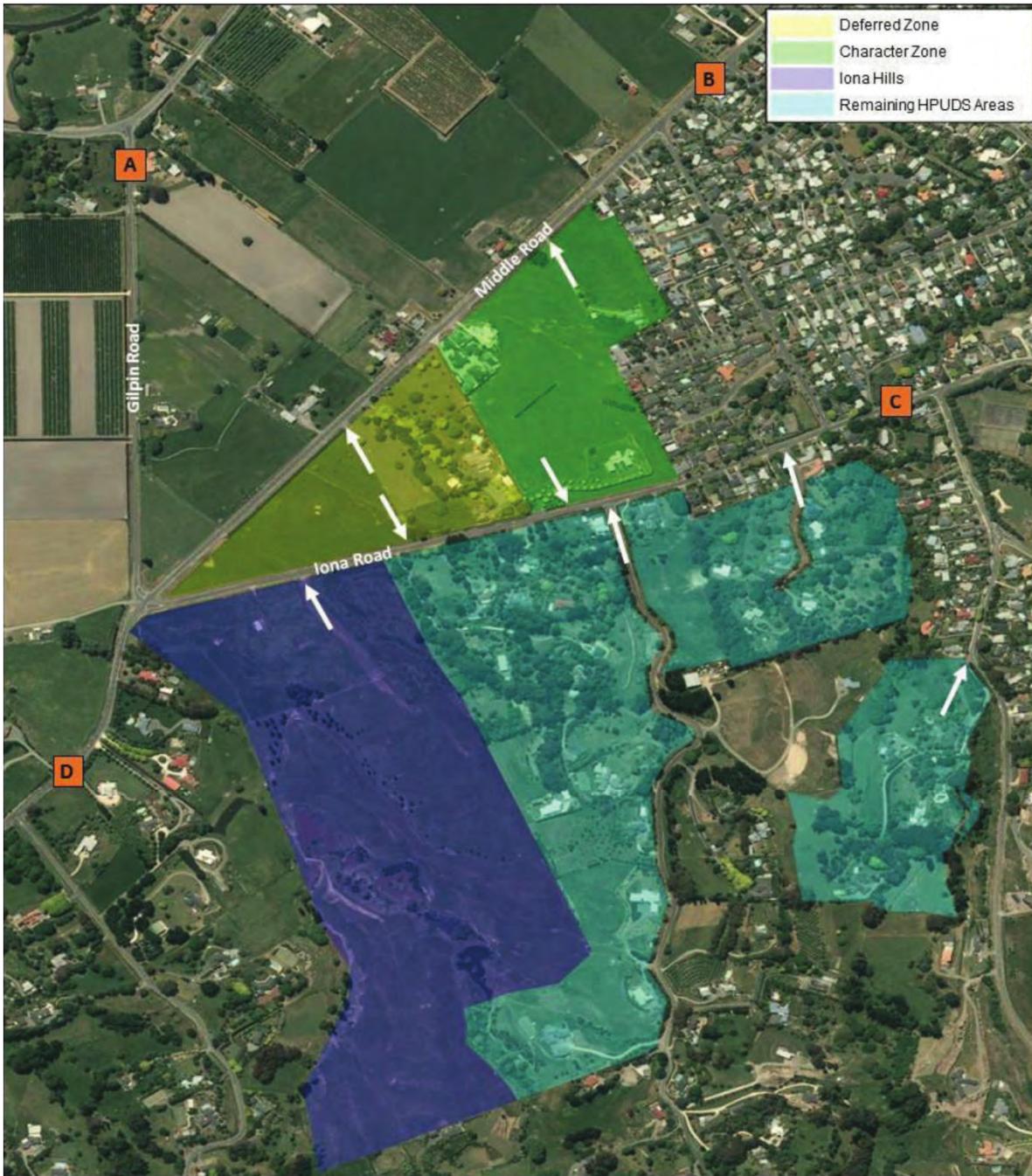
Table 4-2: Trip Generation Estimates

Zone	New Dwellings	Trip Generation			
		AM Peak		PM Peak	
		Inbound	Outbound	Inbound	Outbound
Character Zone	128	31	92	77	45
Deferred Zone	108	26	78	65	38
Iona Hill	160	38	115	97	57
Remaining HPUDS Land	18	4	13	11	6
Total	414	99	298	250	147

The development trips as above have been assigned to various parts of the road network in accordance with the Trip matrix provided below.

Trip Distribution Ratio

	Zone A	Zone B	Zone C	Zone D
Character Zone	10%	60%	25%	5%
Deferred Zone	10%	60%	25%	5%
Iona Hill	10%	60%	25%	5%
Remaining HPUDS Land	10%	50%	35%	5%



Using the above diagram and the Trip distribution matrix, the traffic generated by the new dwellings into various zones can be calculated. The zones B and C traffic levels are of particular interest because they feed the centre of Havelock North via Middle Road and Iona Road respectively. When the trip distribution matrix is applied to the Daily traffic generated by each of the zones to the table 4.2 above the traffic on Middle Road and Iona Road from the Development can be obtained.

Table 1 Daily Trips generated by the Iona/ Middle Development on Iona Road and Middle Road

	Generated Trips on Middle Road (Vehicles/Day)	Generated Trips on Iona Road (Vehicles/ Day)
From Character Zone	768	320
From Deferred Zone	648	270
From Iona Hills Zone	960	400
From Remaining HPUDS Land	90	63
Total	2466	1053

Peak hour traffic could be approximated to 8-10% of the daily traffic. Consequently, the Peak hour traffic from the development is:

Table 2 Peak hour Traffic generated by the Iona/ Middle Development on Iona Road and Middle Road

Peak hour Traffic (veh./hr.)	247	105
-------------------------------------	------------	------------

SIDRA analysis (details provided in Appendix 1) is carried out for the Porter Drive/ Middle Road Intersection. The LoS and the delays (rounded values) expected from the analysis inclusive of the development traffic are tabulated below:

Table 3: Comparison of Level of Service and Delay at Porter Drive/ Middle Road Intersection

	Pre Development			Post Development		
	Porter Drive W	Porter Drive E	Middle Road	Porter Drive W	Porter Drive E	Middle Road
Average Delay (sec.)	5	1	5	5	4	5
Level of Service (LoS)	A	A	A	A	A	A*

Note: A* - Los A for the approach but LoS B for right turners.

The worst LoS is predicted for the right turners from the Middle Road Approach (LoS B). This indicates that the intersection does not suffer any appreciable reduction in the Level of Service it provides even with the development traffic. Therefore, the impact from the development traffic does not warrant any interventions/ improvements to the Porter Drive/ Middle Road intersection.

Transportation Development Engineer
sarithk@hdc.govt.nz

APPENDIX 1

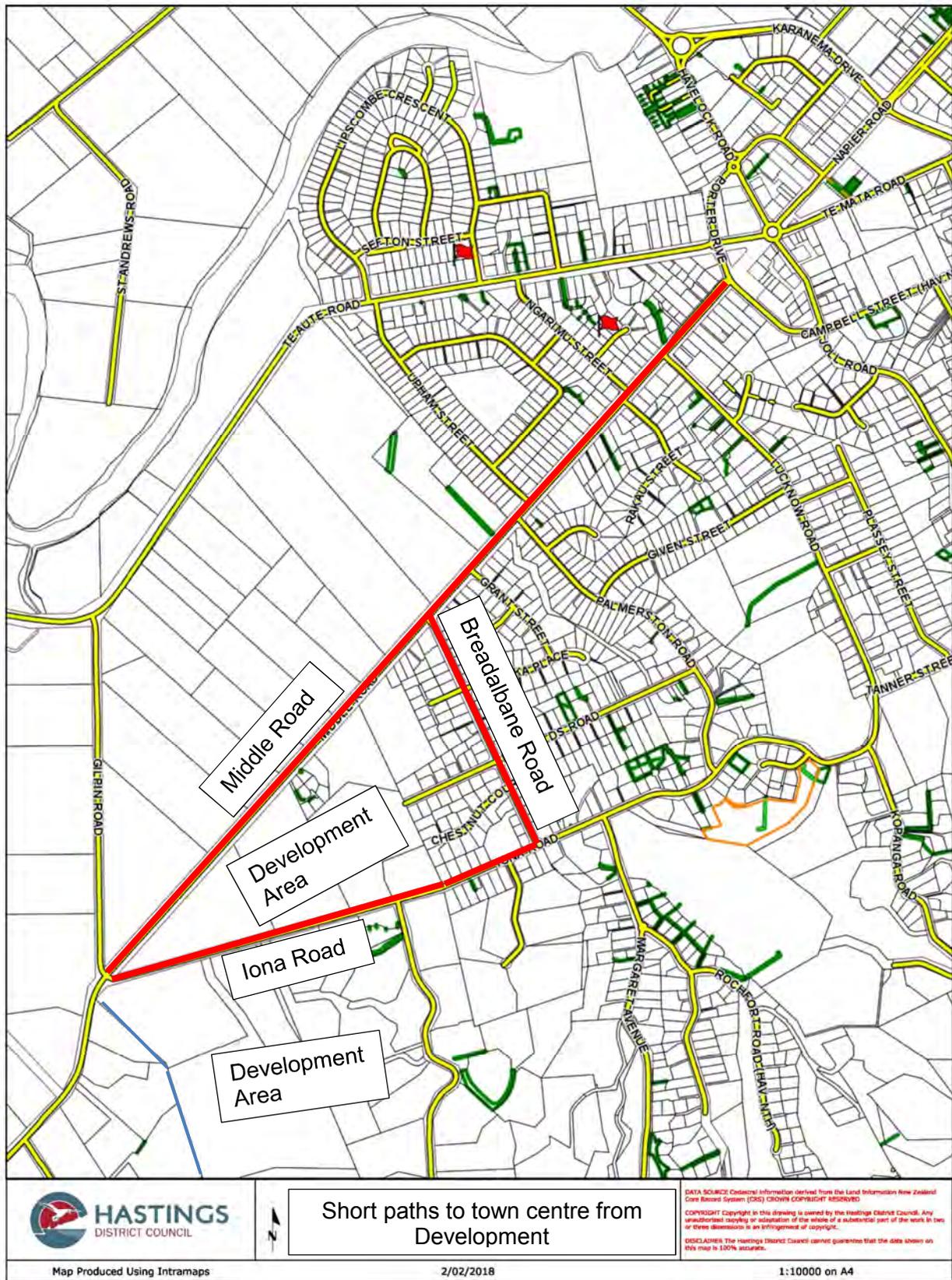


Figure 1 Short paths to town Centre

SIDRA Results

Porter Drive/ Middle Road Intersection without development Levels of Service LANE LEVEL OF SERVICE

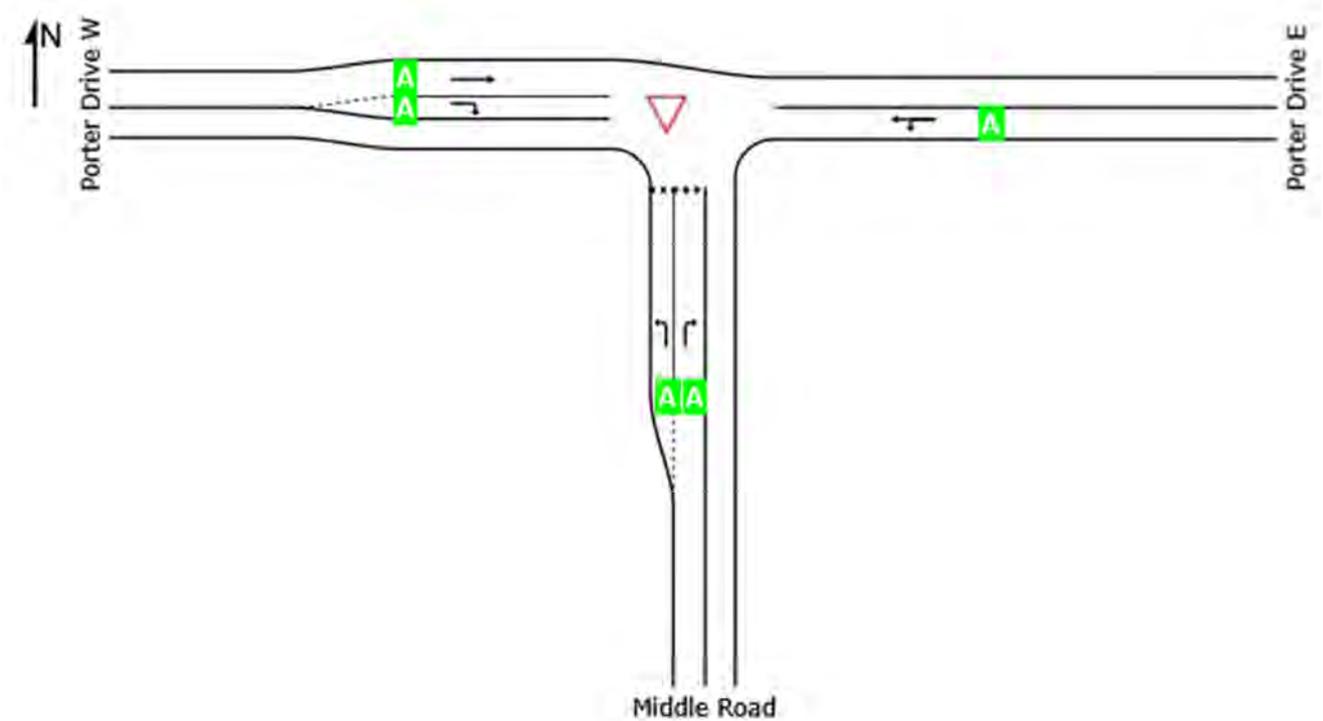
Lane Level of Service

▽ Site: 101 [Middle Porter]

Middle Porter
Giveaway / Yield (Two-Way)

All Movement Classes

	South	East	West	Intersection
LOS	A	NA	NA	NA



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: HASTINGS DISTRICT COUNCIL | Processed: Friday, 2 February 2018 4:19:40 p.m.

Project: G:\Docs\Iona Middle\Traffic Data\SIDRA on Porter Middle\Existing (2010)\Porter Middle LOS.sip7

Porter Drive/ Middle Road Intersection without development Lane Flows

LANE FLOWS

▽ Site: 101 [Middle Porter]

Middle Porter Existing
Giveway / Yield (Two-Way)

Approach Lane Flows (veh/h)									
South: Middle Road									
Mov.	L2	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
From S									
To Exit:	W	E							
Lane 1	481	-	481	2.0	1398	0.344	100	0.0	2
Lane 2	-	67	67	2.0	385	0.175	100	NA	NA
Approach	481	67	548	2.0		0.344			
East: Porter Drive E									
Mov.	L2	T1	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
From E									
To Exit:	S	W							
Lane 1	19	166	185	4.0	1910	0.097	100	NA	NA
Approach	19	166	185	4.0		0.097			
West: Porter Drive W									
Mov.	T1	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
From W									
To Exit:	E	S							
Lane 1	120	-	120	4.0	1693	0.071	100	NA	NA
Lane 2	-	527	527	4.0	1485	0.355	100	9.3	1
Approach	120	527	647	4.0		0.355			
	Total	%HV	Deg. Satn (v/c)						
Intersection	1381	3.2	0.355						

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: HASTINGS DISTRICT COUNCIL | Processed: Sunday, 4 February 2018 11:35:01 a.m.

Project: G:\Docs\Iona Middle\Traffic Data\SIDRA on Porter Middle\Existing (2010)\Porter Middle LOS.sip7

Porter Drive/ Middle Road Intersection without development Movement Summary

MOVEMENT SUMMARY

▽ Site: 101 [Middle Porter]

Middle Porter Existing
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	
South: Middle Road												
1	L2	481	2.0	0.344	3.7	LOS A	1.8	12.7	0.34	0.53	29.9	
3	R2	67	2.0	0.175	11.4	LOS B	0.6	4.5	0.72	0.86	26.4	
Approach		548	2.0	0.344	4.7	LOS A	1.8	12.7	0.38	0.57	29.4	
East: Porter Drive E												
4	L2	19	4.0	0.097	4.6	LOS A	0.0	0.0	0.00	0.06	47.5	
5	T1	166	4.0	0.097	0.0	LOS A	0.0	0.0	0.00	0.06	49.7	
Approach		185	4.0	0.097	0.5	NA	0.0	0.0	0.00	0.06	49.5	
West: Porter Drive W												
11	T1	120	4.0	0.071	0.2	LOS A	2.2	15.8	1.00	0.00	47.2	
12	R2	527	4.0	0.355	5.5	LOS A	2.1	15.0	0.38	0.57	41.6	
Approach		647	4.0	0.355	4.5	NA	2.2	15.8	0.50	0.46	43.1	
All Vehicles		1381	3.2	0.355	4.0	NA	2.2	15.8	0.39	0.45	38.1	

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: HASTINGS DISTRICT COUNCIL | Processed: Sunday, 4 February 2018 11:35:01 a.m.

Project: G:\Docs\Iona Middle\Traffic Data\SIDRA on Porter Middle\Existing (2010)\Porter Middle LOS.sip7

Porter Drive/ Middle Road Intersection with development

Levels of Service

LANE LEVEL OF SERVICE

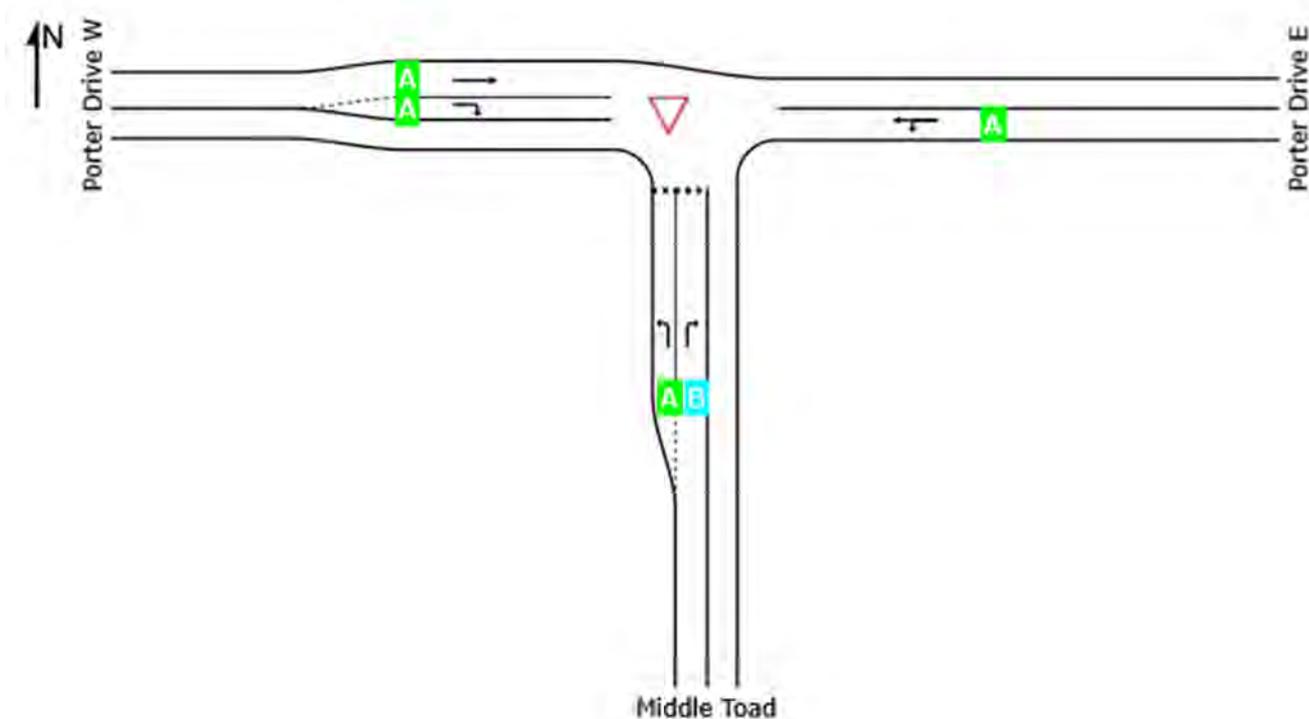
Lane Level of Service

▽ Site: 101 [Middle Porter]

Middle Porter With Development
GiveWay / Yield (Two-Way)

All Movement Classes

	South	East	West	Intersection
LOS	A	NA	NA	NA



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: HASTINGS DISTRICT COUNCIL | Processed: Sunday, 4 February 2018 12:27:32 p.m.

Project: G:\Docs\Iona Middle\Traffic Data\SIDRA on Porter Middle\With Development\Porter Middle Dev LOS.sip7

Porter Drive/ Middle Road Intersection with development Lane Flows

LANE FLOWS

▽ Site: 101 [Middle Porter]

Middle Porter With Development
Giveaway / Yield (Two-Way)

Approach Lane Flows (veh/h)									
South: Middle Toad									
Mov.	L2	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
From S									
To Exit:	W	E							
Lane 1	601	-	601	2.0	1558	0.386	100	0.0	2
Lane 2	-	133	133	2.0	412	0.322	100	NA	NA
Approach	601	133	734	2.0		0.386			
East: Porter Drive E									
Mov.	L2	T1	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
From E									
To Exit:	S	W							
Lane 1	139	46	185	4.0	1848	0.100	100	NA	NA
Approach	139	46	185	4.0		0.100			
West: Porter Drive W									
Mov.	T1	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
From W									
To Exit:	E	S							
Lane 1	55	-	55	4.0	1673	0.033	100	NA	NA
Lane 2	-	593	593	4.0	1485	0.399	100	14.8	1
Approach	55	593	647	4.0		0.399			
	Total	%HV	Deg. Satn (v/c)						
Intersection	1566	3.1	0.399						

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: HASTINGS DISTRICT COUNCIL | Processed: Sunday, 4 February 2018 12:27:32 p.m.

Project: G:\Docs\lona Middle\Traffic Data\SIDRA on Porter Middle\With Development\Porter Middle Dev LOS.sip7

Porter Drive/ Middle Road Intersection with development Movement Summary

MOVEMENT SUMMARY

 **Site: 101 [Middle Porter]**

Middle Porter With Development
Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	
South: Middle Toad												
1	L2	601	2.0	0.386	3.2	LOS A	2.2	16.0	0.17	0.48	30.1	
3	R2	133	2.0	0.322	12.3	LOS B	1.4	9.9	0.74	0.93	26.1	
Approach		734	2.0	0.386	4.8	LOS A	2.2	16.0	0.27	0.56	29.3	
East: Porter Drive E												
4	L2	139	4.0	0.100	4.6	LOS A	0.0	0.0	0.00	0.40	44.3	
5	T1	46	4.0	0.100	0.0	LOS A	0.0	0.0	0.00	0.40	47.8	
Approach		185	4.0	0.100	3.5	NA	0.0	0.0	0.00	0.40	45.6	
West: Porter Drive W												
11	T1	55	4.0	0.033	0.3	LOS A	1.0	7.2	1.00	0.00	47.2	
12	R2	593	4.0	0.399	5.5	LOS A	2.4	17.6	0.40	0.57	41.6	
Approach		647	4.0	0.399	5.1	NA	2.4	17.6	0.45	0.53	42.3	
All Vehicles		1566	3.1	0.399	4.8	NA	2.4	17.6	0.31	0.53	35.6	

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: HASTINGS DISTRICT COUNCIL | Processed: Sunday, 4 February 2018 12:27:32 p.m.

Project: G:\Docs\Iona Middle\Traffic Data\SIDRA on Porter Middle\With Development\Porter Middle Dev LOS.sip7

Stormwater and Wastewater Servicing Assessment for Iona and Middle Road Extension – Havelock North

This report has been prepared for the benefit of Hastings District Council. No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other person.

This disclaimer shall apply notwithstanding that the report may be made available to other persons for an application for permission or approval or to fulfil a legal requirement.

Rev. No.	Date	Description	Prepared By	Reviewed By	Approved By
1	19 Mar 2015	Draft	Robert van Bentum	Wayne Hodson	
2	31 Mar 2015	Final	Robert van Bentum	Wayne Hodson	Wayne Hodson

1 Background

Hastings District Council (HDC) has engaged MWH New Zealand Limited (MWH) to undertake a high level assessment of options for wastewater and stormwater servicing of a potential expansion of the residential zone in the Iona and Middle Road area of Havelock North. The aim of the assessment is to:

- Identify constraints to residential development in these areas
- Scope options for providing wastewater and stormwater services for identified areas

The area considered includes:

- Land currently zoned residential but not currently serviced further south-east along Middle Road (Iona Middle Vacant). 9.2 hectares
- A triangular shaped piece of land bounded by Middle and Iona Roads south-west of the existing residential zone and currently zoned Plains Zone (Iona Middle Triangle). 5.2 hectares
- A separate area fronting either side of Iona Road (Iona Road Frontage). 5.7 hectares
- An area of restricted residential land south of Iona Road which lies west of the existing residential zone (Lower and Upper Havelock Hills). 28.3 hectares + 28.1 hectares = 56.4 hectares

All the areas are either currently zoned residential or included in the Hastings Proposed Urban Development Strategy (HPUDS) as future growth areas. The land areas are depicted in Figure 1.

The work is required by HDC to enable planning for future residential expansion in the Havelock North area. HDC seeks to understand the options for servicing and the likely constraints and issues with respect to servicing. The concept details presented represent one option for servicing that could be considered but would need to be developed further in consideration of other services such as roading. This level of assessment is outside the scope of this study.

In order to determine the servicing requirements confirmation has been sought from HDC on the following:

- Possible staging of proposed re-zoning of residential urban growth areas to residential use
- Confirmation of the ultimate density of residential development in each area

Figure 1. Iona and Middle Road Residential Growth Areas



2 Description of the Proposed Development Areas

2.1 Middle Road Vacant Residential Block

This area of residential zoned land is located between existing serviced residential areas and the plains zone to the south west. This area is currently unserviced however wastewater flows from this area have been included in the assessment as they largely lie outside the sewer catchment of the Breadalbane Pump Station (PS). While the higher areas of this land parcel could be serviced by gravity sewers via an extension to the Breadalbane sewer network, it has been assumed that the entire area is serviced by a new system, on the basis that at full development the Breadalbane sewer PS is fully committed.

There are some existing properties in the north-west corner of the parcel which it is understood are currently serviced by way of a small pump station and a private rising main that discharges into the Council system on Middle Road.

2.2 Middle Road and Iona Road Triangle

The triangular shaped land area between Middle and Iona Roads, approximately 5.2 ha in area, is currently undeveloped aside from a small number of rural residential lots in the south-east corner. It includes a small hill feature (approx. 10m in height) which HDC have suggested may be retained as a feature with-in a reserve area.

2.3 Iona Road Frontage

HDC have identified a strip of land (5.7 ha) along Iona Road with the potential for lots up to 2 deep on either side of Iona Road. This area has been created by deducting area from each of the Middle Triangle and Lower Hills land parcels.

2.4 Lower Hills Area

For the area further south of Iona Road, the growth strategy identifies three areas namely:

- An area immediately south of Iona Road, but excluding the road frontage, to be developed as large lot rural residential (24.1 ha). Around 50% of this area has already been subdivided into large lots.
- A smaller area immediately south of existing residential areas (4.2 ha) again to be developed as large lot rural residential.
- A larger area of higher elevation rural land (28 ha) which is currently undeveloped – Upper Havelock Hills

3 Density of Development

Following discussions with HDC Planning staff member, Mark Clews, both an area reduction factor to account for internal roading and reserves as well as typical lot sizing for each of the areas have been confirmed and are set out in Table 3.1 below. Using these assumptions an estimate of the lot yield and peak wastewater flows for each area is summarised in Table 3.2.

Table 3-1: Development Density

Area	Net Area Reduction	Lot area (m ²)	Zoning
Middle Road – Vacant Block	0.85	700	Existing residential
Iona and Middle Road Triangle	0.85	700	Plains to be re-zoned to residential. Elevated hill area excluded from the gross area.
Iona Road Frontage	0.9	700	Plains and rural residential to be rezoned to residential
Havelock – Lower Hills	0.9	2500	Rural residential
Havelock – Upper Hills	0.9	5000	Rural residential

Table 3-2: Estimate of Lot Yield and Wastewater Flows

Area	Gross Area (ha)	Net Area (ha)	Lot Yield	Peak WWF (l/s) ¹	Zoning
Middle Road – Vacant Block	9.2	7.8	112	5.7	Existing residential
Iona and Middle Road Triangle	5.2	4.5	64	3.2	Plains to be re-zoned to residential. Elevated hill area excluded from the gross area.
Iona Road Frontage	5.7	5.1	73	3.7	Plains and rural residential to be rezoned to residential
Havelock – Lower Hills	28.3	25.5	103	5.2	Rural residential
Havelock – Upper Hills	28.1	25.3	51	2.6	Rural residential
Totals	76.5	68.2	403	20.4	

¹ Peak WWF based on 3.5 pers/lot x 250l/pers x peaking factor of 5

HDC have previously made assessments of potential lot yield or household numbers for these areas that are compared in the table 3.3 below. Note that this excludes the Middle Road, vacant block that is already zoned residential but undeveloped. Also the areas have not been split exactly the same and overlap with different assumptions on the areas considered. The earlier HDC assessment also deducted 20 existing lots from the yield with regard to new lots created, however these lots are included below as we have assumed that these will still need to be serviced and considered in servicing assessments.

Table 3-3: Comparison with Earlier Lot Yield/Household Estimates by HDC

Area	Lot Yield (as above)	Lot Yield (Earlier Assessment)	Zoning
Iona and Middle Road Triangle	10.9ha	14ha	Plains to be re-zoned to residential. Elevated hill area excluded from the gross area.
Iona Road Frontage	137	150	Plains and rural residential to be rezoned to residential
Havelock – Lower Hills	25.5ha 103 lots	31ha 112 lots	Rural residential
Havelock – Upper Hills	28.1ha 51 lots	24ha 86 lots	Rural residential
TOTAL	64.5ha 291	69ha 348	

The assumptions to date on lot yield are only at a high level and actual yields may be significantly less due to existing topography with steep slopes and land stability aspects. More detailed consideration should be given to this, as greater certainty in respect of lot yields will be important for planning and servicing decisions, especially for the lower and upper hills areas.

4 Design Assumptions

4.1 Performance Requirements

Constraints identification and options assessment has been based on the following key assumptions for new infrastructure:

- All development is residential with no trade waste
- Residential lot yields as outlined in Table 3.2
- Stormwater catchment boundaries have been based on HBRC catchment data modified to take account of local contour data from HDC GIS data.

4.2 Servicing Assumptions

Wastewater servicing has been included for all residential and rural residential lots. This is despite the expectation that many rural residential lots are expected to have on-site wastewater systems. This assumption is based on the precedence in other Havelock hill areas where wastewater connections have been provided to rural residential properties via sewers installed in the roads to avoid cumulative effects. This may mean a pumped connection to the sewer rather than a gravity connection is provided in the residential zone.

Key design assumptions include:

- Wastewater flow based on 3.5 persons/lot and flow of 250 l/person/day
- PDWF = 2.5 x ADWF and PWWF = 5 x ADWF.
- Sewer main, pump station and emergency storage to cater for flows from fully developed areas.
- Emergency storage requirements associated with the new pump station of six hours ADWF at full development.
- Sewer manholes and pump station designed to avoid risk of inundation in 1 in 100 year flood event. The final design flood event levels as well as final manhole lid levels will be confirmed during the preliminary design stage.
- Pipe roughness factor, $k_s = 0.03$ and minimum flushing velocity of 0.6 m/s.
- Rising mains will be PE PN12.5, and designed with minimum velocity of 1 m/s and maximum velocity of 2 m/s at peak pumping rate.
- Manholes spaced at 120m and up to 3.0m deep to be 1,050 mm ID, manholes >3.0m deep to be 1,200 mm ID.
- Sewer depths greater than 3.5 m, or 2.5m where lateral connections are proposed to be avoided. Collector sewers or additional pump stations to be provided as necessary.
- All gravity mains will be 150mm or 225mm diameter PVC-U SN16 mains in accordance with HDC approved materials list.
- Minimum gradients of 1 in 200 for DN150 and 1 in 300 for DN225, unless noted below.
- Minimum 1m depth for sewer mains to allow for gravity connection of property laterals.

5 Constraints Assessment

5.1 Iona Middle Vacant

The area like much of the low hills area begins on the margin of the plains area and extends up into the Havelock lower hills area. The area slopes steadily to the north and is similar in relief to neighbouring residential land which has been developed. There are no obvious or significant constraints for servicing. Typically back lots in this area are accessed via a right of way rather than an extensive internal road network. This has a tendency to reduce the intensity of development and is reflect in the average lot size of 700m².

5.2 Triangle Flat

The topography and shape of the proposed triangle shaped area between Iona and Middle Road has some constraints to development including:

- the narrow shape of the triangle at the junction of Middle and Iona Roads is likely to be difficult to develop for access, noise and shape reasons
- HDC have indicated an intention to adjust the 4-way road junction which may result in a small land take reducing the effective area
- It has been assumed that the small hill in the block will be retained by way of reserve further reducing the land area
- Currently subject to overland flows from the catchment above.

Aside from the mound, much of the area has gentle relief so has the potential to be intensively developed, however the constraints identified are likely to reduce the yield from the block.

5.3 Iona Road Frontage

Based on two lot deep development on either side of Iona Road, the street will become a largely residential street with numerous entranceways, and less of the connecting road which it functions as currently.

To function effectively in this way, the road will require upgrading. While the corridor is wide enough to accommodate a stormwater swale drain, multiple entranceways will make a swale a less attractive and practical option. Sewer and stormwater piped drains can be installed to convey flow in a westerly direction.

Key constraints include:

- The presence of several small stream gullies which will complicate installation of sewer services along the road
- Existing road access and large lot development which reduce the effective area available for new lot development

5.4 Lower Hills Area

The lower hills area like other parts of Havelock North Hills comprises a series of small gully and ridge features. Key constraints impacting on the scope for significant further residential development include:

- Around 50% of the areas has already been sub-divided into large rural residential lots
- Many existing lots have long right of way and access track
- Existing amenity ponds and planted areas have been constructed within the gullies

These issues are likely to restrict the intensity of any new lot development which occurs and this is reflected in the average lot size of 2,500m².

5.5 Upper Hills Area

The upper hills area is also characterized by a series of small gully and ridge features, with steeper slopes and sharper relief than for the lower hills area. Key constraints impacting on the scope for significant further residential development include:

- The steeper relief and slopes restricts the availability of suitable building platforms
- Many existing lots have long right of way and access tracks
- Existing amenity ponds and planted areas have been constructed within the gullies

These issues will restrict the intensity of any new lot development which occurs and this is reflected in the average lot size of 5,000m². However this may not be achievable with other similar areas of upper Havelock North having larger lot sizes of 1 to 2ha or larger.

5.6 Wastewater Servicing

The majority of the Iona Middle Vacant and Iona Middle Triangle areas are too distant and low in elevation to be serviced by a gravity network discharging to the Breadalbane PS.

While the higher parts of Iona Middle Vacant and the Lower and Upper Hill areas could be directed to a gravity network discharging to the existing Breadalbane PS, the existing catchment will more than account for the available PS capacity at full development.

A new pump station to service either part or all of the additional growth areas is required and can be constructed in the berm on the north side of Middle Road. The identified pump station location is some 600m south-west of Breadalbane PS. One constraint identified is that the modest flows (PWWF of 20l/s for the entire area) and long rising main may lead to septicity issues particularly during initial development.

5.7 Stormwater Servicing

In respect of stormwater services the area does not include any major streams although there are a number of minor gullies which are expected to generate intermittent stormwater flows following rain events and during wetter periods of the year. A number of existing large lot residential properties in the lower hills area have constructed amenity and detention ponds. The area of the Iona Middle Triangle has the lowest elevations and is likely to be the receiving area for any overland flow or significant stormwater flows. Key constraints in this area include:

- The absence of formal drainage pathways taking water from the Iona Middle Triangle area to the Gilpin Drain or an alternative swale drain discharging to the Karamu Stream to handle additional stormwater drainage which will occur following development
- Risk of overland flow across Middle Road to the private property on the north side following major storm events
- Significant encroachment and amenity modifications in the existing gully drainage pathways which may complicate and increase the cost of providing for peak stormwater discharge mitigation

6 Wastewater Services

6.1 Proposed Collection System

A concept level sewer network has been proposed and is depicted in the plan included in Appendix A. It will comprise collector sewers along Middle and Iona Roads and a connecting sewer crossing Iona Middle Triangle to a pump station located in the berm.

Flow rates were calculated as per design assumptions listed in section 4.2 above.

Table 6-1: Sewer Flows

Area	Net Area (ha)	Lot Yield	ADWF (l/s)	PDWF (l/s)	Peak WWF (l/s) ¹
Middle Road – Vacant Block	7.8	112	1.1	2.8	5.7
Iona and Middle Road Triangle	4.5	64	0.6	1.6	3.2
Iona Road Frontage	5.1	73	0.7	1.8	3.7
Havelock – Lower Hills	25.5	103	1.0	2.6	5.2
Havelock – Upper Hills	25.3	51	0.5	1.3	2.6
Totals	68.2	403	4.1	10.2	20.4

Initial checks of pipe sizing indicate that for the numbers of lots proposed and grades in the range of 1 in 150 to 1 in 200, that sewers of 150 DN will be more than adequate. It is considered feasible to install the majority of the alignment using open trenching, although road crossings of Iona and Middle Road would be best be done by directional drilling.

Provision of a sewer corridor between Iona and Middle Roads will be required as shown.

6.2 Proposed Pump Station

The proposed pump station is to be located on the north side of Middle Road approximately 600m further south-east from Breadalbane PS. Depending on whether part of the proposed development area is directed via gravity to Breadalbane PS, the peak wet weather flows may range from 10 to 20l/s. For the purpose of this initial assessment the higher flow limit has been used. Key requirements for the PS include:

- Emergency storage of 6hrs ADWF = 88m³. This will require a combination of wet well storage and oversized gravity sewers and/or a storage tank.
- No provision for standby generation.
- Venting with no active odour control is considered adequate for the pump station, with appropriate sizing of the rising main, and adequate start-up flows from the serviced catchment.

6.3 Proposed Rising Main Options

As per the design assumptions, the combination of pump and rising main selection has been made as follows:

- the minimum velocity in the rising main is at least 1m/s to minimise build-up of solids
- the maximum velocity does not exceed 2.0m/s to avoid scour
- the rising main volume is flushed every 4 hours to avoid septicity issues

- combined system capacity designed for a PWWF of 20l/s
- preliminary pipe size 100mm diameter PE PN12.5
- The discharge point for the rising main will be the existing Breadalbane PS

Two options were considered for sizing rising main and pumping flows as follows:

- Option 1. Duplicate Rising Mains (100mm and 125mm)
- Option 2. Duplicate Rising Main (2 x 100mm)

Option 1. Duplicate Rising Mains

Under this option flows would be pumped via a single 100m rising main 600m to Breadalbane PS, until flows reach a peak flow of 12-15 l/s. At this point a second larger diameter 125mm rising main would be installed from the new PS to the discharge outlet of Breadalbane PS – 880m in length. Key advantages of this approach:

- Duplicate rising main can be installed when required by pipe pressure / flows or Breadalbane PS capacity
- Avoids any upgrade to Breadalbane PS
- Allows for efficient and appropriate pump selection to match new 125mm rising main

Option 2. Duplicate 100mm Rising Mains

In this option when the capacity of the 100mm rising main is reached, a second 100mm main is installed to take the majority of flow to the discharge of the Breadalbane PS rising main. Under this option some residual flow will continue to be discharged to the Breadalbane PS. Key advantages:

- Allows for a lower cost 100mm rising main to be installed

The proposed position for the pump station and rising main extent is shown on the layout drawings in Appendix A.

Timing for when duplication would be required is uncertain and would depend on rates and density of development that occurs in the development areas. Overall the timing for the duplicate rising main is expected to be more than 10 years out, and may not be needed if development density and extents is less than allowed for in this assessment.

6.4 Rough Order Costs

An assessment of rough order costs for the pump station and rising main is noted below. We have not considered the gravity reticulation required along existing roads or within the development areas in this cost assessment.

Cost estimate of \$0.48M based on:

- Pump station (20 l/s capacity with 90m³ of emergency storage)
- Rising main 650m of 100mm diameter rising main
- P&G of 20%
- Contingency of 30%

7 Stormwater Servicing

7.1 Stormwater Management

Any new residential development would be required to mitigate the effects of additional stormwater runoff by providing attenuation to limit peak stormwater flows to pre-development levels. However this may not be required in existing residential zone areas.

Notwithstanding this mitigation, residential development of the growth areas will result in additional total stormwater runoff over an extended period. As part of development planning an assessment is required to ensure there is adequate drainage capacity and formal overland flow pathways to cope with the full range of design storm events. For the proposed development areas the following stormwater issues have been briefly assessed:

- Existing stormwater drainage pathways and their adequacy
- Extent of the HBRC drainage network and feasibility of directing HDC road drainage to the network
- Mitigation measures to provide for effective stormwater management

7.2 Existing Stormwater Drainage

Stormwater runoff from the proposed development areas is typically concentrated in the existing gully watercourses before discharging to road side drains along Middle Road. From there stormwater appear to find its way across the road and into local private drains, which eventually link up with HBRC's Gilpin Drain.

For areas further south west towards the 4-way road junction, some stormwater is intercepted by swale drains along Iona Road and discharged to the stream west of Gilpin Road and from there to the Karamu.

There is a low lying area of land along the Middle Road boundary with the Iona Middle Triangle which is low lying and appears to hold water at times. It matches with a similar low lying area on the northern side of the road. This area appears to receive stormwater from the vicinity of the 4-way road junction.

There is a need to confirm and formalise the drainage pathways in this area, to ensure that there are permanent drainage pathways for current and additional total stormwater runoff which will occur post development.

7.3 HBRC Drainage Network

As already advised the HBRC receiving network in the area comprises:

- Gilpin Drain – serving Iona Middle Vacant and residential areas up-gradient
- Richards Road drain into the Louisa Stream which drains stormwater from areas to the west of the proposed development area

The majority of the central part of the area appears to drain to Middle Road and from there via local informal farm drains on the north side of Middle Road.

7.4 Stormwater Management Mitigation Measures

Based on the brief desktop assessment of potential stormwater management issues associated with the proposed development area the following mitigation and further work is recommended:

- Existing gully water courses need to be retained both to provide overland flow paths and as locations for wider detention and attenuation basins
- Roadside drainage for Iona Road can be feasibly directed to the 4-way road intersection and from there to the Louisa Stream west of the intersection
- Most of any additional stormwater flows from the Iona Middle Vacant area and some areas of Iona Middle Triangle can be directed to Gilpin Drain
- Further work is required to establish the drainage pathway for stormwater from the middle section of the area and if required formalise a drainage pathway for runoff prior to any development. One option is a new swale drain across the property to the north which then links up with roadside drainage.

A plan of some of the existing and proposed pathways for HDC road drainage and stormwater flows following attenuation is included in Appendix A.

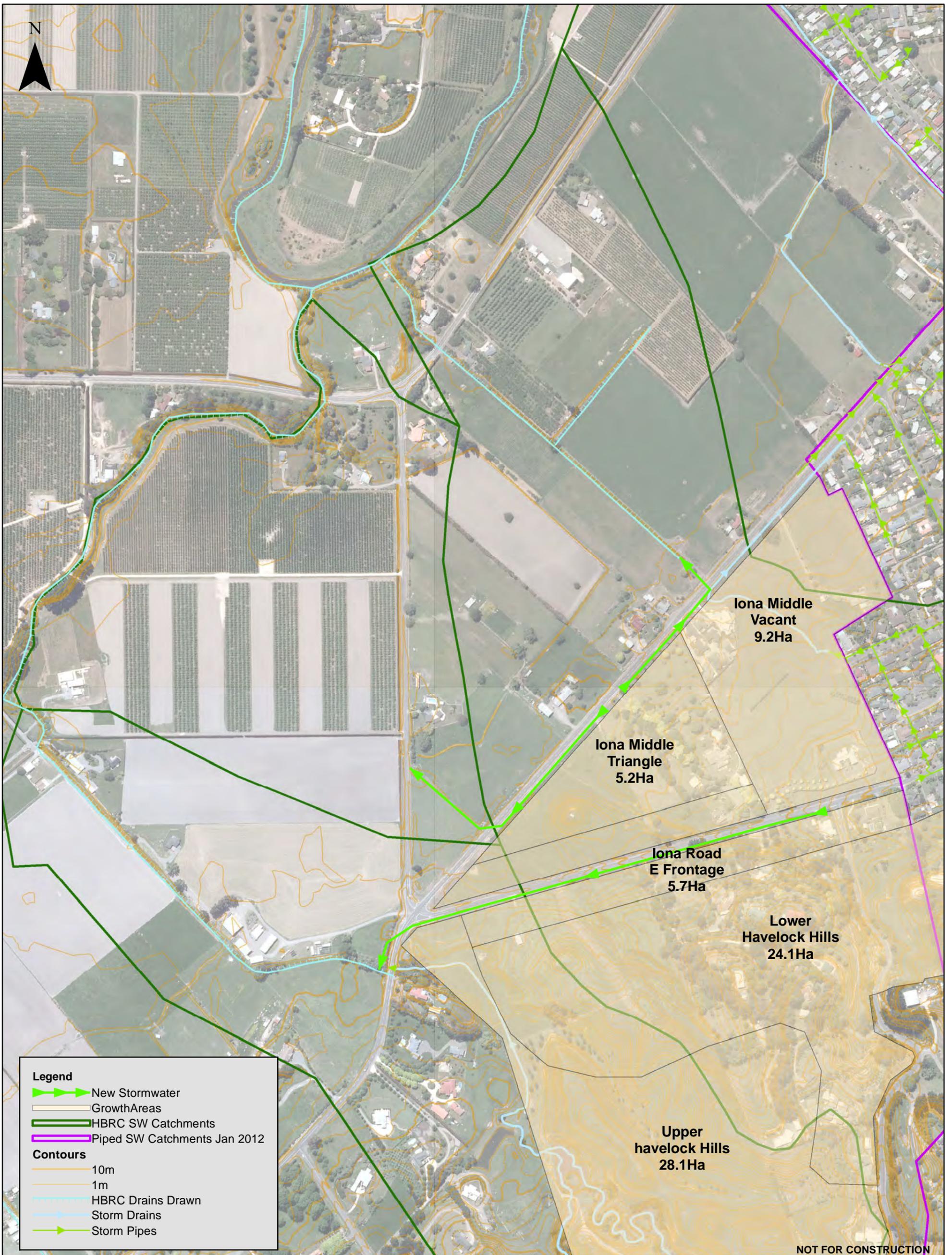
8 Summary

A brief assessment of proposed growth areas for residential development to the south west of Havelock North has confirmed:

- The estimated lot yield for the area is approximately 400 lots or 280 if the existing residential area Iona Middle Vacant is excluded. There is significant uncertainty on the yield, especially within the hill areas due to topography and land stability issues.
- Wastewater servicing can be provided by way of a staged development of a new pumped system with the pump station located in the berm of Middle Road some 600m south-west along Middle Road from Breadalbane PS.
- The exact flow split for wastewater will depend on whether HDC wishes to extend the Breadalbane catchment to allow for gravity servicing of some of the higher elevation areas in the proposed expansion area.
- Sewers of 150mm diameter and a 100mm DN rising main will be sufficient to cope with the majority of flows. The requirement for upgrading or duplicating the rising main will depend on the development intensity and extent that occurs.
- Stormwater drainage in the middle part of the area is by way of gully watercourses and overland flow to existing roadside swale drains along Middle Road. Stormwater then finds its way to the Gilpin Drain via a network of private land drains. The south-western part drains to the Richards Road drain and Louisa Stream to the Karamu Stream.
- Although development may include the requirement to attenuate flows total stormwater runoff volumes will increase and formal drainage pathways are essential.
- Road drainage can largely be directed to either Gilpin Drain or the Louisa Stream west of 4-way road junction. However a local low lying area along the Middle Road boundary with Iona Middle Triangle block requires additional drainage.

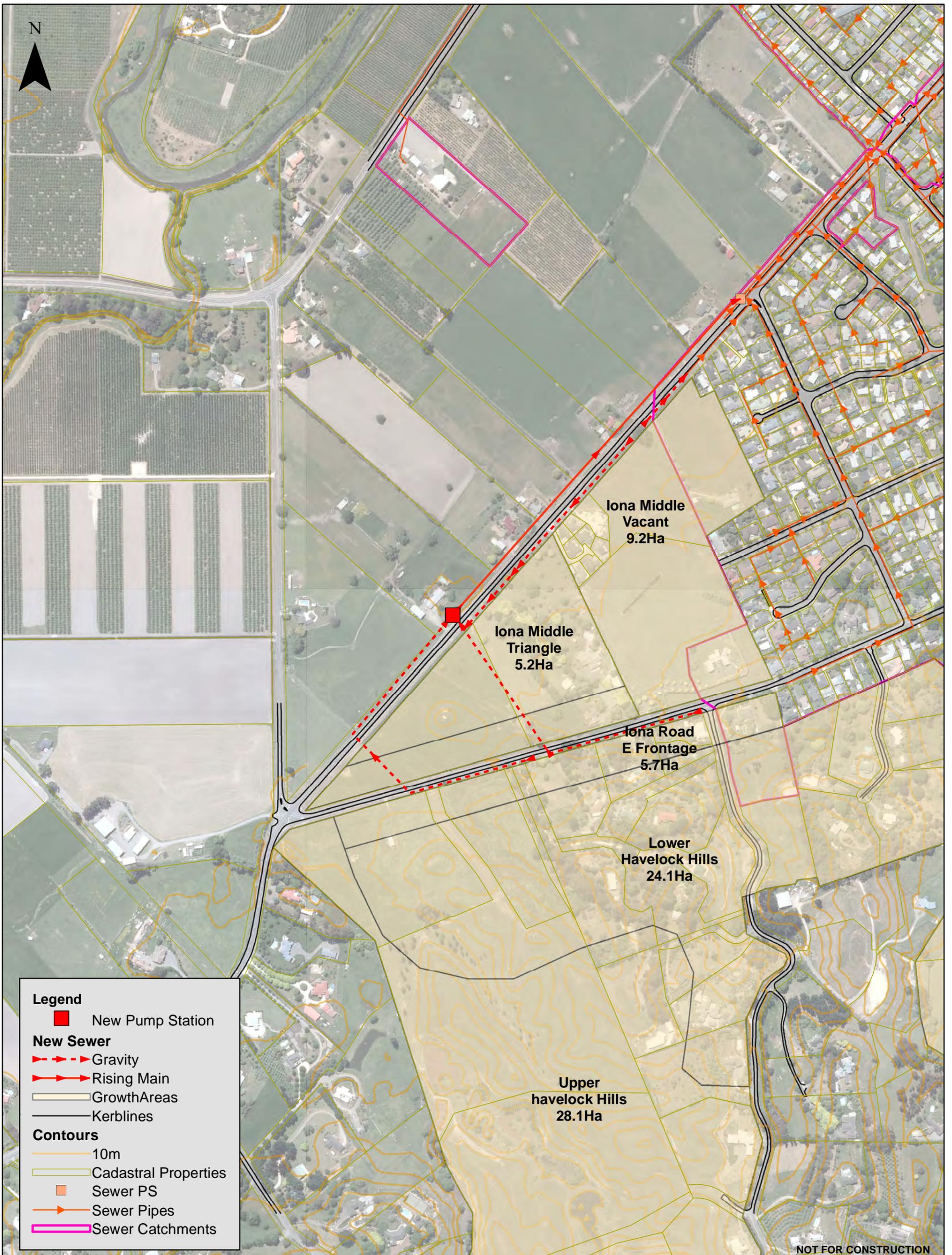


Appendix A Layout Plans for Wastewater and Stormwater Servicing

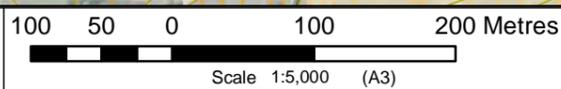


100 50 0 100 200 Metres
 Scale 1:5,000 (A3)
Iona Middle Road Servicing
 Stormwater
 Page 1 Rev: A

Name	Date	PRELIMINARY
Drawn	SWT	18 March 2015
Checked		Job Number: 80503268 - 0130
Reviewed		<small>Note: NZ Topographic data is created at a 1:50,000 scale and when viewed at smaller scales such as 1:2,000 the inaccuracies of position are seen. This is normal and is to do with the fact the data was created as a general dataset to be used at 1:50,000.</small>
Approved		



NOT FOR CONSTRUCTION



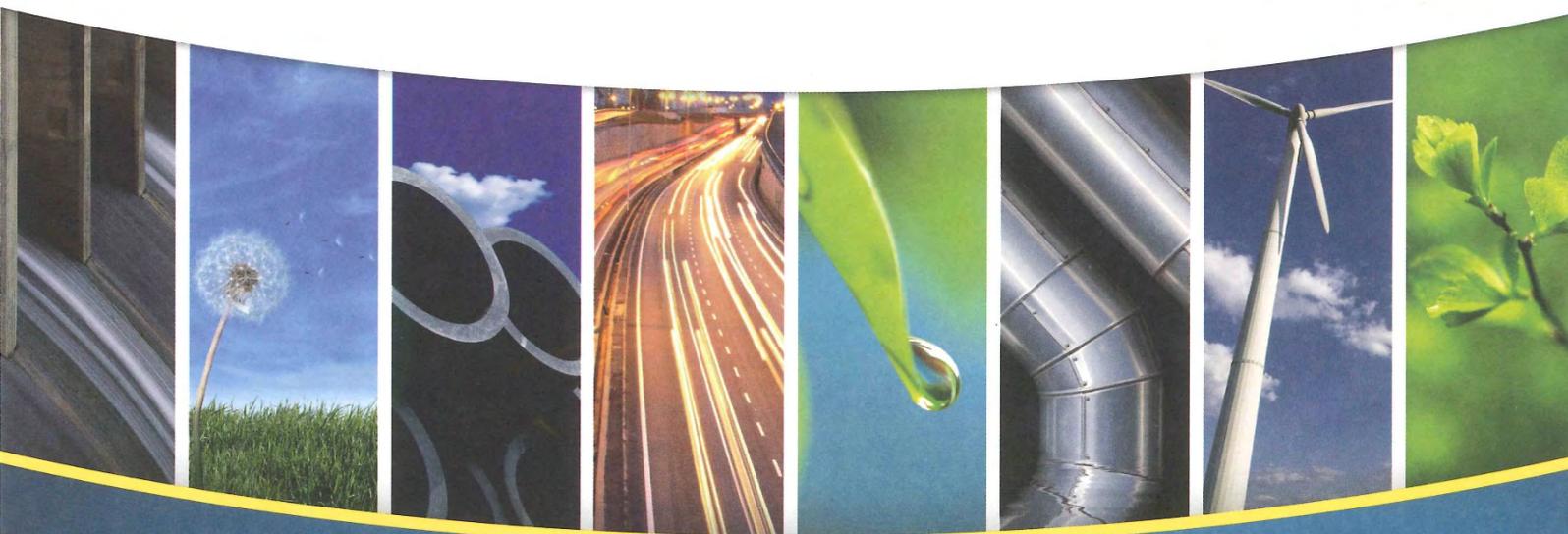
Iona Middle Road Servicing
 Stormwater
 Page 1 Rev: A

	Name	Date	PRELIMINARY
Drawn	SWT		18 March 2015
Checked			Job Number: 80503268 - 0130
Reviewed			Note: NZ Topographic data is created at a 1:50,000 scale and when viewed at smaller scales such as 1:2,000 the inaccuracies of position are seen. This is normal and is to do with the fact the data was created as a general dataset to be used at 1:50,000.
Approved			

MIDDLE IONA WASTEWATER SERVICING OPTIONS REPORT

Prepared for Hastings District Council

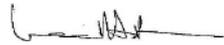
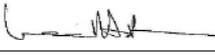
June 2016



This document has been prepared for the benefit of Hastings District Council. No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other person.

This disclaimer shall apply notwithstanding that the report may be made available to other persons for an application for permission or approval to fulfil a legal requirement.

QUALITY STATEMENT

PROJECT MANAGER			PROJECT TECHNICAL LEAD		
Joanna Davenport			Elias Gandashanga		
PREPARED BY					
Elias Gandashanga					15/06/2016
CHECKED BY					
Gary Schofield, Wayne Hodson					15/06/2016
REVIEWED BY					
Wayne Hodson					15/06/2016
APPROVED FOR ISSUE BY					
Des Parkinson					15/06/2016

REVISION SCHEDULE

Rev No	Date	Description	Signature Required		
			Prepared By	Checked By	Approved By
1	15/02/2016	Draft	Elias Gandashanga	Gary Schofield	Des Parkinson
2	10/03/2016	Final	Elias Gandashanga	Gary Schofield	Des Parkinson
3	26/04/2016	Final v2	Elias Gandashanga	Wayne Hodson	Wayne Hodson
3	28/06/2016	Final v3	Elias Gandashanga	Wayne Hodson	Wayne Hodson

HAWKES BAY

1st Floor, 100 Warren Street South, Hastings 4122
 PO Box 1190, Hastings 4156
 TEL +64 6 873 8900, FAX +64 6 873 8901

Hastings District Council

Middle Iona Wastewater Servicing Options Report

CONTENTS

1	Introduction	1
2	Background	2
2.1	Objective.....	2
2.2	Study Area	2
2.2.1	Estimated Wastewater Flows.....	3
3	Existing Wastewater System.....	7
3.1	Wastewater Services within the Proposed Development	7
3.2	Existing Receiving Bulk Infrastructure	7
3.2.1	Ultimate Development.....	7
3.2.2	Catchment Inflow and Infiltration	8
3.3	Breadalbane PS Upgrade	8
4	Wastewater Servicing Options	10
4.1	Staging	10
4.2	Reticulation System	11
4.3	Middle Road Bulk Wastewater Infrastructure Options	11
4.3.1	Option 1-Deep Middle Road Gravity Wastewater System	12
4.3.1.1	Commentary.....	13
4.3.2	Option 2 Middle Road PS and Gravity Wastewater System	14
4.3.2.1	Option 2a –Variation to Option 2.....	16
4.3.3	Option 3 Middle Road Lift PS and Gravity Wastewater System	18
4.3.4	Discussion of Options	20
5	Conclusion	22
6	Recommendation	23

LIST OF TABLES

Table 2-1: Subzones	2
Table 2-2: Middle Iona Lot Yield and PWWF Scenarios Per Zone	4
Table 2-3: Estimate Wastewater Flows per Stage including Breadalbane PS Catchment.....	6
Table 3-1: Existing Breadalbane PS Details	7
Table 3-2: Breadalbane PS Upgrades	8
Table 4-1: Flow Triggers and Approximate Timeline	10
Table 4-2: Option 1 Staging and Rough Order of Costs	12
Table 4-3: Option 2 Staging and Rough Order of Costs	15
Table 4-4: Option 2a Staging and Rough Order of Costs	17
Table 4-5: Option 3 Staging and Rough Order of Costs	19
Table 4-6: Capital Costs	20
Table 4-7: Operation and Maintenance (O&M) and Net Present Value (NPV) Costs	21

LIST OF FIGURES

Figure 2-1: Study Area and Option 1 Middle Road Wastewater System	3
Figure 2-2: Study Area Development Staging and Option 1 Middle Road Wastewater System	5
Figure 4-1: Middle Road PS and Gravity Wastewater System.....	14
Figure 4-2: Option 2A Plan	16
Figure 4-3: Middle Road Gravity Wastewater System and Lift Station	18

APPENDICES

- Appendix A: Existing Breadalbane Pump Station Design Details
- Appendix B: Existing Breadalbane Pump Curves
- Appendix C: Concept Drawings
- Appendix D: Cost Estimates

1 Introduction

The Hastings District Council (HDC) is considering the development of new greenfield sites within the district and have recently completed a high level assessment of options for servicing a potential expansion of the residential zone in the Middle Road / Iona Road area of Havelock North, and now seek to complete a more detailed options report for wastewater. Further wastewater network modelling work of the Hastings and Havelock North areas was completed by MWH including the Breadalbane Pump Station (PS) catchment that would be extended to cater for increased wastewater flows from the proposed Middle Iona zone and surrounding zones.

This report is limited to wastewater services only. Water and stormwater services are being assessed by others under separate work packages.

2 Background

2.1 Objective

Most of the land in the study area is owned by the Lowe Family who are wanting to start development immediately in some of the zones. In addition to this, HDC are considering the development of new greenfield sites so intend to achieve their strategy and the landowners' requirements by:

- Developing wastewater catchments within the growth areas and understanding potential flows from the areas and their potential connections into the existing and proposed bulk wastewater infrastructure in Middle Road.
- Developing wastewater servicing options that meet future growth of the Middle Iona and surrounding zones whilst providing opportunities for staged integration. It is expected that a wastewater pump station will be required in Middle Road, adjacent to the growth zone, as the topography and existing network limits the amount of land that can be practically connected to the existing or extended gravity network.
- Assessing trigger points and associated network upgrades or improvements required to meet development needs considering a range of population densities.
- Identifying areas within the growth zones that can be readily serviced within short time frames without significant infrastructure investment.
- Preparing cost estimates for bulk wastewater infrastructure and concept drawings.

2.2 Study Area

The study area is shown on Figure 2-1. It comprises of subzones outlined in Table 2-1 in line with the proposal (Lowe Proposal) prepared by the landowners of the Middle Iona Triangle and Iona Hills subzones.

Table 2-1: Subzones

Subzone	Description	Total Area(Ha)	Area for Immediate Development ¹	Area Requiring New Infrastructure ²
Area 1	Located between Iona Road, Middle Road and existing serviced residential area on eastern side	14.50	4.10	10.4
	Existing Middle Iona Houses ³	0.7	-	0.7
Area 2A	Apex of the Iona and Middle Roads triangle and adjacent Iona Hills area	5.98	-	5.98
Area 2B	Iona Hills	14.52	-	14.52
Area 3	Iona Hills(Upper)	8.10	-	8.10
Area 4(Remaining HPUDS)	Part in Iona hills and the rest I Lower Havelock hills	32.77	10.20 ⁴	22.57
Total		76.56	14.30	62.26

Notes:

¹Areas that can easily be serviced via the existing gravity network and require minor upgrades of the receiving bulk wastewater system

²Bulk wastewater infrastructure includes pump stations, rising mains, emergency storages and gravity systems in Middle Road

³Decommission existing small pump station rising and hook into proposed bulk wastewater network in Middle Road.

⁴4.2 Ha in isolated catchment near Margaret Avenue and 6 Ha in Breadalbane Avenue area

Further investigations will be required to ascertain whether the receiving gravity wastewater system for Breadalbane Rising Main has sufficient capacity to cope with the proposed upgrades.

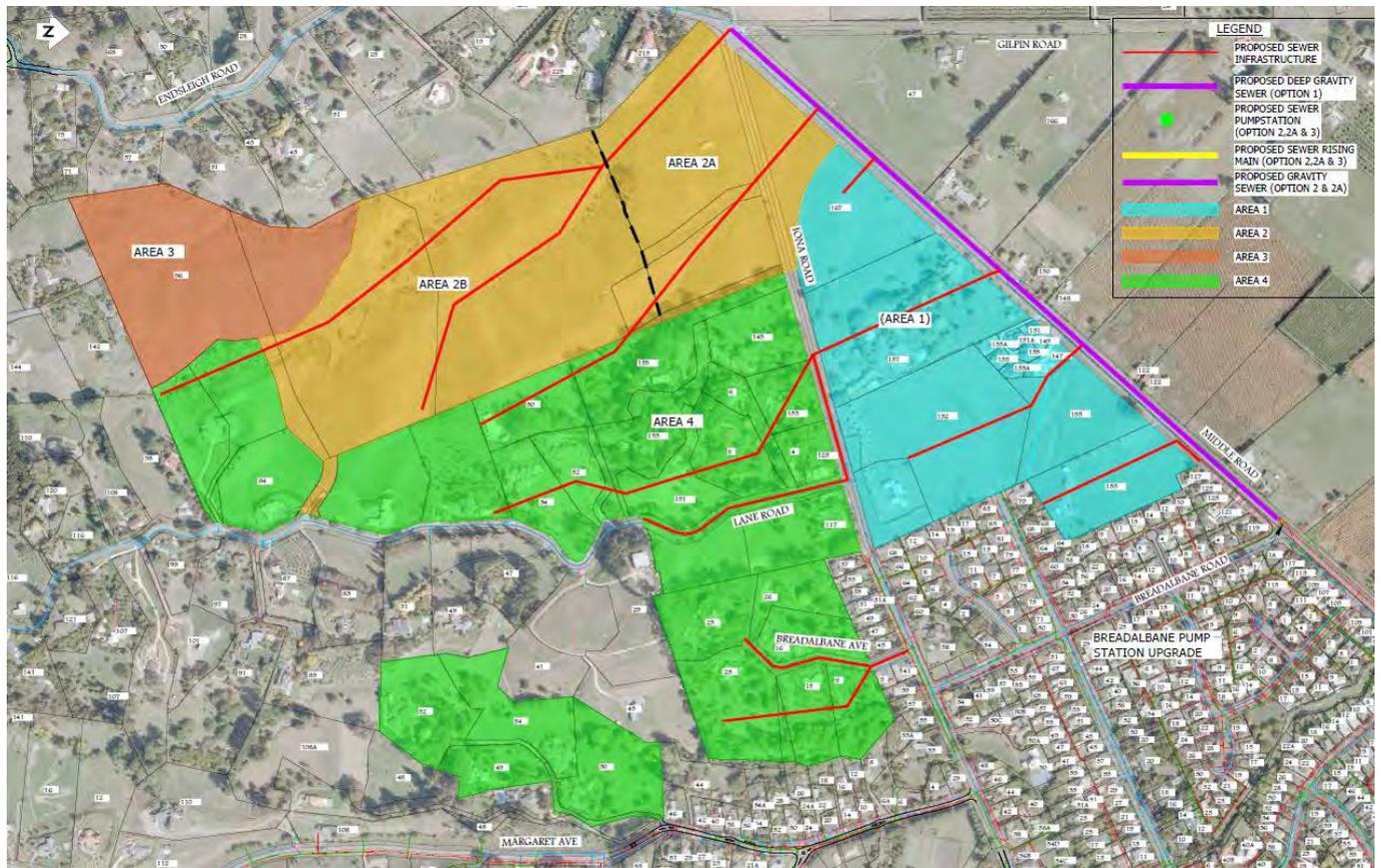


Figure 2-1: Study Area and Option 1 Middle Road Wastewater System

Notes on Figure 2-1:

1. The subzones shown will apply to all the bulk wastewater upgrade options developed in this report
2. Reticulation and bulk infrastructure shown is based on Option 1 Deep Middle Road Gravity Wastewater System (Refer Section 4.3.1)

2.2.1 Estimated Wastewater Flows

Estimated wastewater flows as peak wet weather flows (PWWFs) from the proposed development are outlined in Table 2-2 below. These are based on:

- Lot occupancy of 3.5
- Lot yields (high density scenario) from the Lowe Proposal as shown in Table 2-2 and development staging shown in Figure 2-2: and outlined Table 2-3
- Average Dry Weather Flow (ADWF) of 250 litres/person/day
- Peaking factor of 5.

Based on HDC's current strategy, the full densification scenario of the whole study area is not envisaged due to the landowners' desire to maintain lifestyle character in the Iona Hills and Lower Havelock Hills. It has been considered in Table 2-2 and Table 2-3 to provide an understanding of possible future bulk infrastructure upgrade triggers.

It is critical to allocate flows to subzones so that the wastewater servicing plan can be adapted to any changes in the pace of development.

Table 2-2: Middle Iona Lot Yield and PWWF Scenarios Per Zone

Item	Subzone	Subzone Description	Stage Figure 1 Reference	Area(Ha)	Lot Yield per Area and Stage		PWWF(L/s) per Area and Stage			
					Low Proposal	Full Densification ¹	Low Proposal			Full Densification ¹
							Stage 1	Stage 2	Stages 2A to 5	
1	Area 1	Immediate to Existing Development	Stage 1 – Middle Road ²	4.10	59	59	3.0			3.0
		Existing Middle Rd Houses	Stage 2	0.7	10	10		0.5		0.5
		Rest of Area 1 subzone	Stage 2	10.40	151	151		7.6		7.6
2	Area 2A	Rest of Area 1 subzone and adjacent Iona Hills area	Stage 2A	5.98	70	70			3.5	3.5
3	Area 2B	Iona Hills	Stage 3	14.52	40	170			2.0	8.6
4	Area 3	Iona Hills(Upper)	Stage 4	8.10	40	95			2.0	4.8
5	Remaining HPUDS (Area 4)	Immediate to Existing Zone	Stage 1- Breadalbane Avenue ³	6.00	6	90	0.3			4.6
		Isolated Zone	Stage 1 Margaret Av.	4.20	4	59	0.2			3.0
		Main Zone	Stage 5	22.57	15-30 ⁴	264			0.8-1.5 ³	13.4
	Subtotal						3.5	8.1	8.3-9.0	
	Total			76.6	395-410	968	20-20.6			49

Notes:

¹All areas developed to high density as in Area 1.

²Sum of Area 1 subzone and existing Middle Road Houses

³Stage 1 involves the development of land parcels in close proximity to existing developed areas via the existing reticulation system. Refer Figure 2-2:

⁴Lost yields are 15, 20 and 30 for low, medium and high density developments respectively and corresponding PWWFs are 0.8,1.0 and 1.5 L/s respectively

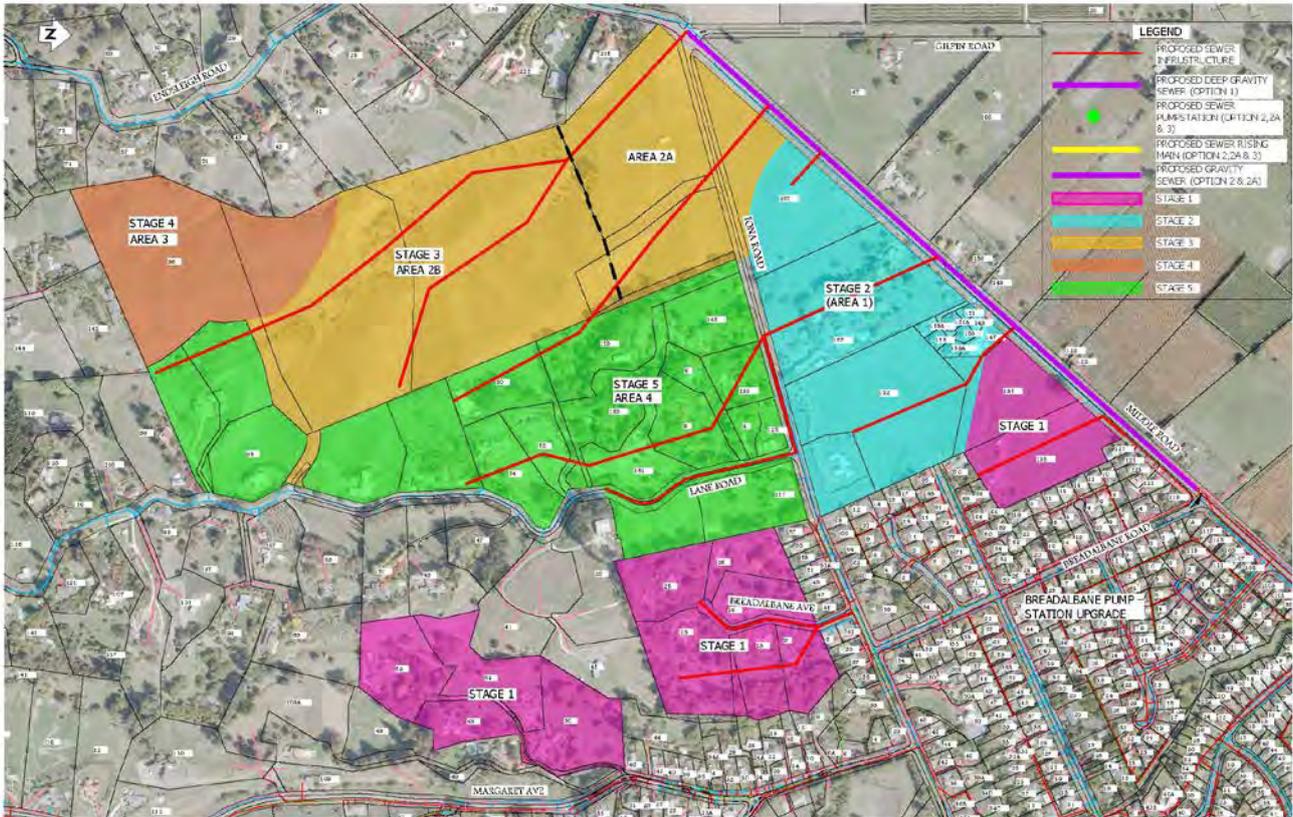


Figure 2-2: Study Area Development Staging and Option 1 Middle Road Wastewater System

Table 2-3: Estimate Wastewater Flows per Stage including Breadalbane PS Catchment

Development Stage in Order of Occurrence	Subzone	PWWF(L/s) per scenario per stage		Cumulative PWWF(L/s) per scenario	
		Low Proposal	Full Densification	Low Proposal	Full Densification
Existing ¹	Breadalbane Catchment	50	50	50	50
Stage 1 ²	Immediate to Existing Development	3.5	10.6	53.5	60.6
Stage 2 ³	Area 1 subzone	8.1	8.1	61.6	68.7
Stage 2A	Rest of Area 1 subzone and adjacent Iona Hills area	3.5	3.5	65.1	72.2
Stage 3	Iona Hills	2.0	8.6	67.1	80.8
Stage 4	Iona Hills(Upper)	2.0	4.8	69.1	85.6
Stage 5 ⁴	Remaining HPUDS	0.8-1.5	13.4	69.9-70.6	99.0
Ultimate Breadalbane	Future Breadalbane PS Catchment infill growth	30 ⁵	30 ⁵	99.9-100.6	129
Total		99.9-100.6	129		

Notes:

¹Existing Breadalbane PS sized to 50 L/s capacity

²Sum of flows from Stage 1 developments in Area 1 and Area 4. Refer Table 2-2 PWWF Stage 1 column

³Sum of flows from existing Middle Road Houses and proposed Area 1 development. Refer Table 2-2 PWWF Stage 2 column

⁴For flow range, Refer Note 3 under Table 2-2

⁵The Breadalbane PS Catchment is expected to grow through infill growth from 50 L/s current capacity to 80 L/s ultimate development

3 Existing Wastewater System

3.1 Wastewater Services within the Proposed Development

The Area 1 subzone is mostly undeveloped except for a few lots, which are serviced by small wastewater pump stations and private rising mains that transport wastewater to the existing gravity network in the existing developed area to the east of the growth zone.

3.2 Existing Receiving Bulk Infrastructure

The proposed development is expected to be serviced via the existing 50 L/s Breadalbane Pump Station (PS) and 800m rising main system. This system was commissioned recently (2011) to relieve the upper Breadalbane catchment, which used to transport wastewater via a 225mm diameter gravity route that crosses Middle Road, and pumped back to the Middle Road trunk system further down the road. This old route does not have adequate capacity to Service Middle Iona and is currently used as an emergency bypass system via an overflow weir. The features of the pump station are summarized in Table 3-1:

Table 3-1: Existing Breadalbane PS Details

Item	Infrastructure Component	Parameter	Comment
1	Pump	2xNP3153.181 MT261 pumps Duty 50 L/s ¹ and 16.8m Head operating in duty/standby mode	Pump attached in Appendix B. Switchgear is designed to allow duty/assist operation upgrading the capacity to 63 L/s (Also refer Breadalbane PS design extracts in Appendix A)
2	Rising Main	OD 280 PE100 PN12.5	Internal diameter is 238mm with pumping velocity of 1.1 m/s. Subject to surge pressure confirmation, this could be increased to say 1.6 m/s allowing for staged pump station upgrade to 80 L/s prior to rising main upgrade
3	Wet Well	3.3 m diameter	Could accommodate modest pump upgrade to say 80 l/s ²
4	Storage	Buried Pipe Storage	To be augmented according to the new total average dry weather flows.

Notes:

¹ Catchment currently developed and reserve capacity between pump capacity and sewage flows is unknown. Assumed to be fully developed to 50L/s capacity

² The existing Breadalbane PS design statement alludes to a provision made during design to upgrade the pumps to 80 L/s in future to cater for the full development of Breadalbane PS Catchment.

3.2.1 Ultimate Development

It is evident from the design statement for the existing Breadalbane PS that there was no provision for the pump station to service the Middle Iona and surrounding areas. It is therefore necessary that the future upgrade of Breadalbane PS takes into account the full development of its own catchment from 50 to 80 L/s and the proposed Middle Iona Development flows finalised by this study. However, this ultimate development of the Breadalbane catchment is unlikely to happen within the 15 to 25 year development horizon considered for Middle Iona. Bulk wastewater infrastructure upgrade options for servicing Middle Iona will therefore be developed on the basis that additional capacity generated by early low to moderate capital expenditure will be used solely for servicing the proposed Middle Iona development.

3.2.2 Catchment Inflow and Infiltration

Recent Inflow and Infiltration (I&I) studies completed by HDC established, through I&I analysis, correlation with historical overflow incidents and prediction of wastewater overflows by network modelling, that for the Breadalbane Catchment:

1. Rainfall dependent infiltration is high and there are historical I&I overflow incidents and network modelling predicted overflows to be occurring in a 1 in 5 year storm event. The Breadalbane catchment was short listed for source detection and rehabilitation works.
2. Source detection works were recommended involving
 - Night flow and wet weather observation studies be carried out to quickly isolate where any major issues are located that make sense to rehabilitate.
 - CCTV inspect main sewer pipes and laterals in catchments identified through night flow studies to have widespread infiltration issues that warrant CCTV inspection and also include small mini catchments that are identified through future flow monitoring to warrant CCTV inspection

This work could reduce the PWWFs and infiltration into the pump station catchment thus delaying some of the upgrade stages proposed in this report.

3.3 Breadalbane PS Upgrade

Based on the existing wastewater system infrastructure capacity and the flow scenarios from the Lowe Proposal, the Breadalbane PS will receive all the wastewater flows from the Middle Iona area and its associated growth areas so will need to be upgraded accordingly, in addition to the new bulk wastewater infrastructure required in Middle Road. Refer Table 3-2 for Breadalbane PS upgrade triggers. It has been assumed that Middle Iona growth will take precedence over growth within the existing Breadalbane PS catchment.

Table 3-2: Breadalbane PS Upgrades

Item	Infrastructure Description	Development Stage ¹	Low Yield	Full Densification ²
1	Flow Contribution from existing Breadalbane PS Catchment and proposed Middle Iona Catchment			
1.1	Total Middle Iona Wastewater Flow(L/s)		20.0-20.6 ⁷	49.0
1.2	Full Breadalbane PS Catchment Flow(L/s)		80.0	80.0
1.3	Future Breadalbane PS Capacity(L/s)		100.0-100.6	129.0
2	Breadalbane PS and Rising Main Upgrade Requirements, Assuming no Breadalbane Catchment Growth			
2.1	Existing Breadalbane PS Catchment- Pump Operating in Duty Standby Mode 50 L/s	Status Quo	50	50
2.2	Existing Breadalbane PS Catchment- Pump Operating in Duty Standby Mode 63 L/s	Stage 1	53.5	60.6
2.3	New Middle PS and Gravity Sewer ³	Stage 2	61.6	68.7
2.4	Breadalbane PS Upgrade –Pumps and switchgear, and storage to 80 L/s ⁴	Stage 2A	65.1	72.2
		Stage 3	67.1	80.8
		Stage 4	69.1-70.6 ⁷	See below
		Stage 5	69.9	See below

Item	Infrastructure Description	Development Stage ¹	Low Yield	Full Densification ²
2.5	Rising Main, Pumps, Switchgear and Wet Well ⁵ Upgrade or diversion into the old trunk wastewater system (100 L/s Capacity)			99
3	Breadalbane PS and Rising Main Upgrade Requirements, Assuming additional Breadalbane Catchment Growth⁶			
3.1	Rising Main, Pumps, Switchgear and Wet Well Upgrade or diversion into the old trunk wastewater system (100 L/s Capacity)	Full infill growth in Breadalbane PS Catchment	99.9-100.6 ⁷	129

Notes:

¹.In order of occurrence

²Unlikely scenario. Not considered for costing and option comparison for bulk wastewater infrastructure options

³New Middle Road bulk infrastructure required at this stage to service early phases of Middle Iona via existing Breadalbane PS operating in duty/assist mode

⁴Assuming Middle Road PS and gravity sewer collects wastewater to Breadalbane PS For alternatives such as Deep Middle Road Gravity Sewer (Option 1) and Bypass Pumping Around Breadalbane PS, the bulk infrastructure components and timing of triggers will vary.

⁶ It is uncertain whether the Breadalbane PS catchment could develop to the ultimate scenario generate PWWFs up to 80 L/s

⁷ Refer Note 3 Table 2-2 for origin of flow ranges

4 Wastewater Servicing Options

4.1 Staging

The staging of the developments, wastewater flows and triggers for bulk wastewater infrastructure upgrades are outlined in Table 4 1. The timeline for full development has been assumed to occur over a 25 year period with infrastructure upgrades completed in 15 years. However, the full development of rural zones into high density residential zones may take longer. This timeline outline will be altered to suit planned developments estimated by HDC when the information becomes available.

The development areas are shown on Figure 2-2: , Figure 4 1, Figure 4 2 and Figure 4 3. The high lot yield scenario from the Lowe Proposal is proposed for assessing infrastructure upgrade options and costs.

Table 4-1: Flow Triggers and Approximate Timeline

Development Stage	Subzone Description	PWWF(L/s) Refer Table 2 3		Trigger	Approximate Timeline for Development ¹
		Per Stage	Cumulative		
Middle Iona Developments					
1	Immediate subzones in Area 1 and Remaining HPUDS area	3.5	3.5	Duty Assist pump operation provides additional 13 L/s capacity	2016
2	Main Area 1	8.1	11.6	New Middle Road Bulk infrastructure ²	2021
2A	Remainder of Area 1 and lower Iona Hills	3.5	15.1	Pump/switchgear/storage upgrades at Breadalbane PS ³ to 80L/s duty/standby	2026(TBC)
3	Iona Hills	2.0	17.1	No further upgrades.	
4	Iona Hills(Upper)	2.0	19.1	No further upgrades.	
5	HPUDS area	1.5	20.6	No further upgrades.	2026(TBC)
Total Additional Flows	Total	20.6	20.6	Triggers assume no further growth in Breadalbane during Middle Iona Development	
Breadalbane PS Catchment Growth					
Breadalbane Catchment	Full Catchment development	30	50.6	Pump Station and rising main upgrade to 101 L/s	2031(TBC)
Existing Breadalbane PS		50	100.6		
Future Breadalbane Capacity (L/s)			100.8		

Notes:

¹HDC to confirm timing.

²Based on a standard new pump station option in Middle Road. Deep gravity sewers in Middle Road will have different timing whereby pump station, wet well and switchgear upgrades will occur upfront.

³Assuming Breadalbane PS is currently developed to a level that fully utilises the duty-standby capacity of 50L/s and Middle Iona developments will occur sooner than Breadalbane catchment infill growth. This way the additional 13 L/s capacity gained by changing pump station operation to duty/assist operation at Breadalbane and future upgrades to 80L/s will cater for the early phases and full development of Middle Iona respectively.

So far HDC has not provided a timeline for the development of each subzone. However, from zoning and subdivision and zoning progress outlined in Section 2, it is noted that the priority areas appear to be Area 1 and Area 2A.

4.2 Reticulation System

The traditional approach to the provision of wastewater services is to construct gravity wastewater systems with pump stations where gravity flow is not feasible. The terrain of Middle Iona and the other zones to the south generally falls to the Middle Road permitting the use of gravity network systems for all the reticulation sewers. Therefore the Middle Iona and the other zones to the south are serviceable by gravity reticulation systems, gravitating into a trunk wastewater system in Middle Road. Other reticulation options such as pressure sewers, vacuum sewers and on-site disposal have not been considered due to the obvious viability of the gravity network system afforded by the steep terrain.

It is also envisaged that the reticulation system will be designed and constructed by the developers so the cost estimates and options in this report focus on the bulk wastewater infrastructure only. The reticulation has been shown to enable the location of the critical connections.

4.3 Middle Road Bulk Wastewater Infrastructure Options

All the wastewater reticulation systems in the zones within the study area will collect and transport wastewater to the existing Breadalbane PS and rising main via either the existing Breadalbane reticulation system and/or the new bulk wastewater infrastructure to be constructed Middle Road. The Middle Road wastewater infrastructure could be either a pure gravity system or a combination of gravity and pumped system as follows:

- **Option 1:** Deep Gravity wastewater system and deepened Breadalbane PS obviating the need of an additional pump station in Middle Road.
- **Option 2:** New Middle Road PS, rising main and gravity wastewater system collecting wastewater from the growth areas.
- A sub-option **2A** will also be investigated involving a longer new Middle Road rising main by-passing and avoiding major upgrades at Breadalbane PS.
- **Option 3:** New Middle Road Lift Pump Station (PS) and gravity trunk wastewater collecting wastewater from all growth areas.

For all these options:

1. Small private wastewater pump stations currently servicing a small number of lots within Middle Road would be decommissioned and integrated into the new wastewater system.
2. Stage 1 flows which emanate from Area 1 and the remaining HPUDs area will be serviced via the existing infrastructure system within the developed area with minor pump upgrades.
3. The existing Breadalbane PS and Rising Main will require upgrading to provide capacity to deal with additional flows from the growth areas and growth from within its own catchment.
4. Preliminary and general items have been estimated based on additional costs for multiple establishment and disestablishment for staged construction options.
5. Based on the site knowledge gained during the recent (2011) construction works for the Breadalbane PS, we have assumed that there is no groundwater to be pumped out from the excavation site.
6. Costs estimates for the reticulation system have been excluded from the cost estimates.

4.3.1 Option 1-Deep Middle Road Gravity Wastewater System

In this option, shown in Figure 2.2, a deep gravity wastewater system will be constructed within the Middle Road corridor to service zoned areas and will transport wastewater to a new deep Breadalbane PS constructed near the existing one. Refer Appendix C for concept plans.

The existing Breadalbane PS, constructed in 2011, is nearing its full capacity of 50 L/s and was sized to cater for the existing Breadalbane PS developed catchment only. However, opportunities exist to optimise the pump station assets by carrying out staged upgrades to reach maximum possible capacity prior to upgrading the pump station structure. Such upgrades include switching to duty assist mode of pump operation to increase pump station capacity from 50L/s to 63 L/s.

Due to the deep gravity wastewater system being installed at a lower elevation than the existing Breadalbane PS wet well level invert, this option has an early trigger for major upgrades at the recently constructed Breadalbane PS so will not be able to take advantage of all the staged pump station upgrades discussed above. The upgrade trigger is reliant on the development of Area 1. In contrast, the other gravity and pumped wastewater system options have the ability to optimise the existing Breadalbane PS capacity delaying the need for major upgrades.

The main advantage offered by this option is the reduction in operation and maintenance costs due to its reliance on a gravity wastewater system all the way to the receiving Breadalbane PS.

Possible staging of the upgrades could be as outlined in the cost summary in the Table 4-2, which summarises the components of infrastructure included in the option and rough order capital cost ($\pm 30\%$). Refer Appendix D for rough order of cost details.

Table 4-2: Option 1 Staging and Rough Order of Costs

Stage	Description of Works		PWWF Per Stage (L/s) Refer Table 4 1	ROC(\$) for Bulk Wastewater Infrastructure	Comment
	New Bulk Wastewater System	Reticulation			
Current	Nil	Existing Breadalbane PS	50 L/s	\$-	No capital coats
1	Breadalbane PS Switch to Duty/Assist operation	Area 1 and remaining HPUDS immediate development zones only	Additional 3.5 L/s	\$-	No capital coats
2	Stage 2-New Middle Road Gravity Wastewater system and New Pump 100 L/s ^{1,2}	Main Area 1	Additional 8.1 L/s	\$2,007,000	Bulk wastewater infrastructure only
	Stage 2A-Nil ²	Remainder of Area 1 and adjacent Iona Hills	Additional 3.5 L/s	\$-	Bulk wastewater infrastructure only
3-5	Nil	The remainder of the growth area	Additional 5.5 L/s	\$-	No upgrades required
Ultimate	Development-Pump & rising main upgrade and storage upgrade (100 L/s)	Full Breadalbane Catchment Development	Additional 30 L/s ³	\$702,000	Pump, rising main and storage
Total			100.6 L/s	\$2,709,000	

Notes:

¹ Wet well and power supply to suit future 100 L/s but mechanicals, fittings and storage sized to 80 L/s

² Timing of upgrades deviates from Table 4-1 due to the deep Middle Road gravity sewer necessitating immediate pump station upgrade

³The Breadalbane PS Catchment is expected to grow through infill growth from 50 L/s current capacity to 80 L/s ultimate development

4.3.1.1 Commentary

The following issues should be noted to better manage the changes that may happen in the sequences in development within the various zones:

1. Option 1 issues relevant to all options considered in this study:
 - a. Upgrade of Stage 1 has been assumed to be achievable with no capital investment as the current 50 L/s duty/standby pump station capacity could be upgraded to 63 L/s by reverting to duty/assist mode. HDC to provide cold standby pump for storage by HDC operations staff.
 - b. Stage 2 relies on permitting high velocities of up to 1.6 m/s through the rising main. Detailed surge analysis is required to confirm this as it poses the risk of exposing the rising main to pipe burst issues. If not suitable for this operating scenario, the upgrade of the rising main is to be brought forward or other options that avoid higher flow pumping will be adopted. The worst case scenario has been estimated.
 - c. It has been assumed that the full development of the Breadalbane PS catchment to 80L/s sewage flows will occur after the Middle Iona development so that the additional capacity from early upgrades at Breadalbane PS will be geared for servicing Middle Iona only.
2. Issues relevant to Option 1 only:
 - a. The Deep Middle Road Gravity Sewer (Option 1) necessitates the immediate upgrade of the existing Breadalbane PS so does not afford the opportunity for staged upgrades that fully utilise the Breadalbane duty/assist capacity and pump upgrades prior to full pump station upgrades, unlike Options 2, 2A and 3.

4.3.2 Option 2 Middle Road PS and Gravity Wastewater System

This option involves an extension of the Middle Road wastewater system from Breadalbane PS by way of gravity wastewater system and a new Middle Road PS as shown in Middle Road PS and Gravity Wastewater System and new Middle Road PS as shown in Figure 4-1. Refer Appendix C for concept plans.

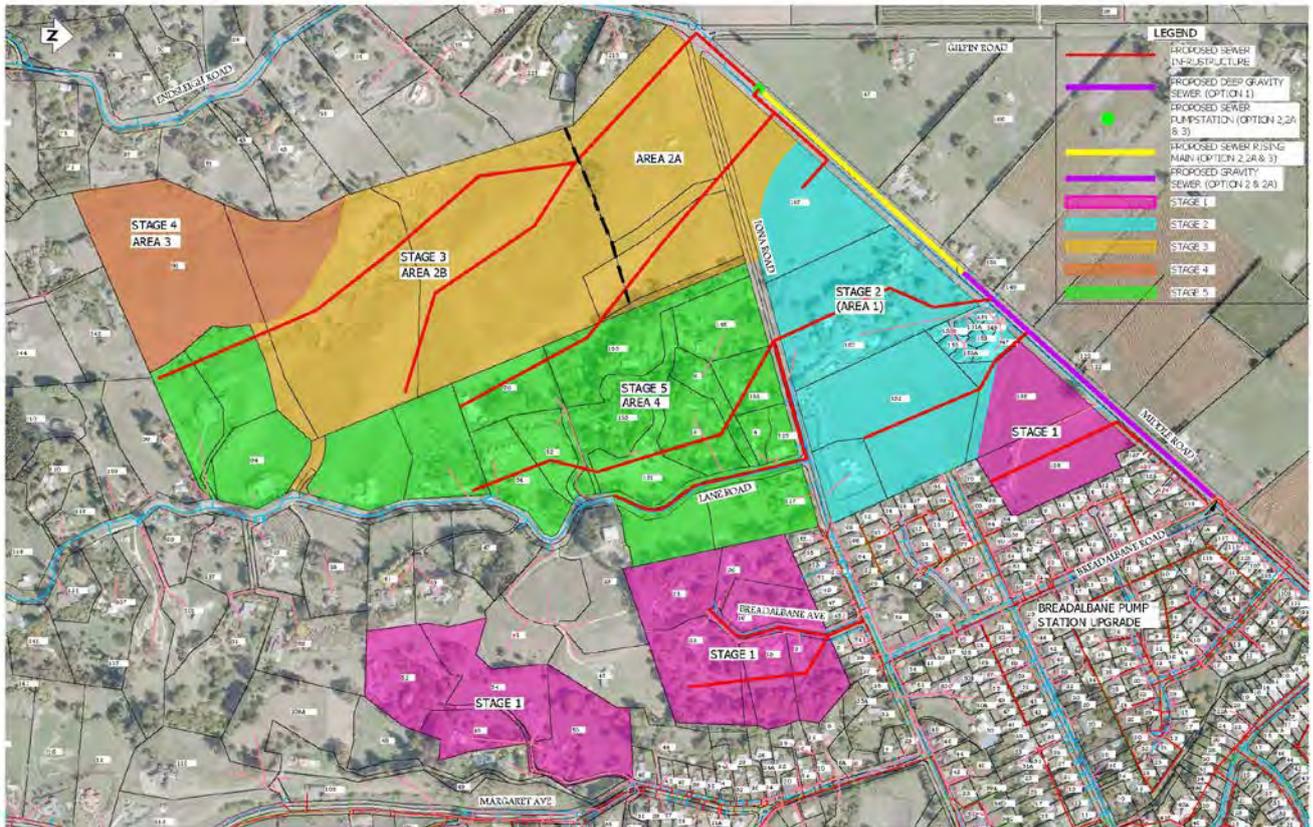


Figure 4-1: Middle Road PS and Gravity Wastewater System

The main advantage offered by this option is the ability to optimise the use of infrastructure at Breadalbane PS. The gravity wastewater system along Middle Road will be extended from Breadalbane PS to service most of Area 1 and the remaining HPUDS area. A new Middle Road PS will be required to service the remainder of Area 1 and other subzones if early development occurs. It has been assumed that both the Middle Road PS and the gravity wastewater extension will be required from the onset, thus managing the risk of sporadic development that may happen throughout Area 1 and Area 2A.

The main draw back for the option is additional operational costs arising from an additional new Middle Road PS.

Possible staging of the upgrades could be as outlined in the cost summary in Table 4 3, which summarises the components of infrastructure included in the option and rough order capital cost ($\pm 30\%$). Refer Appendix D for cost details.

Table 4-3: Option 2 Staging and Rough Order of Costs

Stage	Description of Works		PWWF Per Stage (L/s) Refer Table 4 1	ROC(\$) for Bulk Wastewater Infrastructure	Comment
	Bulk Wastewater System	Reticulation			
Current	Nil	Existing Breadalbane PS	50 L/s	\$-	No capital coats
1	Pump upgrades	Area 1 and Remaining HPUDS area initial development	Additional 3.5 L/s	\$-	Duty mode assist
2	Stage 2-Middle Road PS(10 L/s) ¹ & Rising Main and Gravity Wastewater System ³	Main Area 1	Additional 8.1L/s	\$1,046,000	Bulk wastewater system only
	Stage 2A-Breadalbane PS Upgrade- Pump(80L/s), storage and switchgear ^{2,3}	Remainder of Area 1 and adjacent Iona Hills	Additional 3.5L/s	\$668,000	Bulk wastewater system only
3-5	-	The remainder of the growth area	Additional 5.5 L/s		
	Full Breadalbane Development- Pump & rising main upgrade and storage upgrade (100 L/s)	Full Breadalbane Catchment Development	Additional 30L/s ⁴	\$914,000	Pump, rising main and storage
Total			100.6/s	\$2,628,000	

Notes

¹Sized to cater for land parcels that cannot directly gravity feed to existing Breadalbane PS Catchment reticulation.

² Utilising existing wet well

³ Upgrade triggers as outlined in Table 4-1

⁴The Breadalbane PS Catchment is expected to grow through infill growth from 50 L/s current capacity to 80 L/s ultimate development

Similar issues to Option 1 apply to infrastructure upgrades as outlined in Section 4.3.1.1.

4.3.2.1 Option 2a –Variation to Option 2

A variation of Option 2 was considered involving a long rising main by-passing the existing new Breadalbane PS, to discharge either at the same manhole with the existing Breadalbane Rising main. This obviates the need for major Breadalbane PS upgrades but results in increased energy costs from the long rising main. Refer Figure 4-2 for the concept plan and Table 4-4 for the cost summary.

This option counters the need to upgrade the Breadalbane rising main which occurs if the existing Breadalbane PS catchment is fully developed in addition to the Middle Iona development.

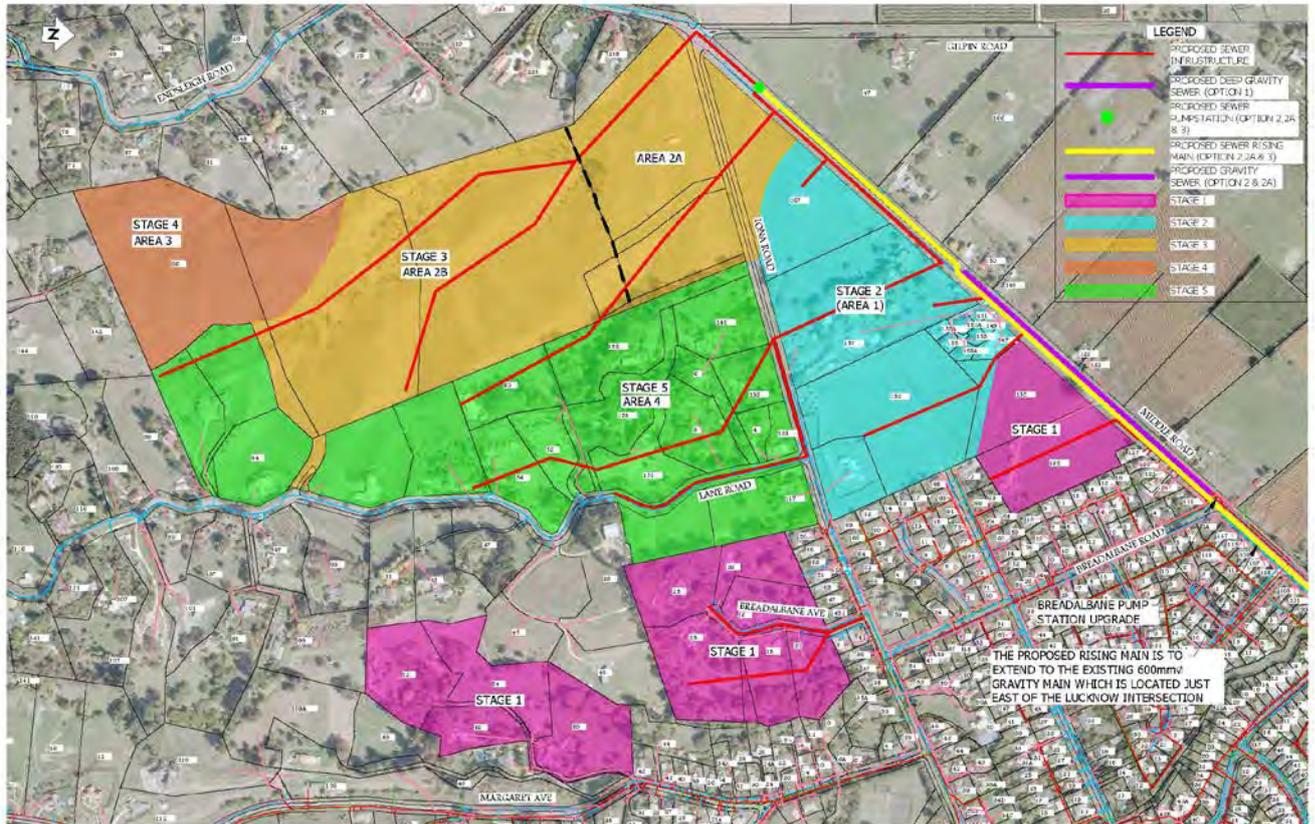


Figure 4-2: Option 2A Plan

Table 4-4: Option 2a Staging and Rough Order of Costs

Stage	Description of Works		PWWF Per Stage (L/s) Refer Table 4 1	ROC(\$) for Bulk Wastewater Infrastructure	Comment
	Bulk Wastewater System	Reticulation			
Current	Nil	Existing Breadalbane PS	50 L/s	\$-	No capital coats
1	Pump upgrades to 63 L/s via duty/assist operation	Area 1 and Remaining HPUDS area initial development	Additional 3.5 L/s	\$-	Duty assist mode
2	Stage 2-Middle Road PS(17L/s) ¹ Rising Main & Gravity Wastewater system	Main Area 1	Additional 8.1L/s	\$1,906,000	Bulk wastewater system only
	Stage 2A-Nil	Remainder of Area 1 and adjacent Iona Hills	Additional 3.5L/s		Bulk wastewater system only
3-5	-Nil	The remainder of the growth area	Additional 5.5 L/s		
	Pump & switchgear and storage upgrade (80 L/s) ²	Full Breadalbane Catchment Development	Additional 30L/s ³	\$648,000	Pump, rising main and storage
Total			100.6/s	\$2,554,000	

Notes

¹Sized to optimise gravity flow to the Middle Road PS for pumping directly to the discharge of Breadalbane RM, bypassing Breadalbane PS

²Most of Middle Iona flows will bypass Breadalbane PS so will have capacity to service Breadalbane ultimate development

³The Breadalbane PS Catchment is expected to grow through infill growth from 50 L/s current capacity to 80 L/s ultimate development

4.3.3 Option 3 Middle Road Lift PS and Gravity Wastewater System

This option is similar to Option 2 except for the new pump station which is replaced by a lift pump station.

As in Option 2, this option involves an extension of the Middle Road wastewater system from Breadalbane PS by way of gravity wastewater system and a new Middle Road Lift PS as shown in Figure 4. Refer Appendix C for concept plans.

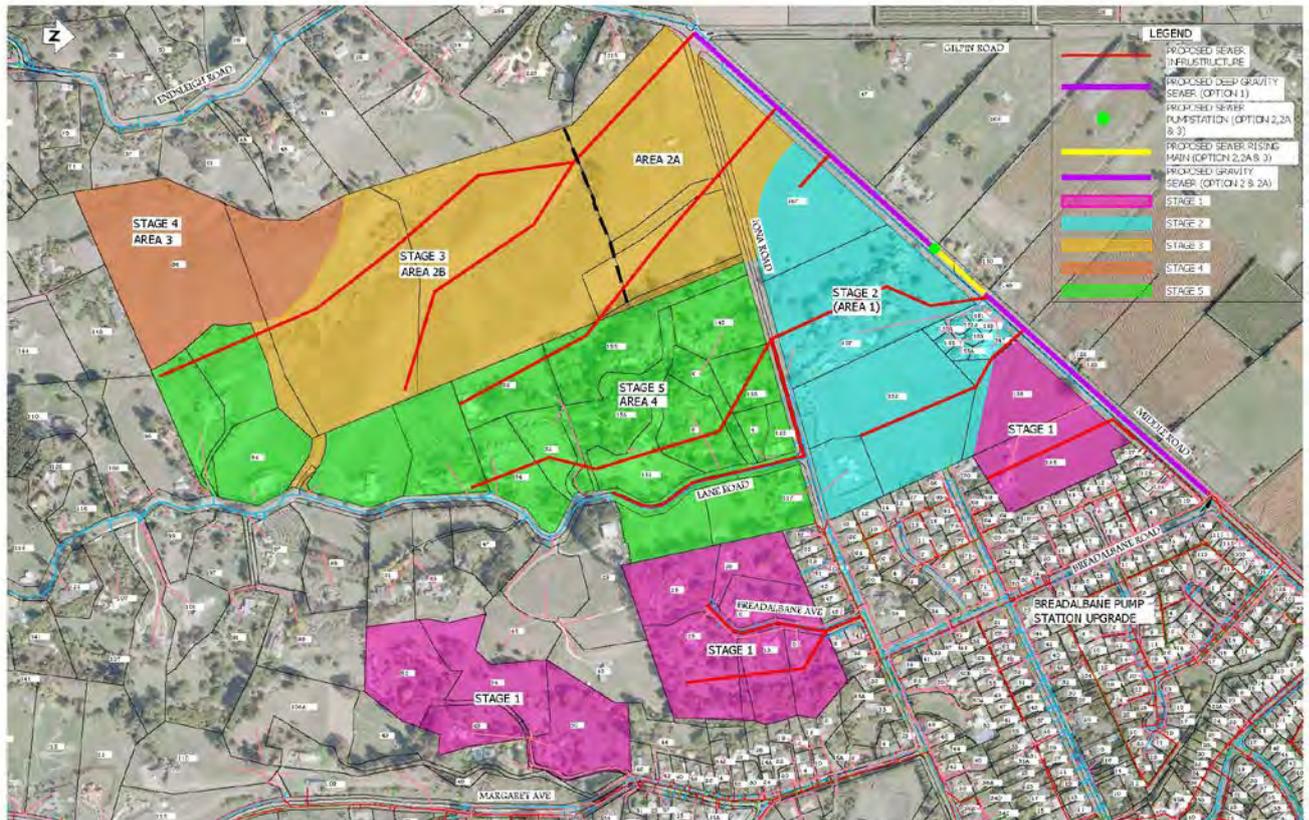


Figure 4-3: Middle Road Gravity Wastewater System and Lift Station

For details on features, advantages, disadvantages and staging refer to the Option 2 notes in Section 4.3.2.

Possible staging of the upgrades could be as outlined in the cost summary in Table 4 5, which summarises the components of infrastructure included in the option and rough order capital cost ($\pm 30\%$). Refer Appendix D for cost details.

Table 4-5: Option 3 Staging and Rough Order of Costs

Stage	Description of Works		PWWF Per Stage (L/s) Refer Table 4 1	ROC(\$) for Bulk Wastewater Infrastructure	Comment
	Bulk Wastewater System	Reticulation			
Current	Nil	Existing Breadalbane PS	50 L/s	\$-	No capital coats
1	Pump upgrades	Area 1 and Remaining HPUDS area initial development	Additional 3.5 L/s	\$-	Duty assist mode
2	Stage 2-Middle Road PS(10 L/s) ¹ & Rising Main and Gravity Wastewater System ³	Main Area 1	Additional 8.1L/s	\$1,236,000	Bulk wastewater system only
	Stage 2A-Breadalbane PS Upgrade- Pump(80L/s), storage and switchgear ^{2,3}	Remainder of Area 1 and adjacent Iona Hills	Additional 3.5L/s	\$666,000	Bulk wastewater system only
3-5	-	The remainder of the growth area	Additional 5.5 L/s		
	Full Breadalbane Development- Pump & rising main upgrade and storage upgrade (100 L/s)	Full Breadalbane Catchment Development	Additional 30L/s ⁴	\$911,000	Pump, rising main and storage
Total			100.6/s	\$2,813,000	

Notes

¹Sized to cater for land parcels that cannot directly gravity feed to existing Breadalbane PS Catchment reticulation.

² Utilising existing wet well

³ Upgrade triggers as outlined in Table 4-1

⁴The Breadalbane PS Catchment is expected to grow through infill growth from 50 L/s current capacity to 80 L/s ultimate development

4.3.4 Discussion of Options

Based on Net Present value (NPV) of capital costs, Option 2 is the least cost option followed by Option 2A. Option 1 and Option 3 have the highest capital costs. Refer Table 4-6 for capital cost summary. Option 2A and Option 2 better fulfill HDC's main driver to provide wastewater services that meet future growth of the Middle Iona and surrounding zones, whilst providing opportunities for staged integration. They both require the least investment.

Table 4-6: Capital Costs

Stage	Estimated Expenditure Year from Today**	Capital Costs			
		Option 1	Option 2	Option 2A	Option 3
1	2016	\$-	\$-	\$-	\$-
2	2021***	\$2,007,000	\$1,046,000	\$1,906,000	\$1,236,000
	2021-2026	\$-	\$668,000	\$	\$666,000
Upgrades for Full Breadalbane PS Catchment Development	2031	\$702,000	\$914,000	\$648,000-	\$911,000
Capital Costs		\$2,709,000	\$2,628,000	\$2,554,000	\$2,813,000
Write Off Costs+		\$300,000	\$-	\$-	\$-
Total Capital Costs		\$3,009,000	\$2,628,000	\$2,554,000	\$2,813,000
Net Present Value of Capital Costs++		\$2,209,000	\$1,722,000	\$1,821,000	\$1,867,000

+Pump station to be decommissioned. Write off costs to be confirmed by HDC

** To be confirmed by HDC. Developed for the purposes of developing an Net Present value for capital expenditure spread over a 15 year period

++ 2016 values based on an inflation rate of 2.5% and discount rate 6.5%

*** Middle Road bulk infrastructure to allow development to start in Area 1(Middle Iona Triangle), utilising Breadalbane PS capacity unlocked by changing operation to duty/assist.

Option 2A would involving a longer rising main has been considered for costing purposes. It obviates the need to upgrade Breadalbane PS beyond 80 L/s by pumping most of the Middle Iona flows directly to the Breadalbane RM discharge manhole , passing the existing pump station.

Option 1 offers reduced operational savings due to there being no additional pump stations as in other options. This implies lower maintenance costs in comparison with the other 3 options. Maintenance costs for the other options are similar, due to them having the same number of pump stations in the network. For comparison purposes, the annual maintenance costs have been assumed to be \$5,000 for Option 1 and \$10,000 for the other options.

All four options result in additional energy costs due to additional pumped flow and heads. Energy comparison is an estimate based on 4.8 hours pumping per day, energy cost of 15c per kWh. Option 3 provides least cost energy and Option 2A the highest due to its long rising main. Options 1 and 2 have higher additional energy costs than Option 3 due to a large pumped flow and higher friction head respectively.

Table 4-7: Operation and Maintenance (O&M) and Net Present Value (NPV) Costs

Item	Total Energy Comparison			
	Option 1	Option 2	Option 2A	Option 3
Breadalbane PS Power Required(kW) *	87	48	35	48
Middle Road PS Power Required(kW)*	-	5.2	21.6	2.4
Total Power Required(kW)	87	53.2	56.6	50.4
Annual Energy Estimate (kWh)**	152,424	93,206	99,163	86,542
Annual Energy Costs	\$22,863	\$13,980	\$14,874	\$12,982
Maintenance Costs	\$5,000	\$10,000	\$10,000	\$10,000
Total Operation and Maintenance Costs	\$27,863	\$23,980	\$24,874	\$22,982
NPV of O& M Costs	307,000	264,000	\$274,000	\$253,000
Capital Costs	\$3,009,000	\$2,628,000	\$2,554,000	\$2,813,000
NPV of Capital Costs	\$2,209,000	\$1,722,000	\$1,821,000	\$1,867,000
Total NPV Costs	\$2,516,000	\$1,986,000	\$2,095,000	\$2,120,000

**Based on proposed systems power calculated from duty flow and head with and an assumed wire to water efficiency (60%)

Option 1 suffers a drawback in that it does not offer the full flexibility in the staging of upgrades for the existing Breadalbane PS. Its deepened Middle Road gravity pipes required to service Middle Iona in Stage 2 of developments will require an immediate upgrade of the pump station structure, pumps and switchgear. This is unlike Options 2 and 3, which utilize a shallow gravity pipes in Middle Road which can be serviced by the existing Breadalbane PS at its current level, so could stage upgrades into pump, pump station then rising main upgrade in that order if development happens logically away from the existing development

In considering total NPV costs as outlined in Table 4 7, Option 2 has least total cost requirements. It is recommended for adoption as the preferred option. It is also noted that if development within Middle Iona and infill growth within Breadalbane PS Catchment become sporadic, Option 2A would be similar to Option 2 and warrants further investigations.

5 Conclusion

Wastewater flows from the lot yield scenarios developed by the landowner (Lowe) were used as the basis for this report. The highest lot yield scenario will generate approximately 21 L/s when fully developed as per desired densities, and connected to the Middle Road Bulk wastewater system.

Options were considered for bulk wastewater infrastructure in Middle Road and:

1. The preferred Option 2 involves a new Middle Road PS discharge wastewater which flows into a new Middle Road gravity system which in turn discharges into the existing Breadalbane PS.
2. A deep gravity system (Option 1) in Middle Road is feasible but results in high NPV costs due to write off costs for the Breadalbane PS as a result of to the need to replace it.

This report identified that both subzones Area 1 and remaining HPUDS area have parcels of land that are located in close proximity to the existing Breadalbane PS gravity wastewater network, which could be serviced readily through the existing network without significant infrastructure investments. At most, the upgrade required would involve changing the mode of operation from duty/standby to duty/assist at only minor additional cost. This will provide an additional 13 L/s capacity.

In addition to servicing the areas adjacent to the existing Breadalbane reticulation, the duty assist operation could also service most of Area 1 provided the Middle Road bulk infrastructure, involving a new pump station, rising main and gravity sewers, is installed at a ROC of 1,046M.

Developments in Area 2A and Area 3 will trigger major Breadalbane pump station upgrades involving upsizing of pumps, switchgear and storage as follows:

1. Upgrade Breadalbane PS at a ROC of \$668,000 as follows:
 - a. Switchgear upgrades to cater for future 100 L/s pumps
 - b. Pump upgrades to 80 L/s duty/standby capacity utilising the existing wet well and rising main
 - c. Storage upgrades to 80 L/s capacity.
2. Upon the full development of Iona and triggered by the need to fully develop the existing Breadalbane PS Catchment, upgrade the sewer rising main, wet well, pumps and storage to 100 L/s at a ROC of \$914,000.

It has been assumed that the Middle Iona infrastructure will be required in 2021 provided initial development until then is limited to areas that could be serviced via the existing sewer reticulation system in the Breadalbane catchment.

It is recognised that the inherent risk with the strategy adopted in this report emanates from:

- Unknown rates of development within both the new Middle Iona Catchment and the existing Breadalbane PS catchment
- Their competition for the reserve capacity that could be unlocked by early low investment options.

The worst case scenario would emanate from sporadic development in both catchments in which case the estimated capital cost of \$2.7 will be required upfront and the alternative Option 2A will warrant further consideration due to its similar NPV costs to Option 2.

However, it is also noted that the full densification of the existing Breadalbane PS catchment, as predicted in the original design statement, is unlikely to happen within the 25 year timeline considered for full Middle Iona development.

6 Recommendation

It is recommended that:

- Option 2 is adopted for servicing Middle Iona, Breadalbane PS Catchment and other zones to the south and a budget of \$2.7M be reserved for implementation of the option over a 10 to 15 year period.
- Should the actual pace of development of the zones be different to the assumed rate and timing in this report, the staging be changed to suit. The budget remains the same but expenditure will occur sooner or later than the stages assumed in this report.
- HDC liaises with land developers to establish development timelines for each subzone in Middle Iona and infill growth in the Breadalbane PS Catchment.
- HDC confirms the assumption on the timing of the developments and preferred infrastructure upgrade option if development occurs in a sporadic pattern.

Appendix A Existing Breadalbane Pump Station Design Details

1 Introduction

The following sections are extracts from the Design Statement for the Breadalbane Pump Station to provide background information on the pump station servicing basis including catchments, allowance for growth and capacity.

2 Design Standards

2.1 General

The following design standards have been used for preliminary design and will also apply to detailed design:

- NZS 4404:2010 – Land Development and Subdivision Infrastructure
- Hastings District Council Engineering Code of Practice
- WSA 04-2001 Sewage Pumping Station Code of Australia

2.2 Design Parameters

The following key design parameters have been used, generally in accordance with the above standards.

Table 2-1 : Preliminary Design Flow Parameters

Development Land Type	Average Lot Size	Design Peak Wet Weather Flow (L/s/ha)
General Residential	0.04	0.4
Future Residential	0.04	0.4
Future Residential	0.07	0.4
Rural Residential	1.00	0.05
Rural - Farm Park	0.25	0.15
Rural	20.0	0.05

The above parameters have been agreed with HDC and form the basis of the design flow rates presented later in this report. Comparison of the peak flow rate per hectare has been carried out in terms of the recommended parameters from NZS4404:2010 as follows:

- Wastewater flow allowance – 180-250 litres per person per day
- Peak flow factor – 2.5 (NZS4404)
- Infiltration and Inflow factor – 2.0 (NZS4404)
- Population Equivalent – 2.5-3.5 persons per dwelling

With the exception of rural farm parks, it is assumed that 25% of the developable area is lost to roads and reserves for the purpose of determining the number of dwellings per hectare. Rural farm parks stipulate that 75% of the area cannot be developed.

Peak flow and rainfall factors remain constant as stated above.

3 Areas to be Serviced and Sewage Flows

The following methods of catchment and flow assessment have been carried out and compared:

- Current – Allows for current development as shown in the District Plan.
- Farm Parks – Adjustments made to allow for development of catchments 38 & 44 as Farm Parks.
- Farm Parks & 25, 28, 31 – Allows for a combination of farm park and residential development.
- Catchments 25, 28, 31 as residential – Allows for areas nominated by HDC to be included in the assessment. Note: does not include all areas shown in District Plan Appendix 2.4-1.
- HDC Map – based on the future density map supplied by HDC.
- Fully developed catchment – Includes all additional catchments, and an maximum development density.

The following table summarises the outcome of the various assessments.

Table 3-1 : Design Flows

Method	PWWF (L/s)
HDC District Plan – Current	45
HDC District Plan - Farm Parks	43
HDC District Plan - Farm Park & 25, 28, 31 res	45
HDC District Plan - 25, 28, 31 residential	47
HDC Future Density - HDC Map	56
HDC Fully Developed Catchment	79

The average peak wet weather flow rate from the various assessments is 52.5 L/s. The median flow rate is 46 L/s. For the purpose of preliminary design a design peak wet weather flow rate of 50 L/s has been adopted.

The maximum estimated design peak wet weather flow rate of 79 L/s will not be specifically designed for, however it is considered in relation to the effect such flows would have on future options.

4 Pump Station

4.1 Location

It has not been possible to secure private land adjacent to the Herehere Stream option as detailed in the Herehere Pump Station and Rising Main, June 2009 report. However, it is possible to utilise the road reserve in Middle Road to construct a pump station that will service flows from Breadalbane Road, Grant Street and Palmerston Road.

This pump station will have a limited design horizon and is expected to be an interim pumpstation until development requires a larger pumpstation for ultimate catchment development (Maximum Possible Development - MPD). As such the scale of this pump station is significantly less than that proposed for the Iona Road pump station (Refer to The Herehere Pump Station and Rising Main Concept Design Report May 2008).

With the exception of generator storage, no building structures are proposed and the minimum volume of overflow storage will be provided. A backup generator will be provided for backup power provision. Above ground structures will be limited to telemetry and control cabinets.

4.2 Pump Station Capacity

The following table summarises the design flows which will be applied to the pump station design.

Table 4-1 : Pump Station Design Flows

Catchment	ADF	PDF	PWWF
<i>Estimated development</i>	10	25	50
<i>Maximum possible development</i>	16	40	80

The pump station design will focus on the estimated development flow values presented above. Maximum possible development and the effects of those flows on the pump station will be considered in terms of storage, overflow and the future use of the proposed rising main.

4.2.1 Pump Regime

Several regime options have been considered to meet the estimated development flows, as tabulated below;

Option	# Pumps	Pump 1	Pump 2	Pump 3	Pump 4
1	2	Duty - PWWF	Standby - PWWF		
2	2	Duty - PWWF	Duty - ADWF		
3	3	Duty - PWWF	Duty - ADWF	Standby - ADWF	
4	2	Duty - PWWF	Duty - PDWF		
5	4	Duty - PWWF	Standby - PWWF	Duty - ADWF	Standby - ADWF

Option 1 is recommended and has been progressed to detailed design.

Option 1 involves installing two pumps each sized for peak wet weather flow. The pumps would operate in a duty-standby capacity with alternating duty. The second pump could be set up to operate as an assist pump either initially or later on if the estimated development flows are exceeded.

This option has the benefit of not requiring storage or overflow capability in the event of failure of the duty pump because the standby pump is also sized for PWWF.

Other risks to the pumpstation include:

1. Power failure, this can be remedied with a generator
2. Cabinet failure, provision for storage and overflow required
3. 2x pump failure, provision for storage and overflow required
4. Rising main failure, provision for storage and overflow required

These risks are discussed in further in section 5.6.3.

4.2.2 Pump Selection

Based on Option One of a duty (PWWF) standby (PWWF) pump arrangement the pumps below have been selected. Pump selection is based on a rising main aged roughness of 1.5mm.

Table 4-2 : Pump Selection

Option	Duty Pump	Standby Pump 1
1	Flygt NP3153.181 MT with a 261mm Impellor (PWWF) - 13.5 kW	Flygt NP3153.181 MT with a 261mm Impellor (PWWF) - 13.5 kW

4.2.3 Maximum Possible Development / Future Capacity

The proposed option is not designed for the maximum possible development of the serviced catchments. However Option One is the most flexible option in terms of operation and upgrade. While designed for 50 L/s in a duty-standby regime, if operated in a duty-assist regime the pump station will discharge 62.5 L/s which with a suitable amount of buffer storage to cater for increased development in the future.

Where buffer storage is not available or not desirable, the pumps may be upgraded to NP3202 HT units utilising the same 150mm discharge pipework as the NP3153 pumps.

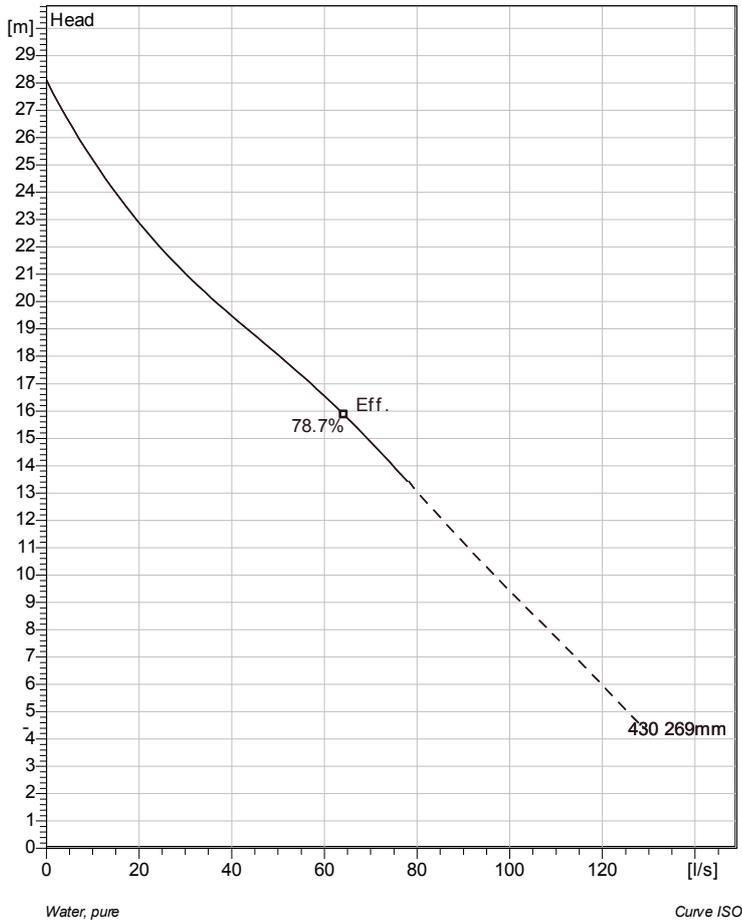
The following table is a summary of the upgrade path for Option 1.

Table 4-3: Option 1 Upgrade Path

Scenario	Pump	Regime	Design Discharge
Initial Install	2 x NP3153, 13.5 kW	Duty-Standby	50 L/s
Interim Upgrade	2 x NP3153, 13.5 kW	Duty-Assist	62.5 L/s
Ultimate Development (MPD)	2 x NP3202, 37 kW	Duty-Standby	80 L/s

Appendix B Existing Breadalbane Pump Curves

NP 3153 MT 3~ 430 Technical specification



Note: Picture might not correspond to the current configuration.

General

Patented self-cleaning semi-open channel impeller, ideal for pumping in waste water applications. Possible to be upgraded with Guide-pin® for even better clogging resistance. Modular based design with high adaptation grade.

Impeller

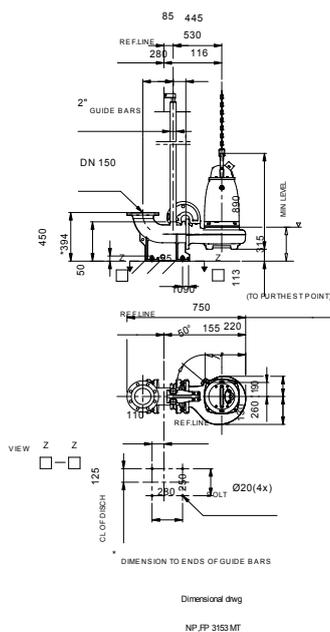
Impeller material	Grey cast iron
Discharge Flange Diameter	150 mm
Inlet diameter	150 mm
Impeller diameter	269 mm
Number of blades	2

Motor

Motor #	N3153.181 21-18-4AA-W 13.5KW
Stator variant	2
Frequency	50 Hz
Rated voltage	400 V
Number of poles	4
Phases	3~
Rated power	13.5 kW
Rated current	27 A
Starting current	145 A
Rated speed	1455 1/min
Power factor	
1/1 Load	0.84
3/4 Load	0.79
1/2 Load	0.68
Efficiency	
1/1 Load	86.5 %
3/4 Load	88.0 %
1/2 Load	88.5 %

Configuration

Installation: P - Semi permanent, Wet



Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

NP 3153 MT 3~ 430

Performance curve

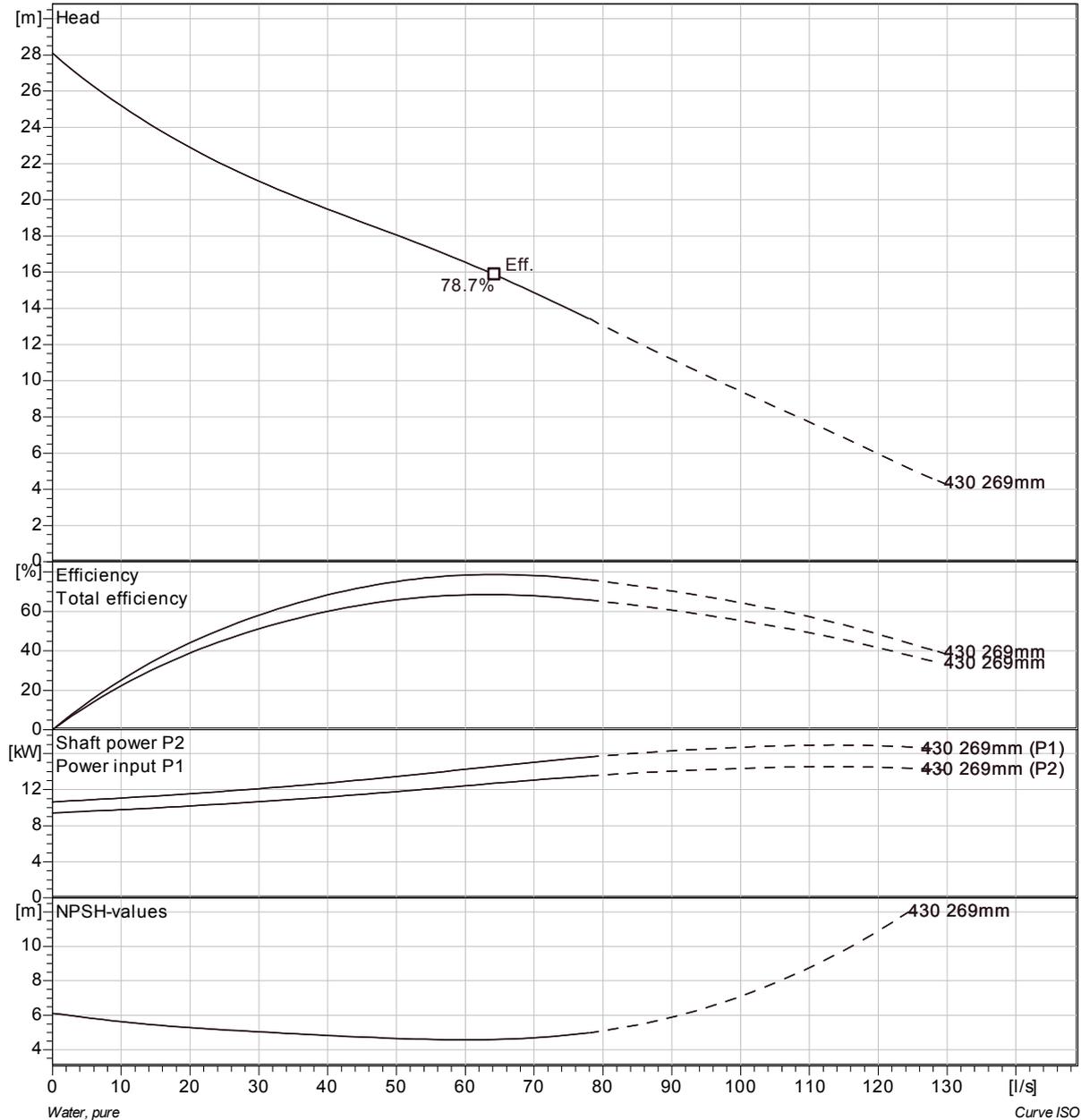
Pump

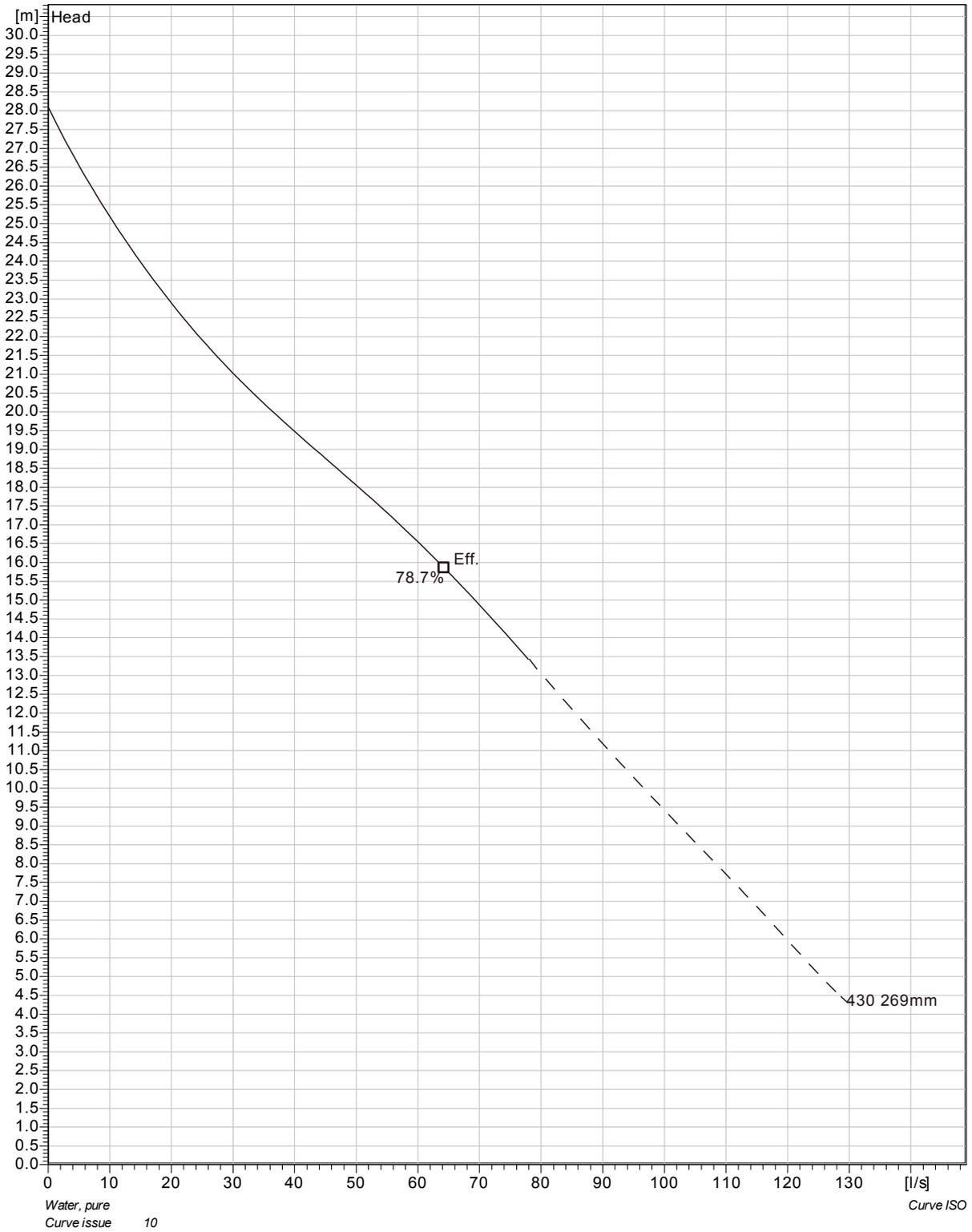
Discharge Flange Diameter 150 mm
 Inlet diameter 150 mm
 Impeller diameter 269 mm
 Number of blades 2

Motor

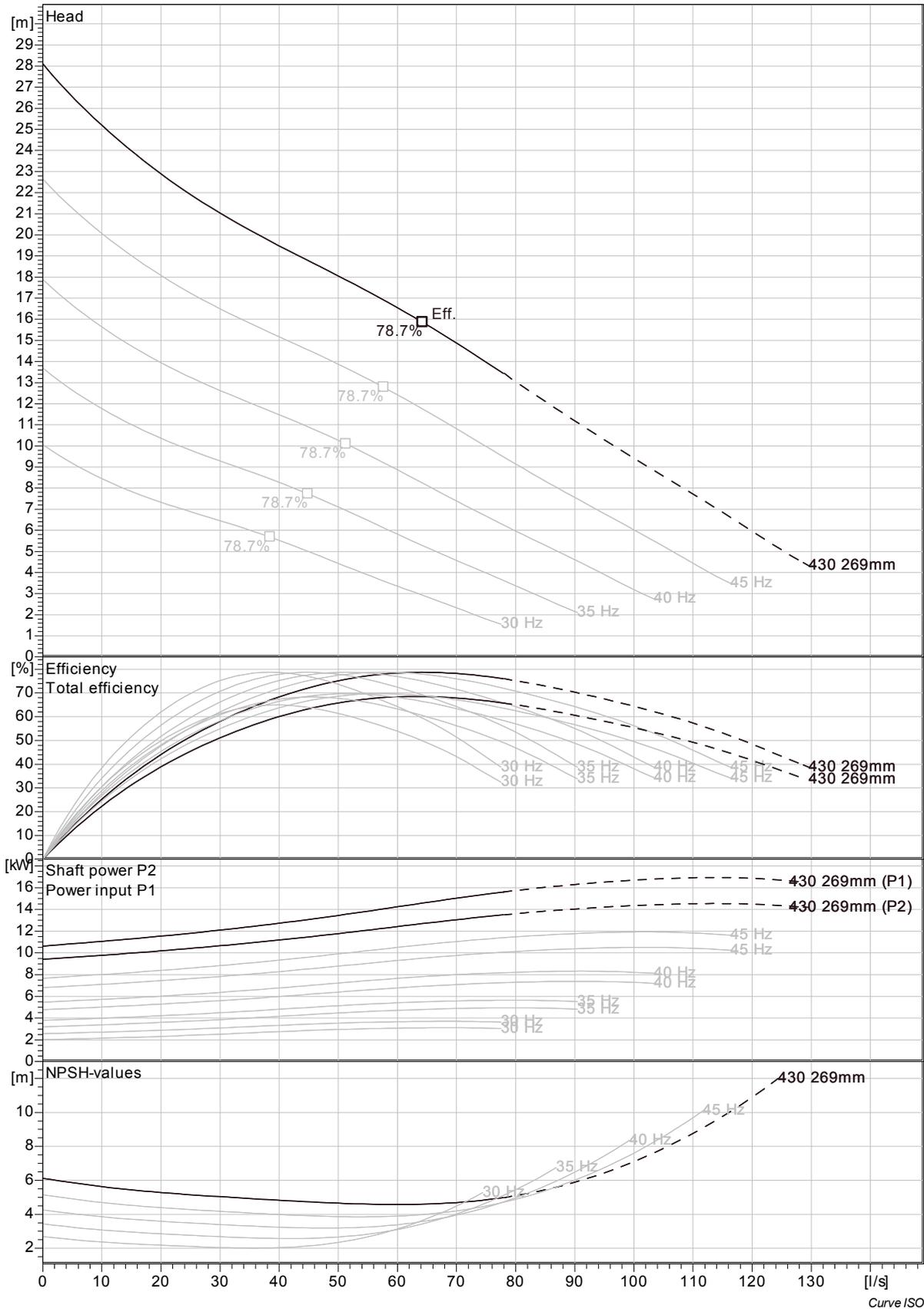
Motor # N3153.181 21-18-4AA-W 13.5KW
 Stator variant 2
 Frequency 50 Hz
 Rated voltage 400 V
 Number of poles 4
 Phases 3~
 Rated power 13.5 kW
 Rated current 27 A
 Starting current 145 A
 Rated speed 1455 1/min

Power factor
 1/1 Load 0.84
 3/4 Load 0.79
 1/2 Load 0.68
 Efficiency
 1/1 Load 86.5 %
 3/4 Load 88.0 %
 1/2 Load 88.5 %

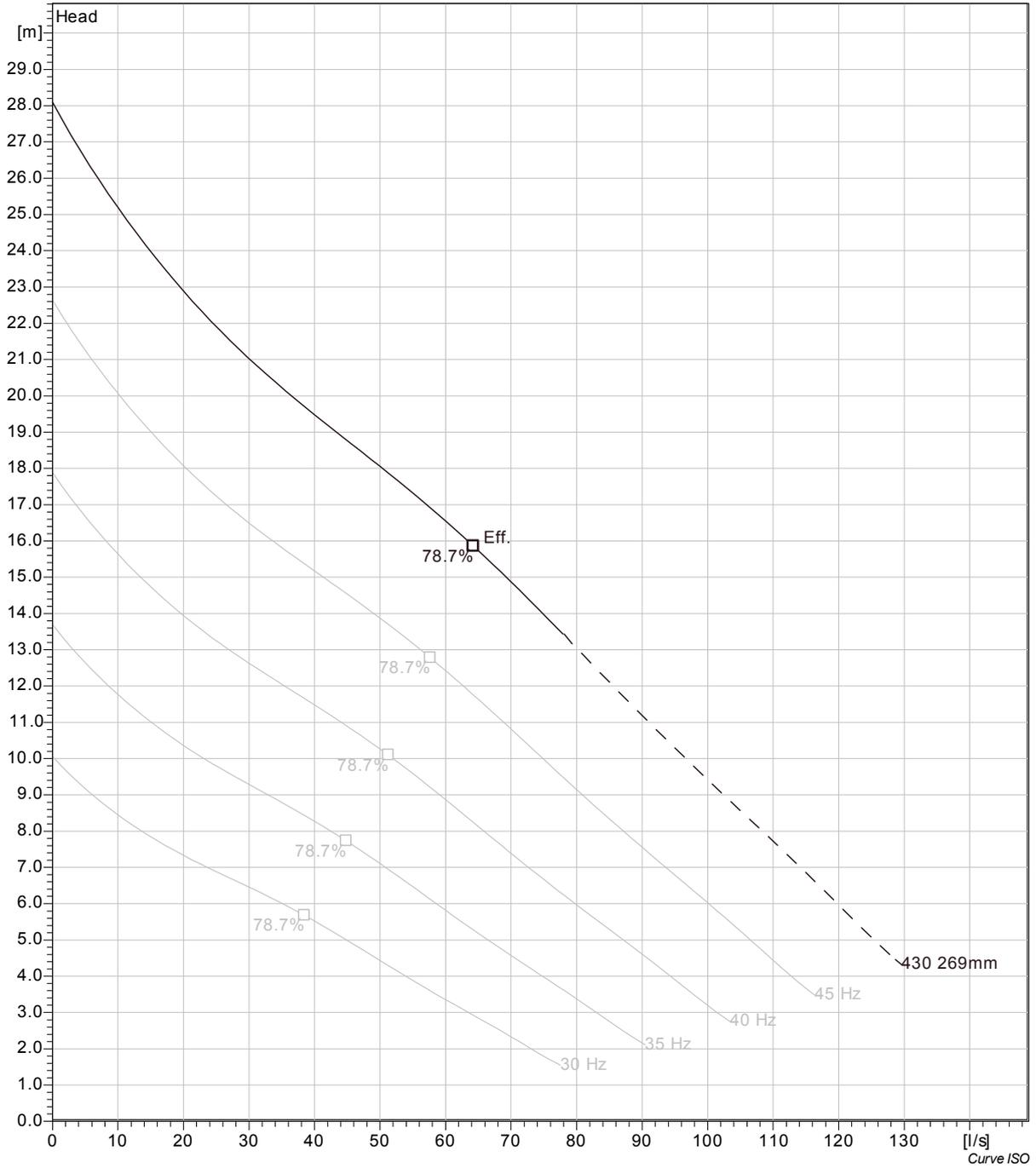




Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

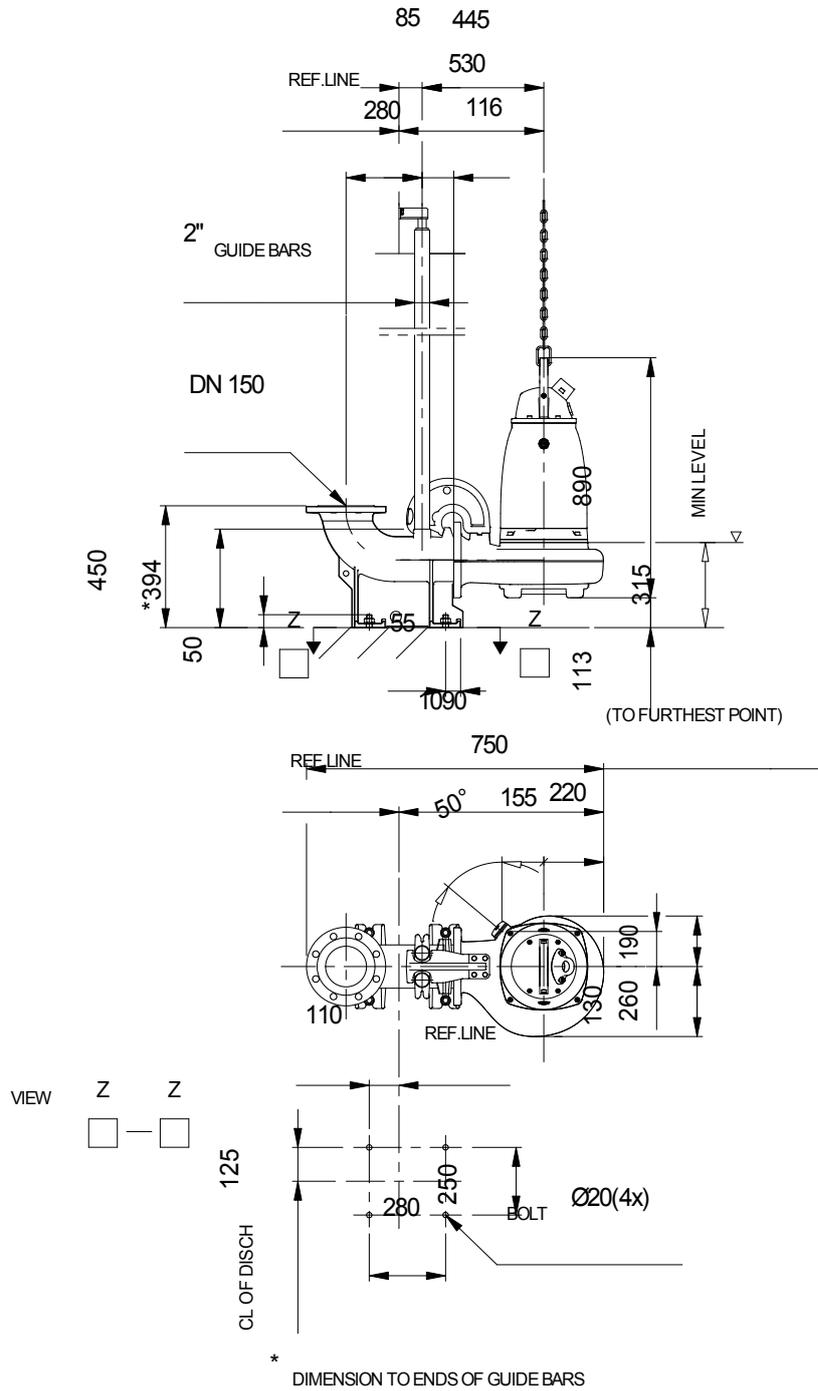


Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	



Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

NP 3153 MT 3~ 430 Dimensional drawing



Dimensional drwg

NP,FP 3153 MT

Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

NP 3153 MT 3~ 430

Performance curve

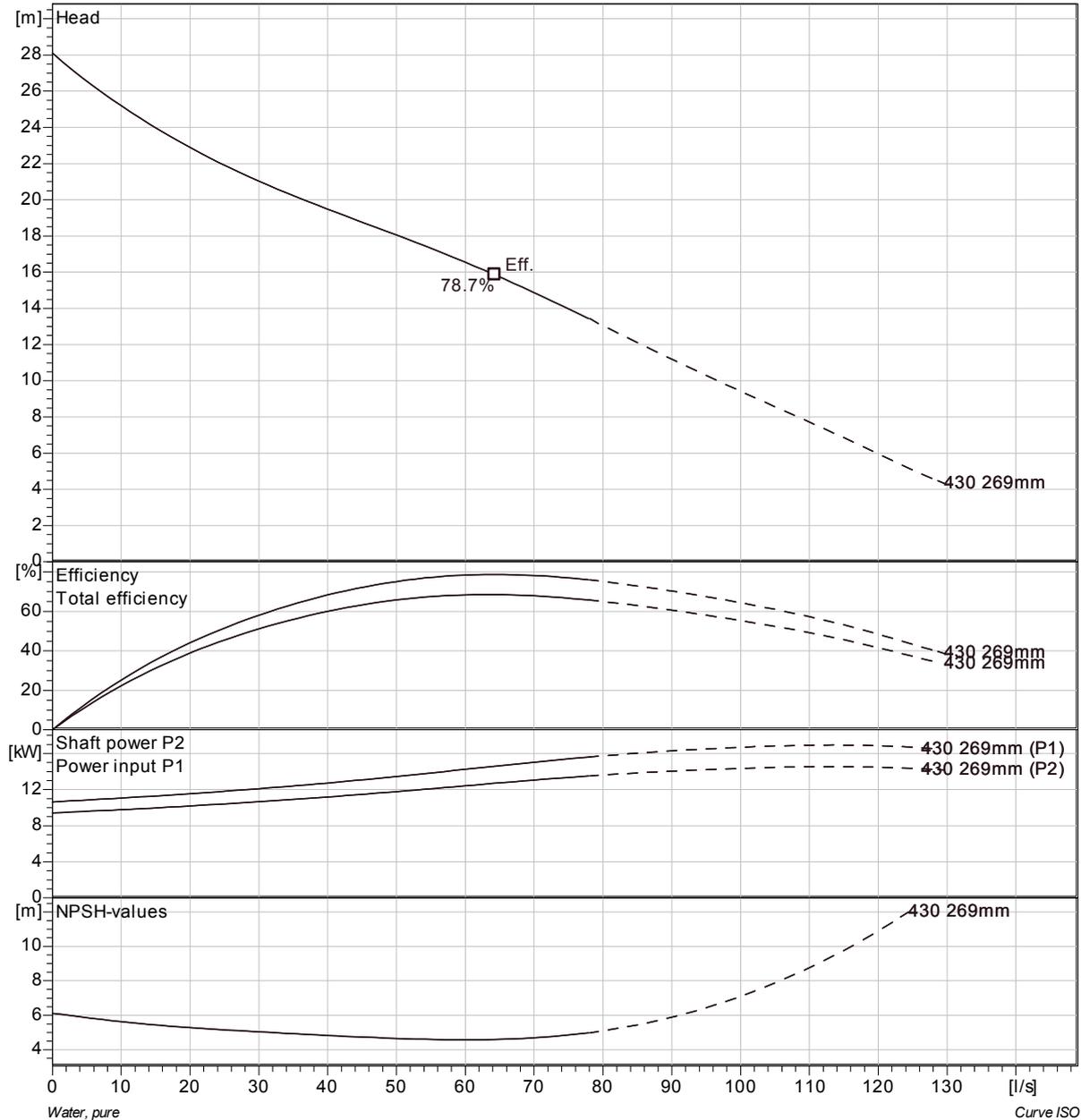
Pump

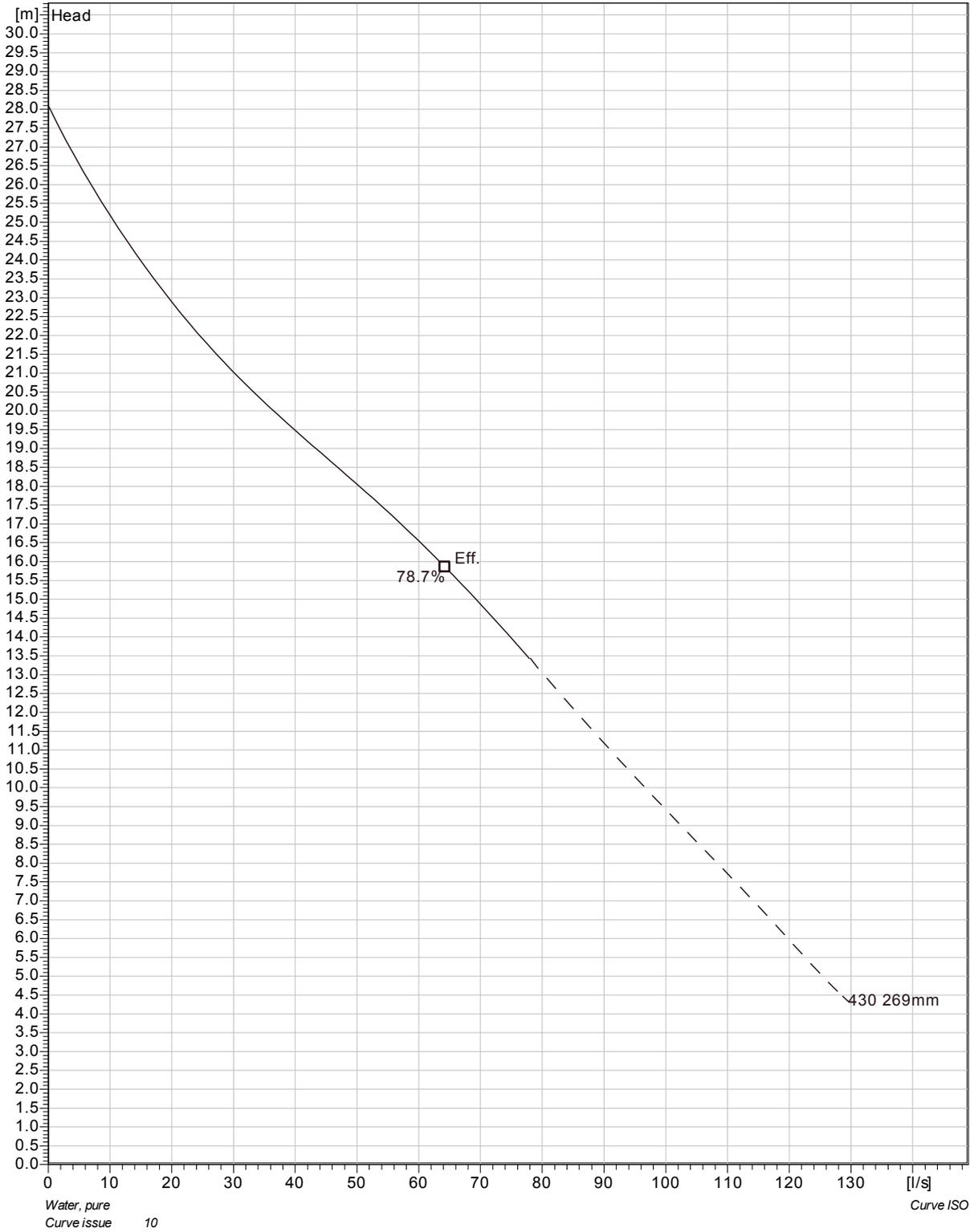
Discharge Flange Diameter 150 mm
 Inlet diameter 150 mm
 Impeller diameter 269 mm
 Number of blades 2

Motor

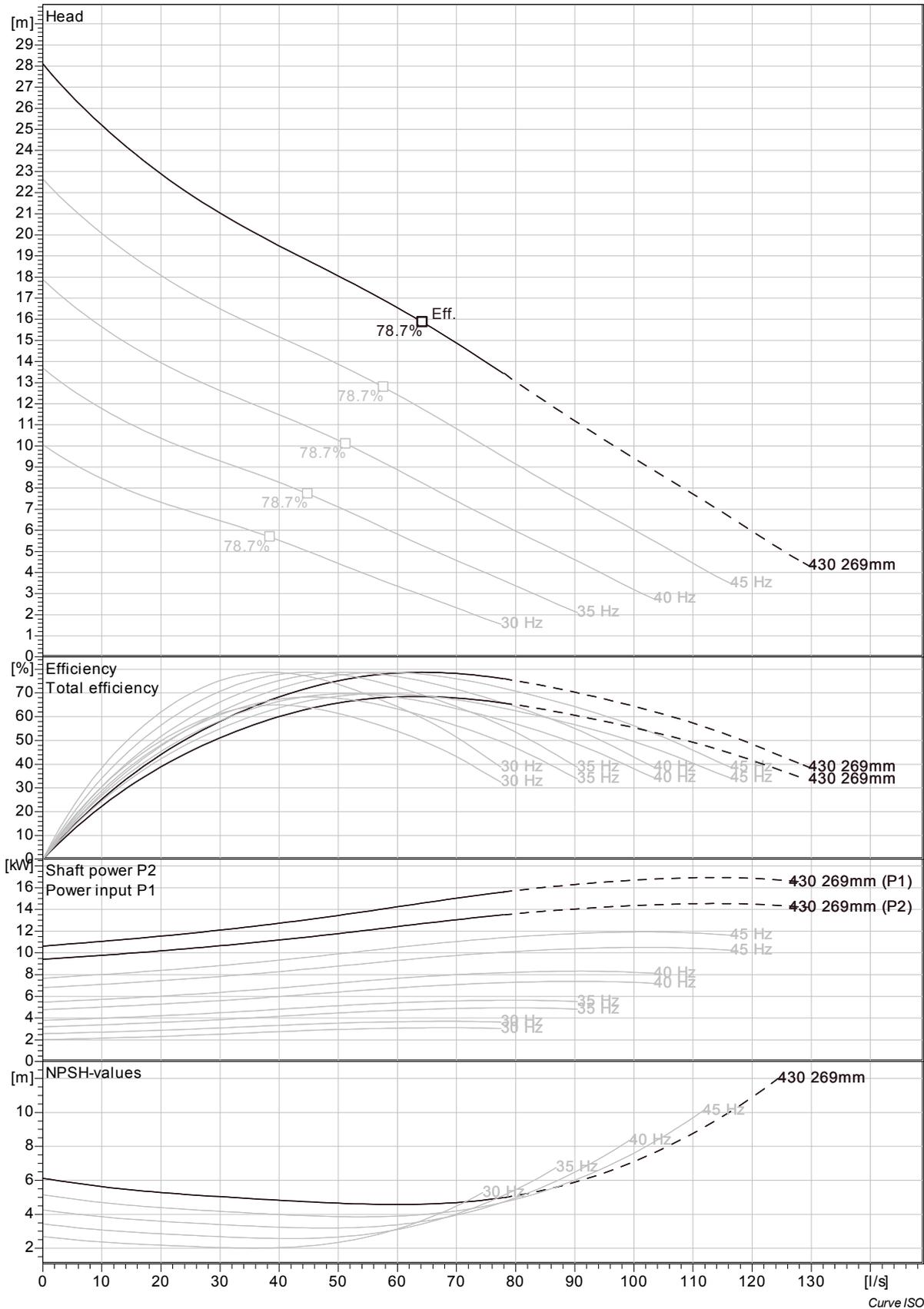
Motor # N3153.181 21-18-4AA-W 13.5KW
 Stator variant 2
 Frequency 50 Hz
 Rated voltage 400 V
 Number of poles 4
 Phases 3~
 Rated power 13.5 kW
 Rated current 27 A
 Starting current 145 A
 Rated speed 1455 1/min

Power factor
 1/1 Load 0.84
 3/4 Load 0.79
 1/2 Load 0.68
 Efficiency
 1/1 Load 86.5 %
 3/4 Load 88.0 %
 1/2 Load 88.5 %

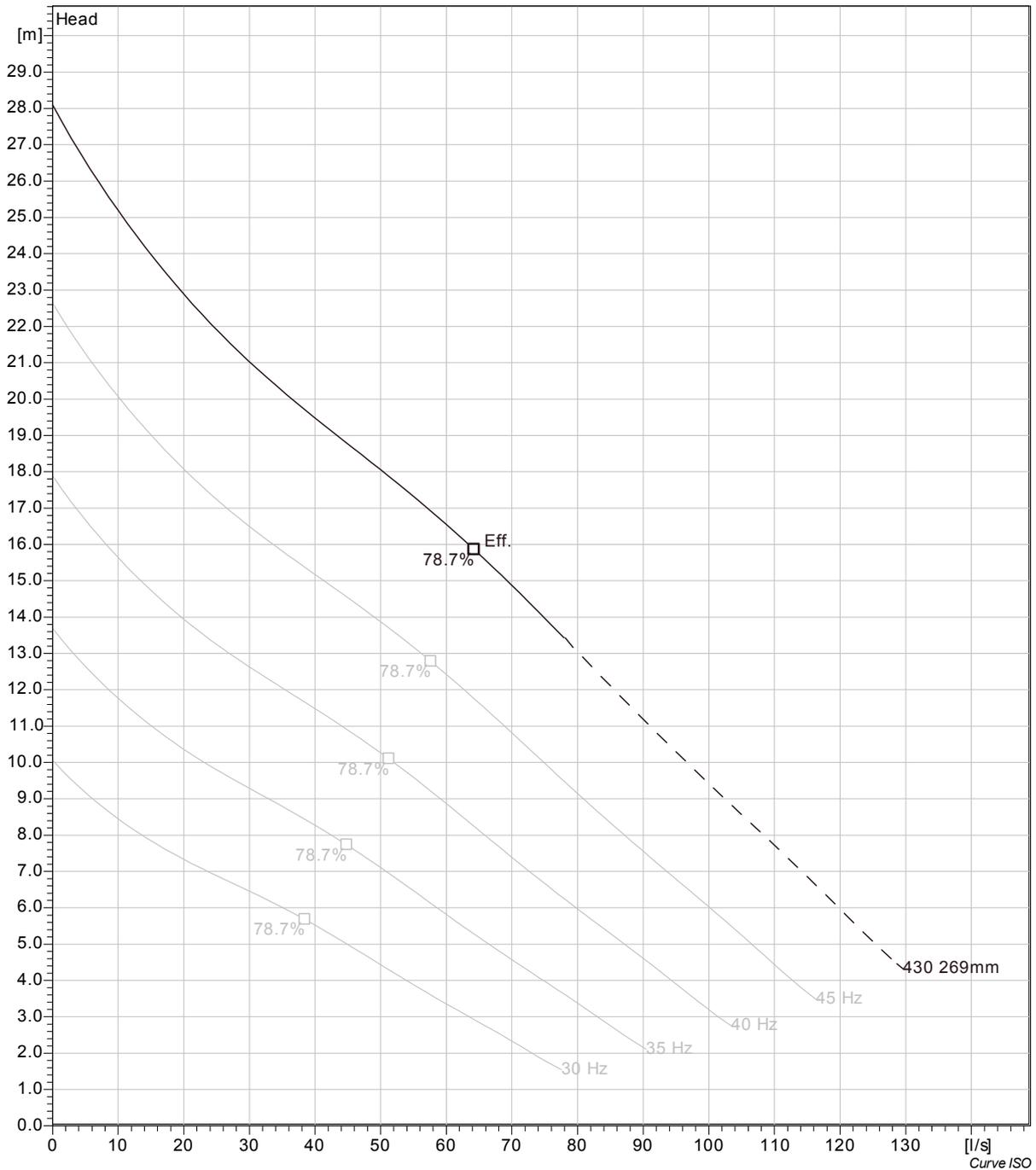




Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

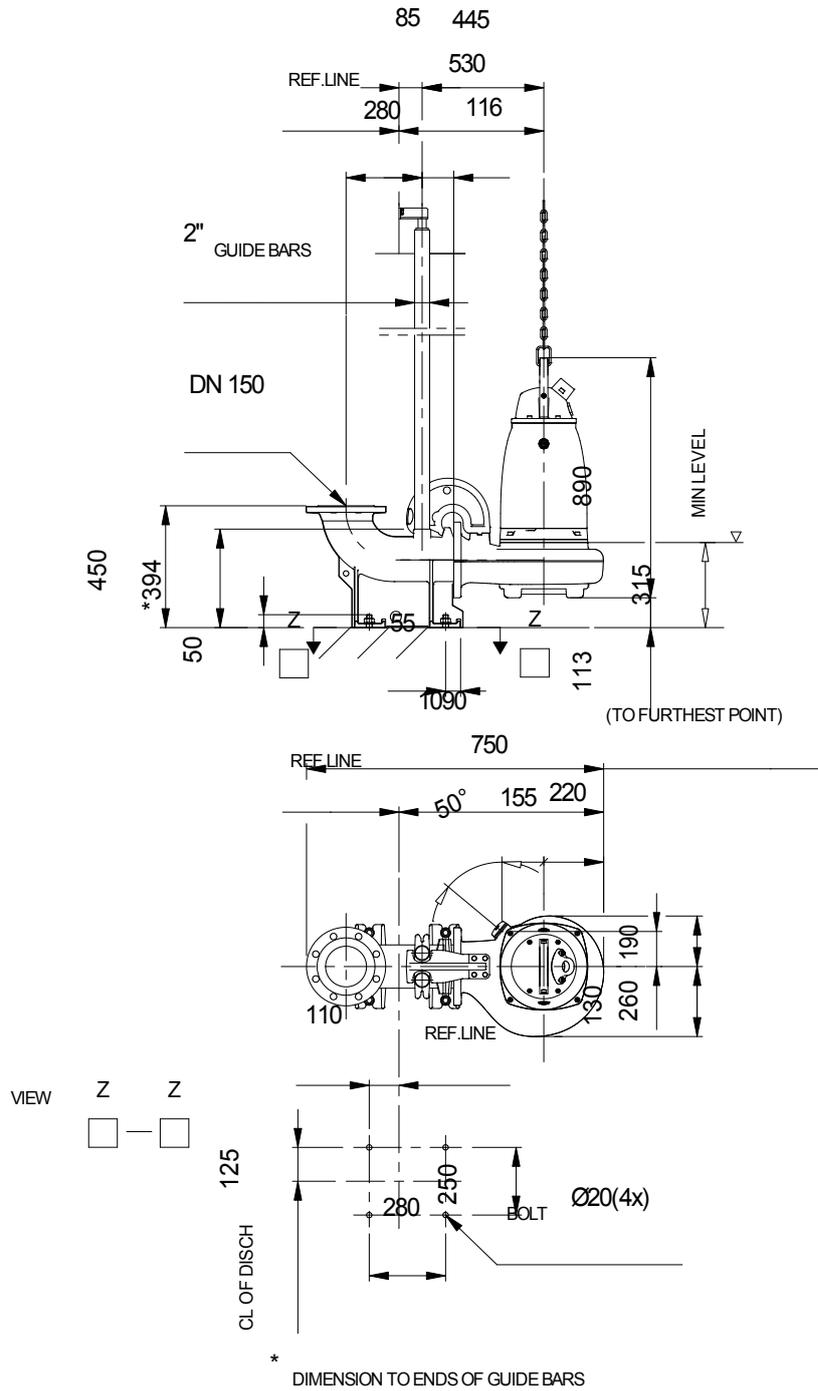


Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	



Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

NP 3153 MT 3~ 430 Dimensional drawing

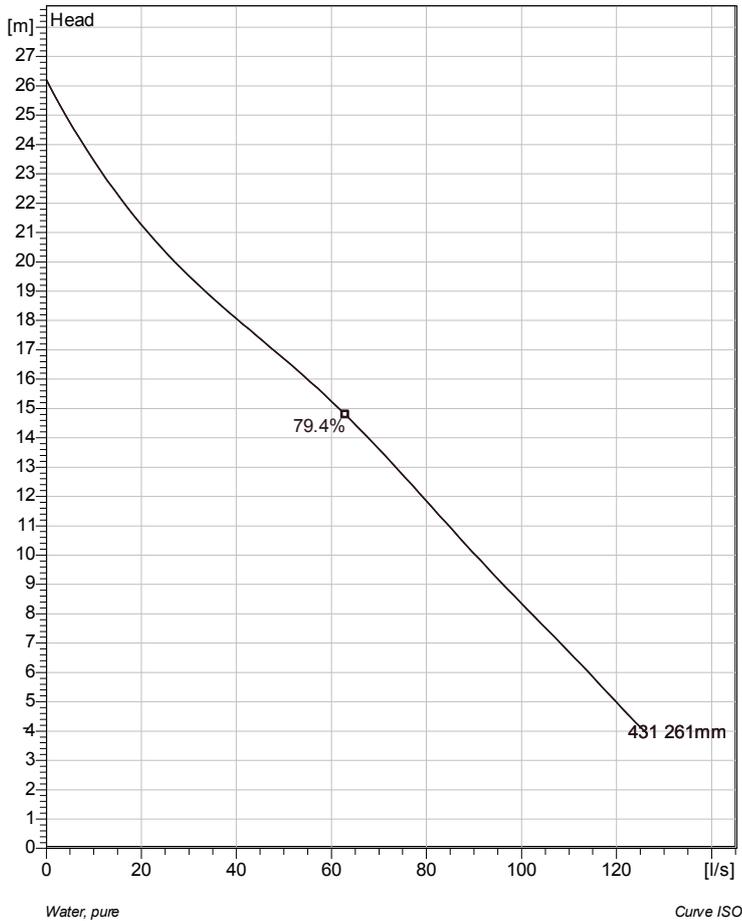


Dimensional drwg

NP,FP 3153 MT

Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

NP 3153 MT 3~ 431 Technical specification



Note: Picture might not correspond to the current configuration.

General

Patented self-cleaning semi-open channel impeller, ideal for pumping in waste water applications. Possible to be upgraded with Guide-pin® for even better clogging resistance. Modular based design with high adaptation grade.

Impeller

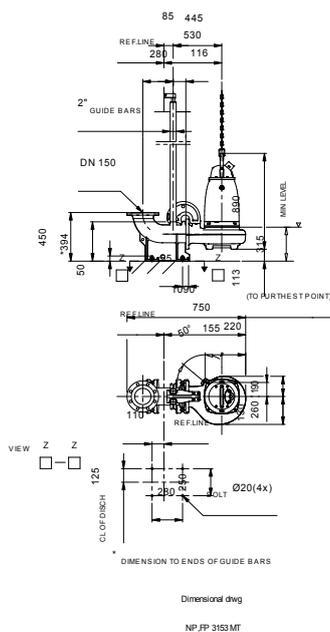
Impeller material	Grey cast iron
Discharge Flange Diameter	150 mm
Inlet diameter	150 mm
Impeller diameter	261 mm
Number of blades	2

Motor

Motor #	N3153.181 21-18-4AA-W 13.5KW
Stator variant	2
Frequency	50 Hz
Rated voltage	400 V
Number of poles	4
Phases	3~
Rated power	13.5 kW
Rated current	27 A
Starting current	145 A
Rated speed	1455 1/min
Power factor	
1/1 Load	0.84
3/4 Load	0.79
1/2 Load	0.68
Efficiency	
1/1 Load	86.5 %
3/4 Load	88.0 %
1/2 Load	88.5 %

Configuration

Installation: P - Semi permanent, Wet



Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

NP 3153 MT 3~ 431

Performance curve

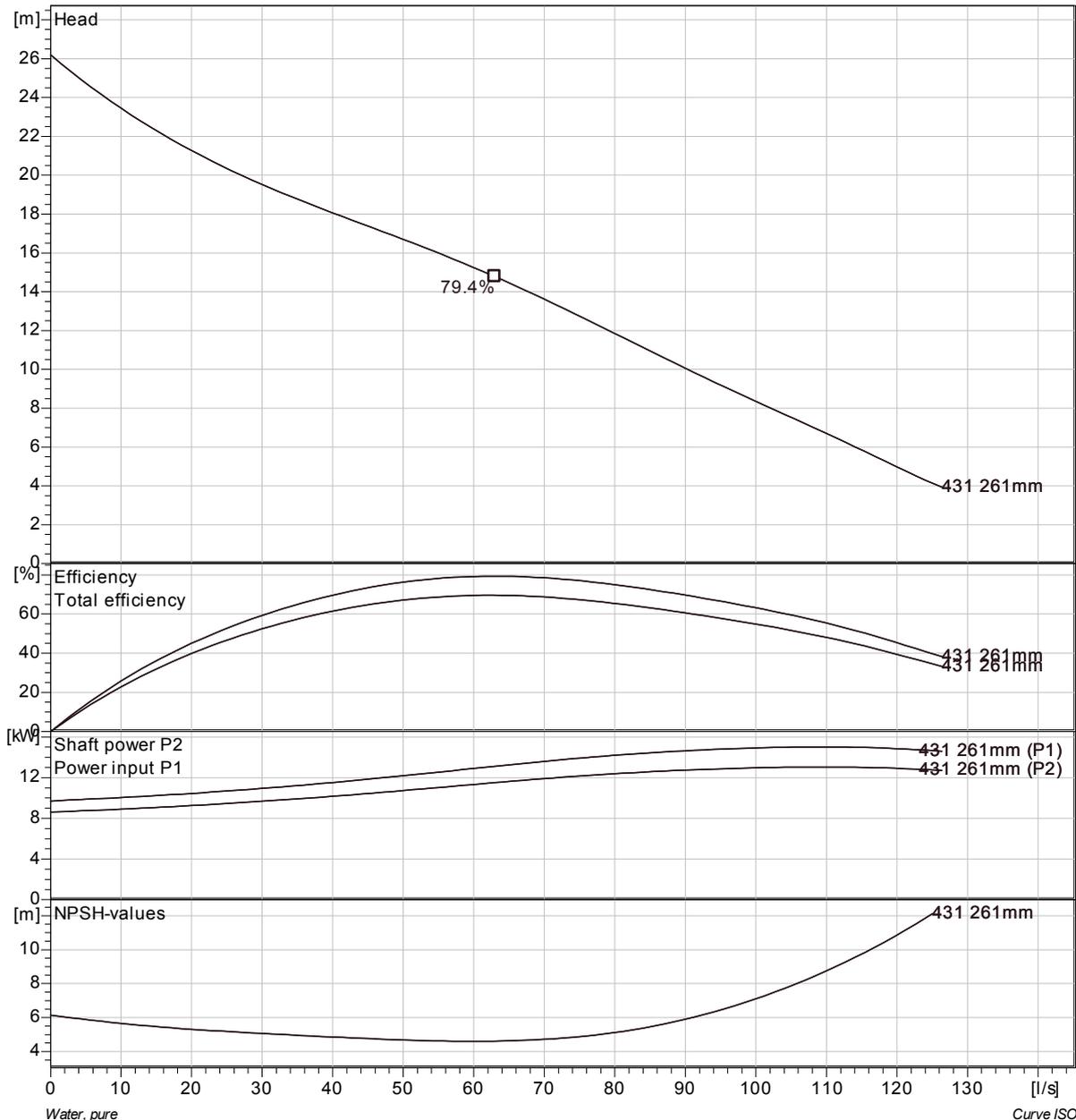
Pump

Discharge Flange Diameter 150 mm
 Inlet diameter 150 mm
 Impeller diameter 261 mm
 Number of blades 2

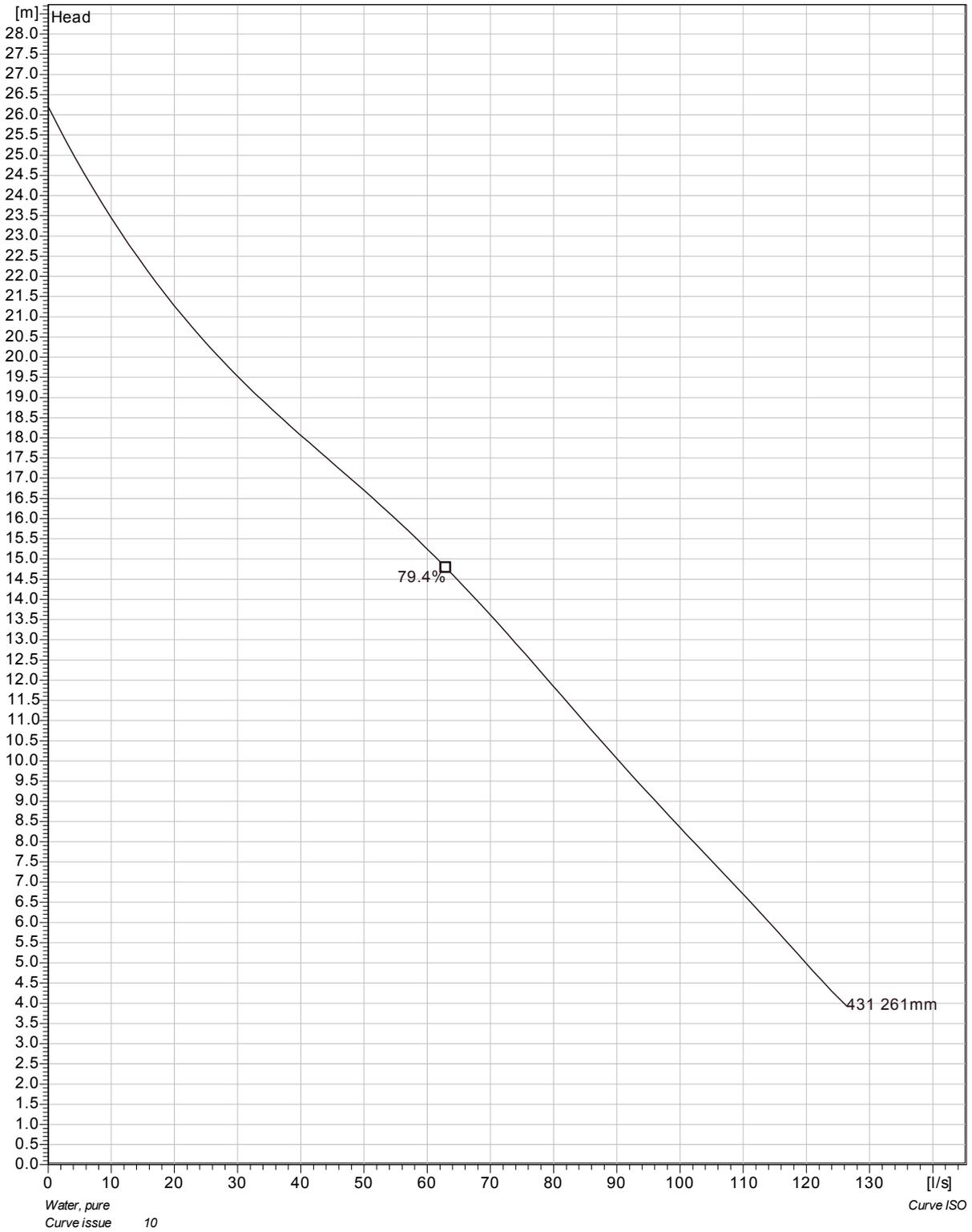
Motor

Motor # N3153.181 21-18-4AA-W 13.5KW
 Stator variant 2
 Frequency 50 Hz
 Rated voltage 400 V
 Number of poles 4
 Phases 3~
 Rated power 13.5 kW
 Rated current 27 A
 Starting current 145 A
 Rated speed 1455 1/min

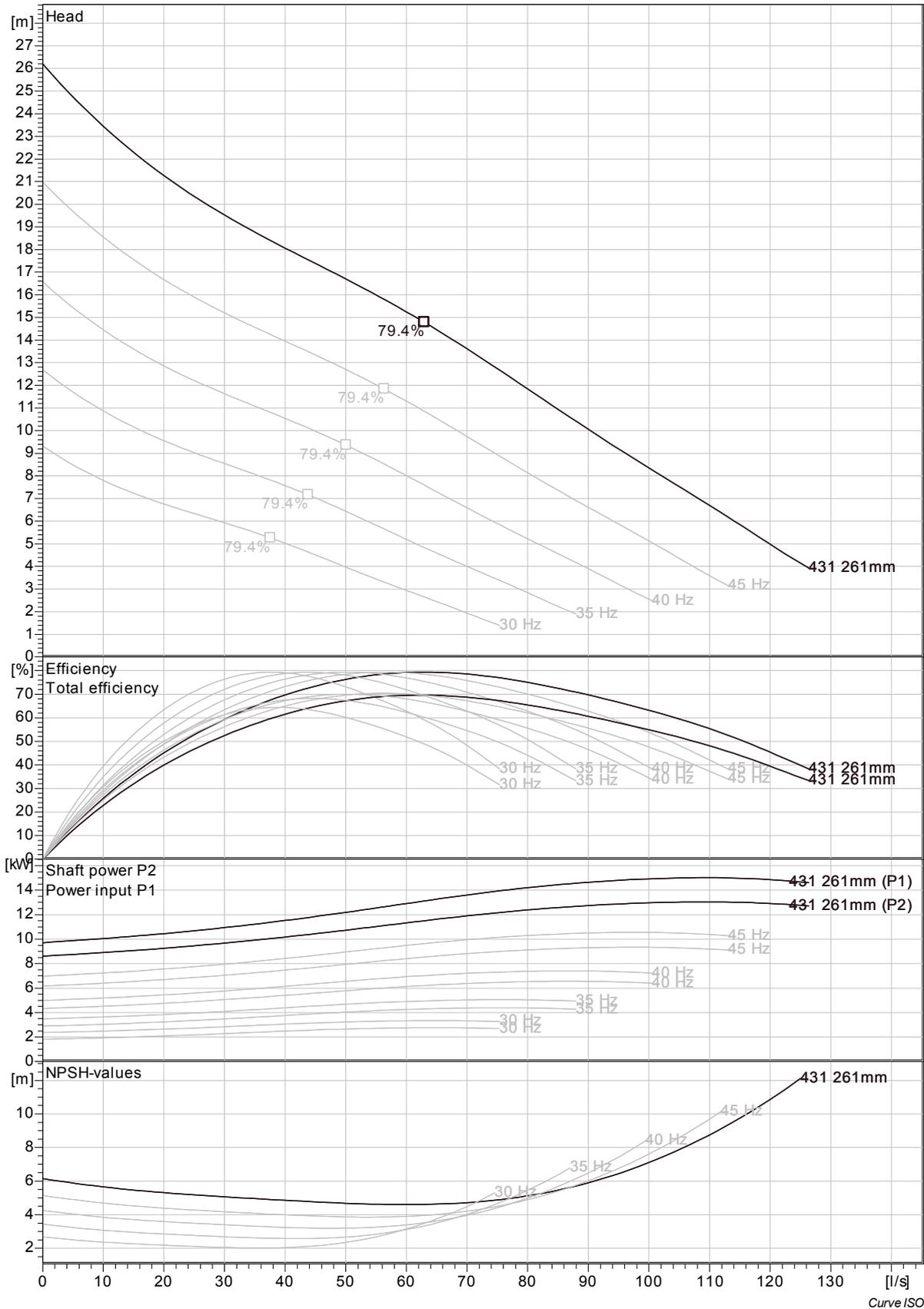
Power factor
 1/1 Load 0.84
 3/4 Load 0.79
 1/2 Load 0.68
 Efficiency
 1/1 Load 86.5 %
 3/4 Load 88.0 %
 1/2 Load 88.5 %



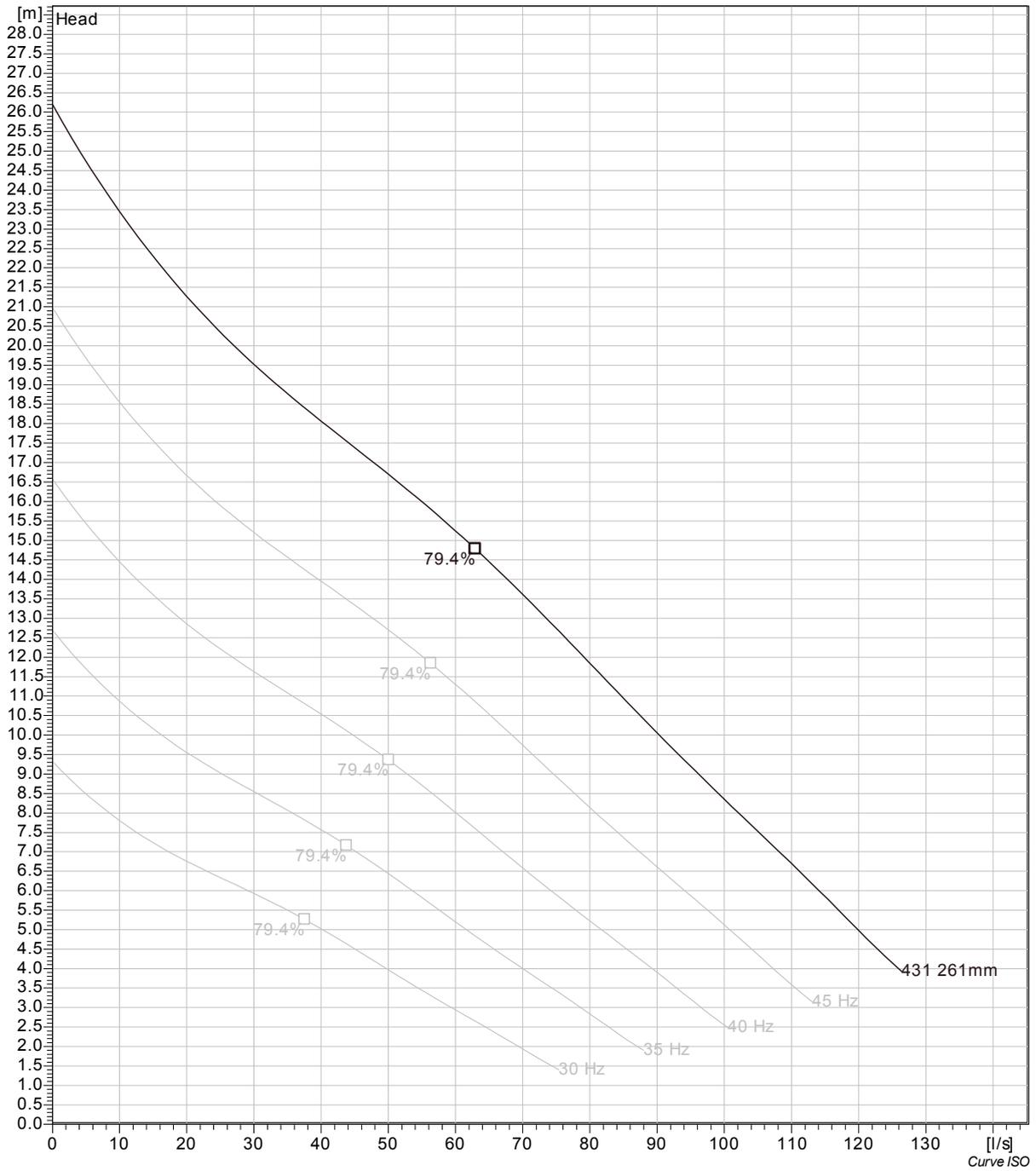
NP 3153 MT 3~ 431 Duty Analysis



Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

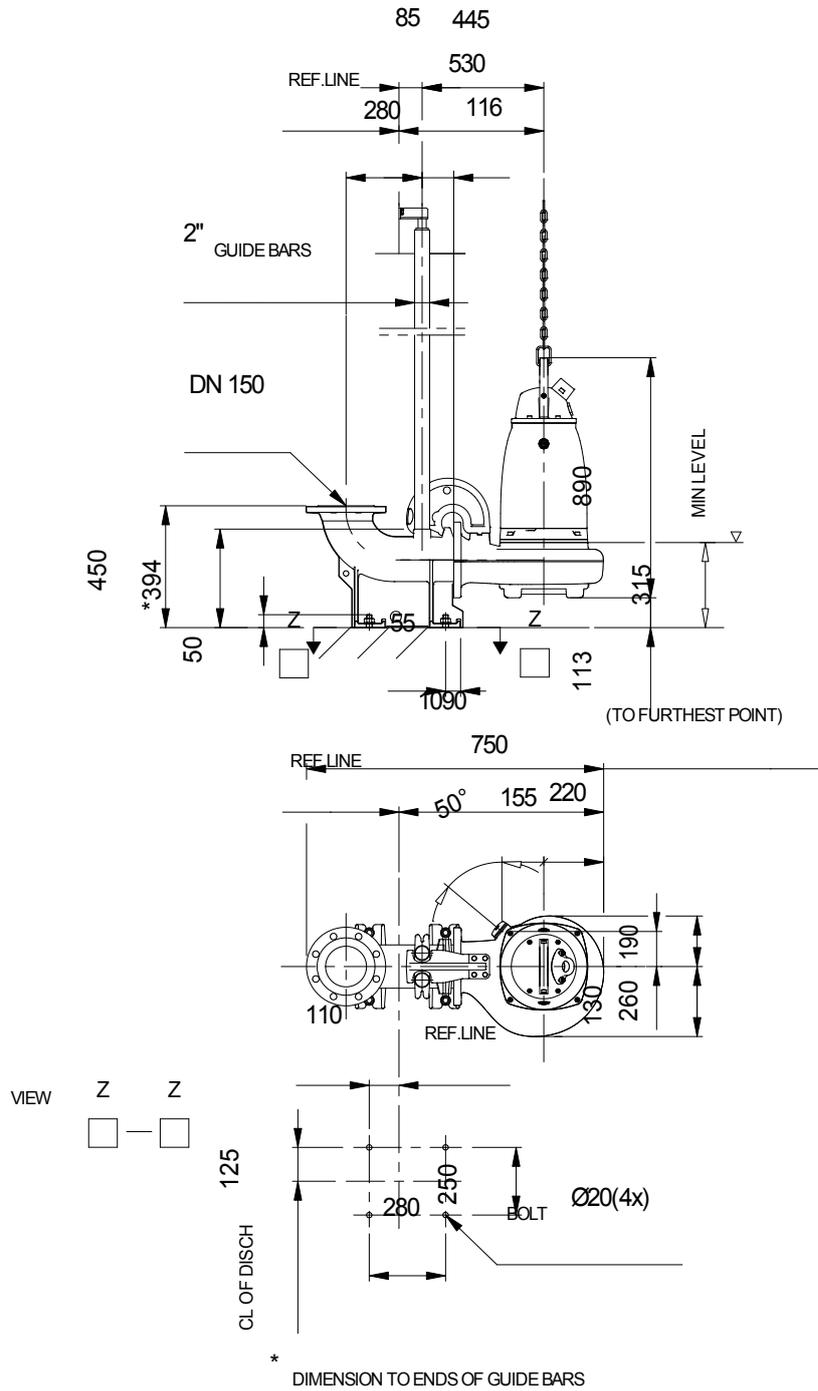


Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	



Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

NP 3153 MT 3~ 431 Dimensional drawing



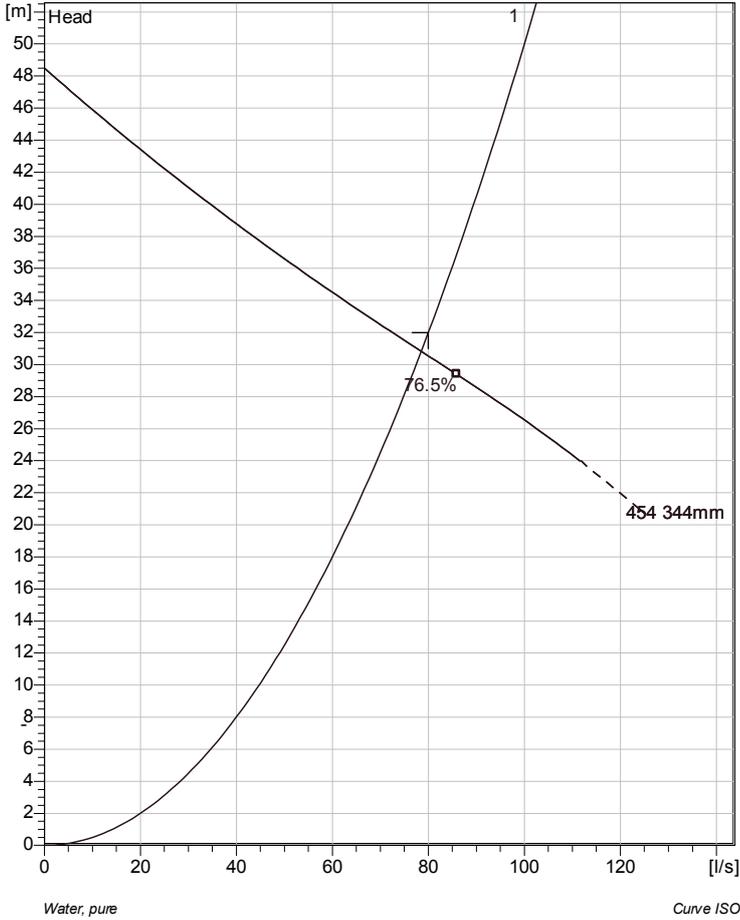
Dimensional drwg

NP,FP 3153 MT

Project	Project ID	Created by	Created on	Last update
			2016-01-19 23:56:30	

NP 3202 HT 3~ 454

Technical specification



Note: Picture might not correspond to the current configuration.

General

Patented self-cleaning semi-open channel impeller, ideal for pumping in waste water applications. Possible to be upgraded with Guide-pin® for even better clogging resistance. Modular based design with high adaptation grade.

Impeller

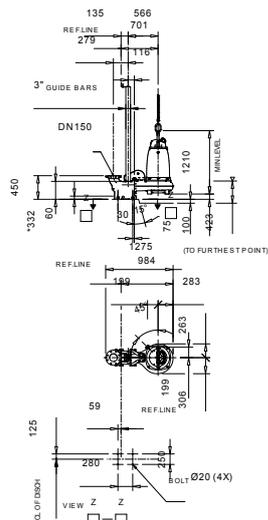
Impeller material	Grey cast iron
Discharge Flange Diameter	150 mm
Inlet diameter	150 mm
Impeller diameter	344 mm
Number of blades	2

Motor

Motor #	N3202.180 30-24-4AA-W 37KW
Stator variant	1
Frequency	50 Hz
Rated voltage	400 V
Number of poles	4
Phases	3~
Rated power	37 kW
Rated current	65 A
Starting current	420 A
Rated speed	1475 1/min
Power factor	
1/1 Load	0.89
3/4 Load	0.86
1/2 Load	0.79
Efficiency	
1/1 Load	91.0 %
3/4 Load	92.0 %
1/2 Load	92.0 %

Configuration

Installation: P - Semi permanent, Wet



* DIMENSION TO ENDS OF GUIDE BARS

FP: NP 3202.090, 095, 180, 185, 350, 350 HT

Dimensional drawing

Project	Project ID	Created by	Created on	Last update
			2016-02-11 20:38:04	

NP 3202 HT 3~ 454

Performance curve

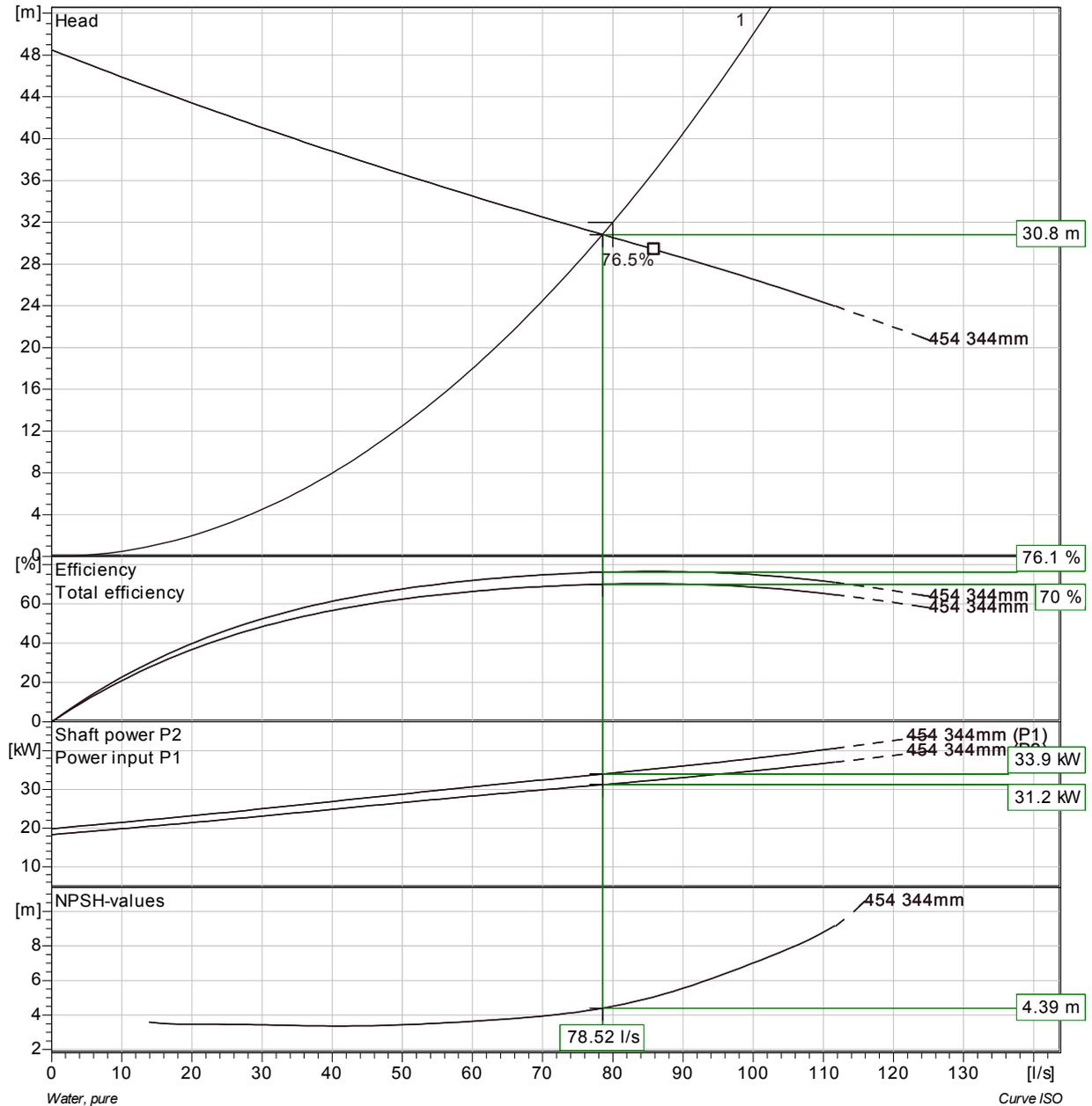
Pump

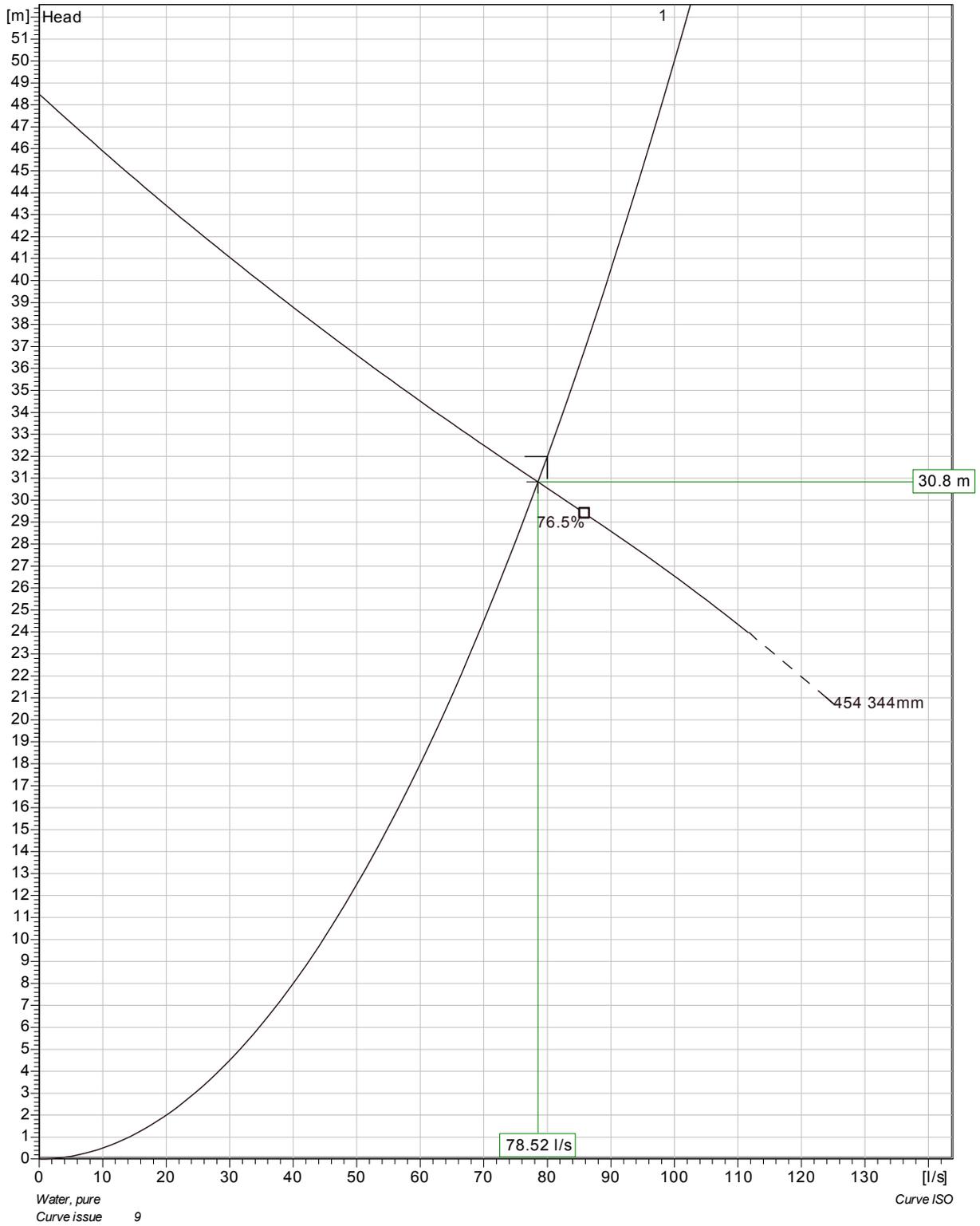
Discharge Flange Diameter 150 mm
 Inlet diameter 150 mm
 Impeller diameter 344 mm
 Number of blades 2

Motor

Motor # N3202.180 30-24-4AA-W 37KW
 Stator variant 1
 Frequency 50 Hz
 Rated voltage 400 V
 Number of poles 4
 Phases 3~
 Rated power 37 kW
 Rated current 65 A
 Starting current 420 A
 Rated speed 1475 1/min

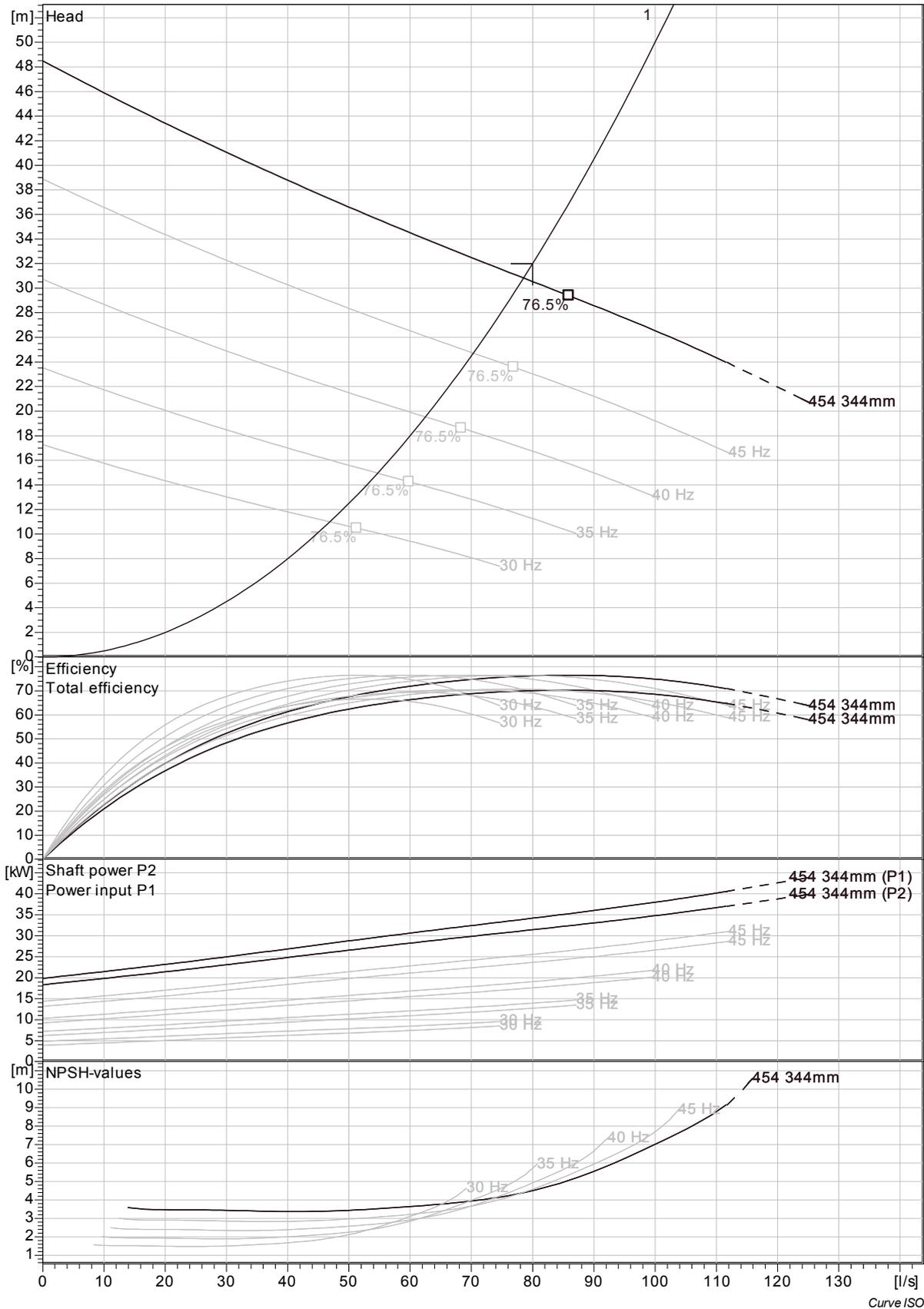
Power factor
 1/1 Load 0.89
 3/4 Load 0.86
 1/2 Load 0.79
 Efficiency
 1/1 Load 91.0 %
 3/4 Load 92.0 %
 1/2 Load 92.0 %



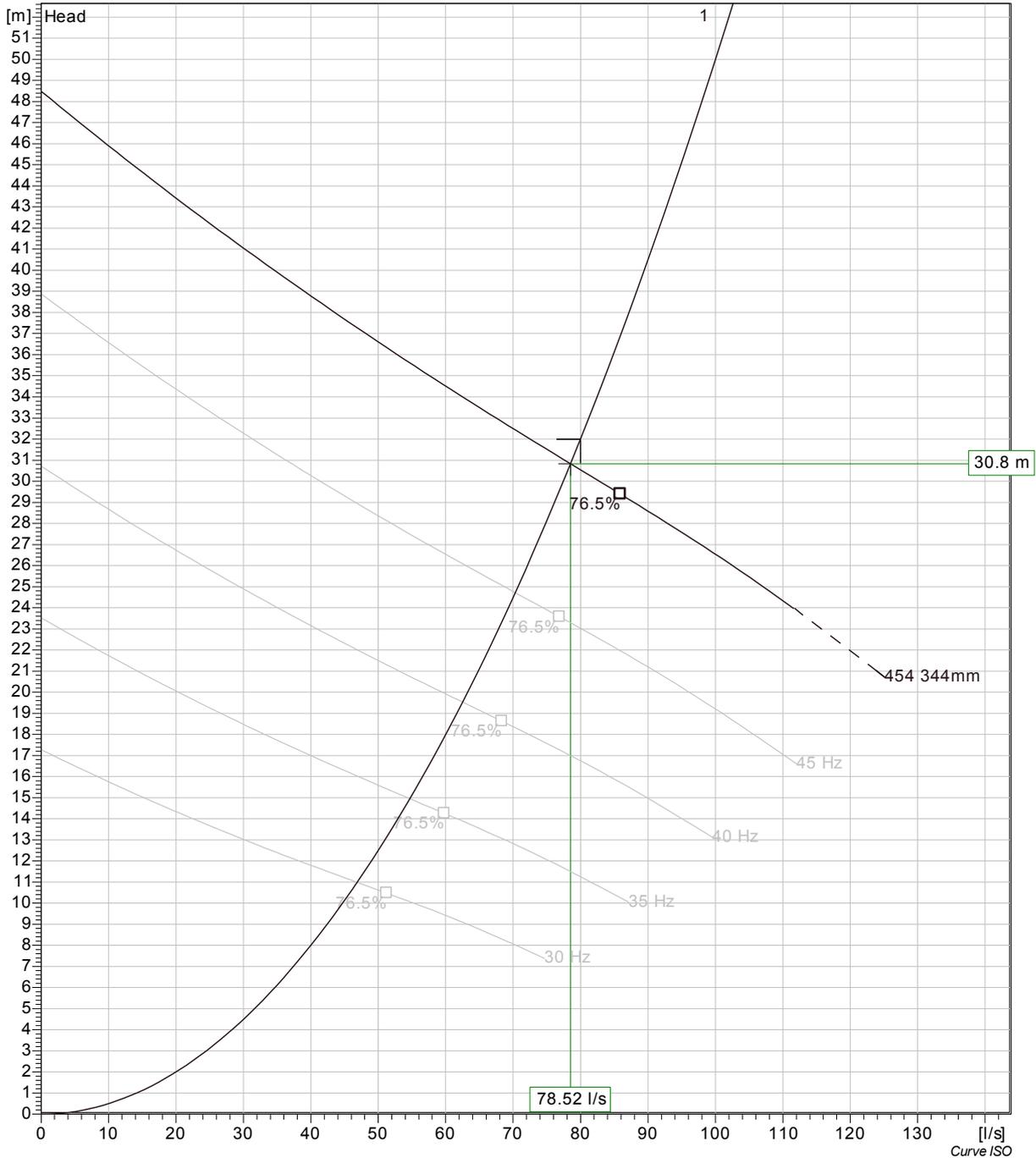


Pumps running /System	Individual pump			Total					
	Flow	Head	Shaft power	Flow	Head	Shaft power	Pump eff.	Specific energy	NPSHre
1	78.5 l/s	30.8 m	31.2 kW	78.5 l/s	30.8 m	31.2 kW	76.1 %	0.12 kWh/m ³	4.39 m

Project	Project ID	Created by	Created on 2016-02-11 20:38:04	Last update
---------	------------	------------	--	-------------

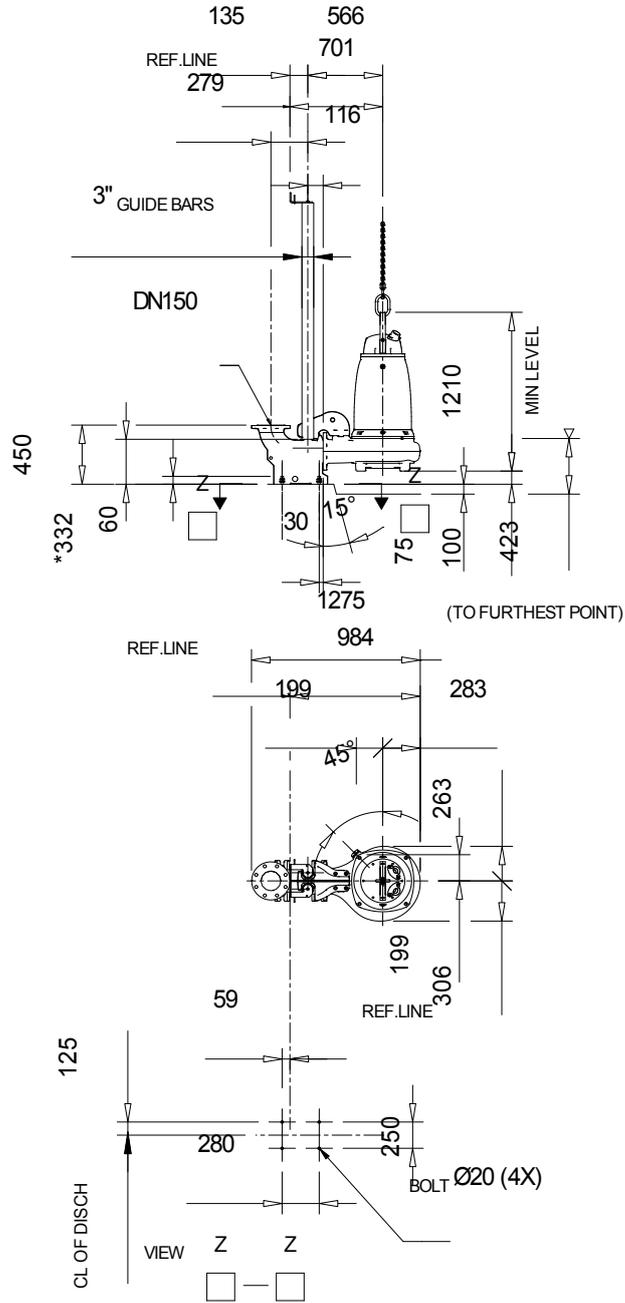


Project	Project ID	Created by	Created on	Last update
			2016-02-11 20:38:04	



Pumps running /System	Frequency	Flow	Head	Shaft power	Flow	Head	Shaft power	Hyd eff.	Specific energy	NPSHre
1	50 Hz	78.5 l/s	30.8 m	31.2 kW	78.5 l/s	30.8 m	31.2 kW	76.1 %	0.12 kWh/m ³	4.39 m
1	45 Hz	70.3 l/s	24.7 m	22.4 kW	70.3 l/s	24.7 m	22.4 kW	76.1 %	0.0957 kWh/m ³	3.68 m
1	40 Hz	62.5 l/s	19.5 m	15.7 kW	62.5 l/s	19.5 m	15.7 kW	76.1 %	0.076 kWh/m ³	3.05 m
1	35 Hz	54.7 l/s	15 m	10.5 kW	54.7 l/s	15 m	10.5 kW	76.1 %	0.0592 kWh/m ³	2.46 m
1	30 Hz	46.9 l/s	11 m	6.64 kW	46.9 l/s	11 m	6.64 kW	76.1 %	0.0454 kWh/m ³	1.92 m

NP 3202 HT 3~ 454 Dimensional drawing



* DIMENSION TO ENDS OF GUIDE BARS

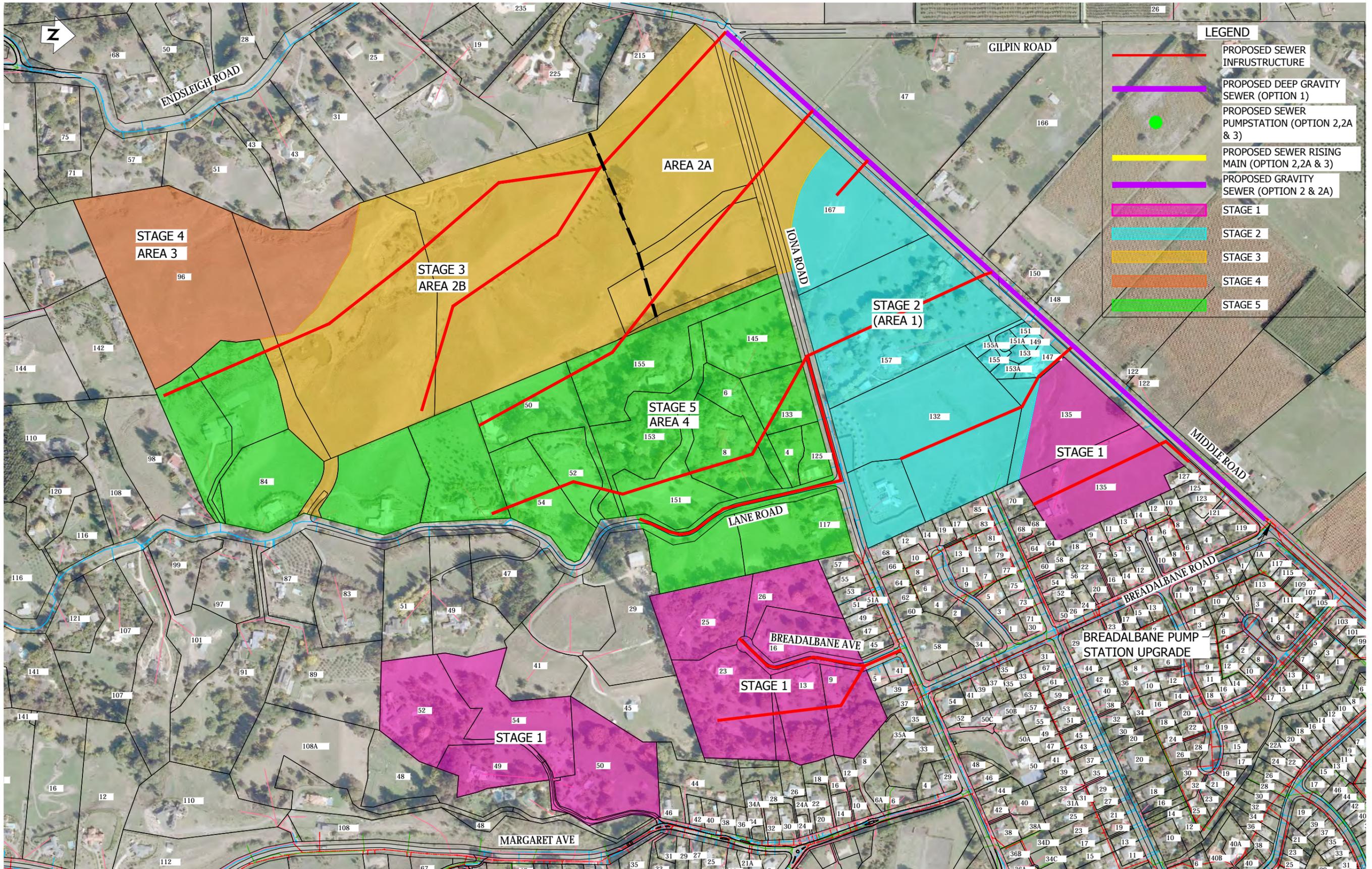
FP, NP 3202.090, 095, 180, 185, 350, 390 HT

Dimensional drwg

FP:NP 3202.090,095,180,185,350,390 HT

Project	Project ID	Created by	Created on	Last update
			2016-02-11 20:38:04	

Appendix C Concept Drawings



LEGEND	
	PROPOSED SEWER INFRASTRUCTURE
	PROPOSED DEEP GRAVITY SEWER (OPTION 1)
	PROPOSED SEWER PUMPSTATION (OPTION 2, 2A & 3)
	PROPOSED SEWER RISING MAIN (OPTION 2, 2A & 3)
	PROPOSED GRAVITY SEWER (OPTION 2 & 2A)
	STAGE 1
	STAGE 2
	STAGE 3
	STAGE 4
	STAGE 5

ORIGINAL SIZE A1
200 mm DO NOT SCALE - IF IN DOUBT, ASK

NOT FOR CONSTRUCTION

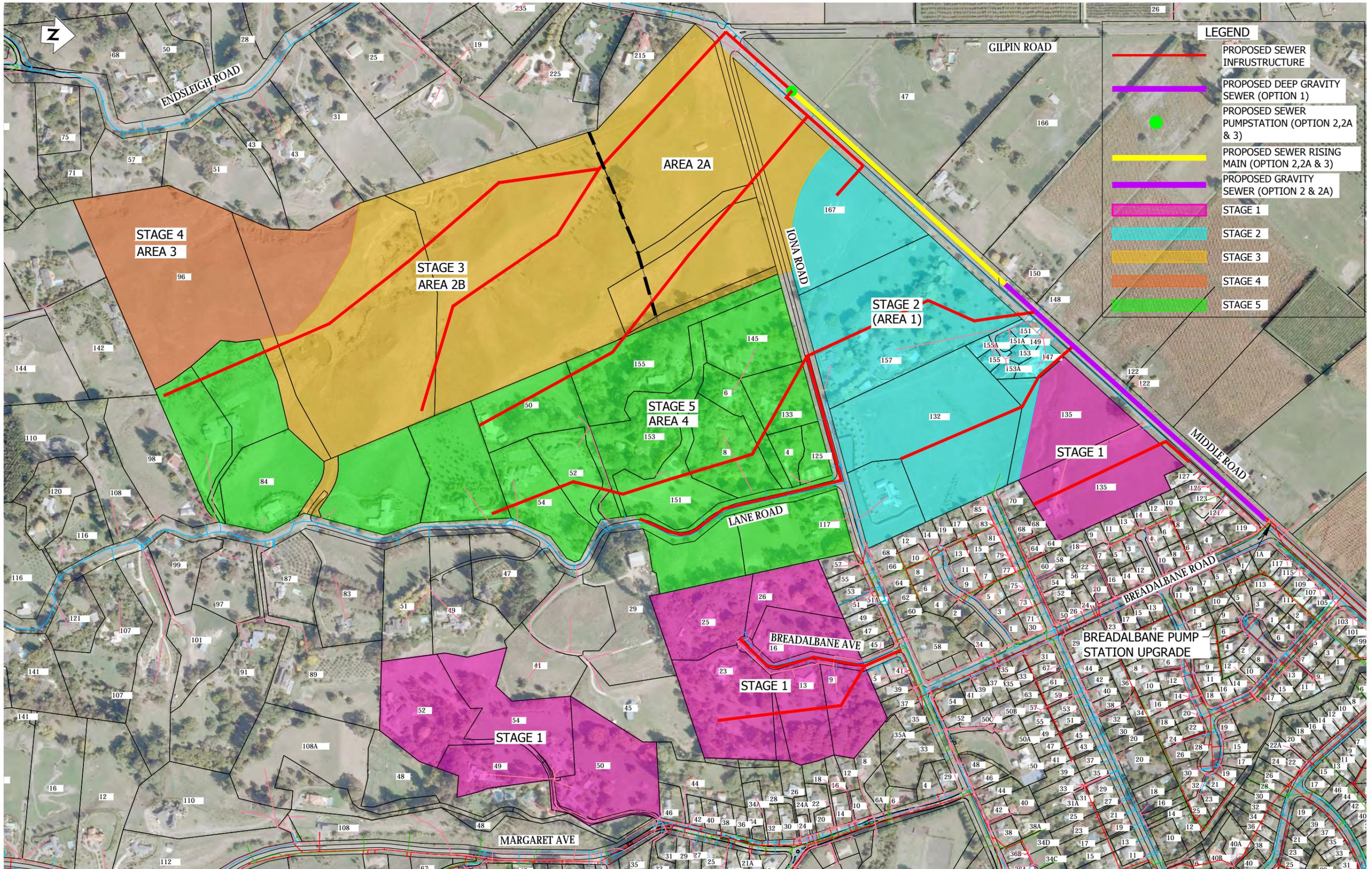
REV	DESCRIPTION	PAC	EG	DATE	APPROVED
A	WORKING PLOT			01/2016	

Name	Date
SURVEYED	
DESIGNED	ELIAS GANDASHANGA 01/2016
DESIGN CHECK	
DRAWN	PAUL CHILTON 01/2016
DRAWING CHECK	
APPROVED	



HASTINGS DISTRICT COUNCIL - MWH ALLIANCE
 IONA TRIANGLE PROJECT
 MIDDLE ROAD TRUNK SEWER
 PLAN OPTION 1 - DEEP GRAVITY SEWER

Status Stamp	WORKING PLOT
Date Stamp	04/02/2016
SCALES	(A1) 1:2500 (A3) 1:5000
Drawing No.	80508576
Sheet No.	C001
Rev.	A



LEGEND	
	PROPOSED SEWER INFRASTRUCTURE
	PROPOSED DEEP GRAVITY SEWER (OPTION 1)
	PROPOSED SEWER PUMPSTATION (OPTION 2,2A & 3)
	PROPOSED SEWER RISING MAIN (OPTION 2,2A & 3)
	PROPOSED GRAVITY SEWER (OPTION 2 & 2A)
	STAGE 1
	STAGE 2
	STAGE 3
	STAGE 4
	STAGE 5

ORIGINAL SIZE A1
200 mm DO NOT SCALE - IF IN DOUBT, ASK

NOT FOR CONSTRUCTION

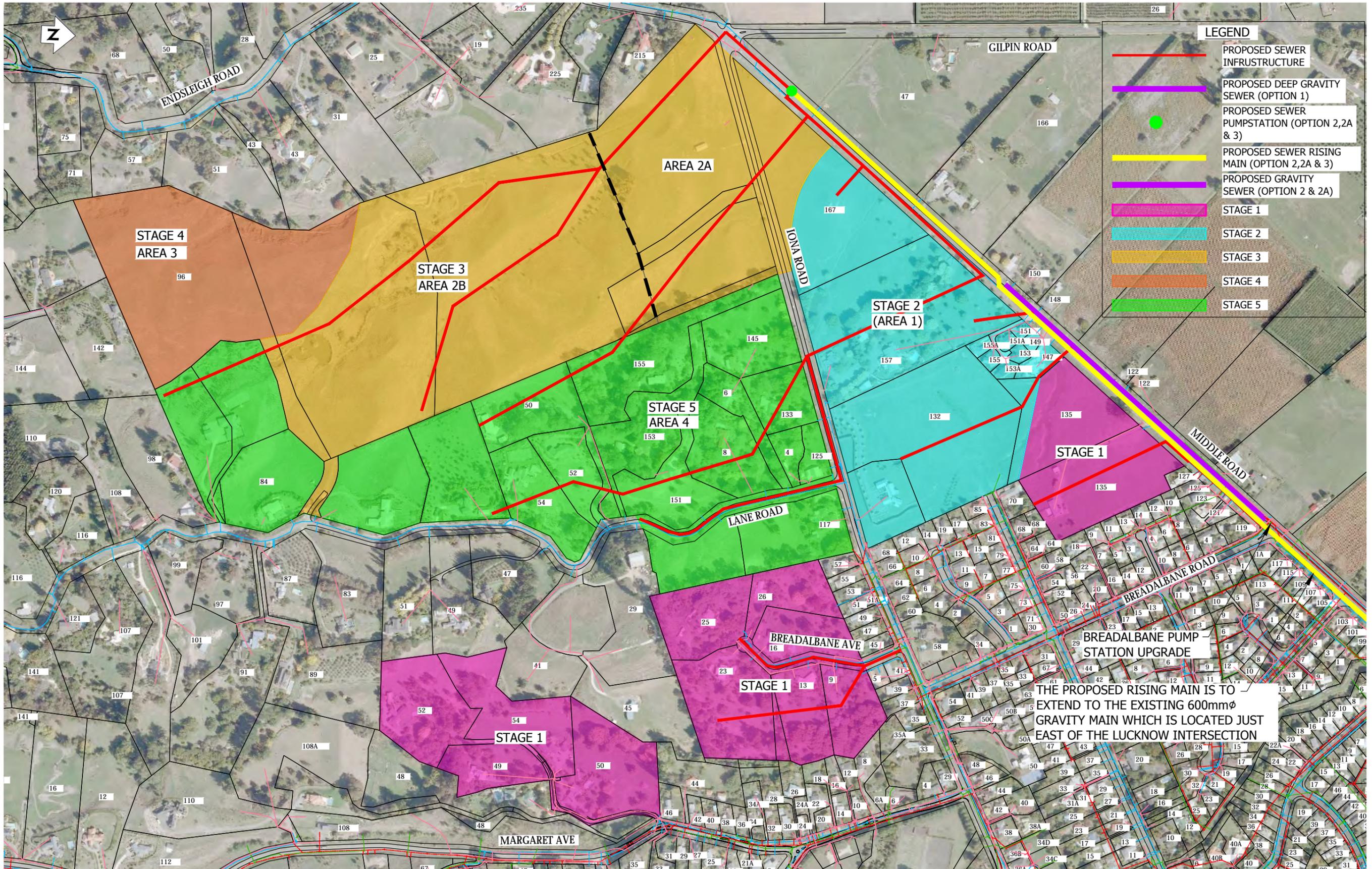
REV	DESCRIPTION	PAC	EG	DATE	APPROVED
A	WORKING PLOT			01/2016	
	REVISIONS				

	Name	Date
SURVEYED		
DESIGNED	ELIAS GANDASHANGA	01/2016
DESIGN CHECK		
DRAWN	PAUL CHILTON	01/2016
DRAWING CHECK		
APPROVED		



HASTINGS DISTRICT COUNCIL - MWH ALLIANCE
 IONA TRIANGLE PROJECT
 MIDDLE ROAD TRUNK SEWER
 PLAN OPTION 2 - GRAVITY SEWER AND PUMP STATION

Status Stamp	WORKING PLOT	
Date Stamp	04/02/2016	
SCALES (A1) AS SHOWN	Drawing No.	Sheet No.
	80508576	C002
		Rev. A



LEGEND	
	PROPOSED SEWER INFRASTRUCTURE
	PROPOSED DEEP GRAVITY SEWER (OPTION 1)
	PROPOSED SEWER PUMPSTATION (OPTION 2,2A & 3)
	PROPOSED SEWER RISING MAIN (OPTION 2,2A & 3)
	PROPOSED GRAVITY SEWER (OPTION 2 & 2A)
	STAGE 1
	STAGE 2
	STAGE 3
	STAGE 4
	STAGE 5

ORIGINAL SIZE A1 200mm DO NOT SCALE - IF IN DOUBT, ASK

NOT FOR CONSTRUCTION

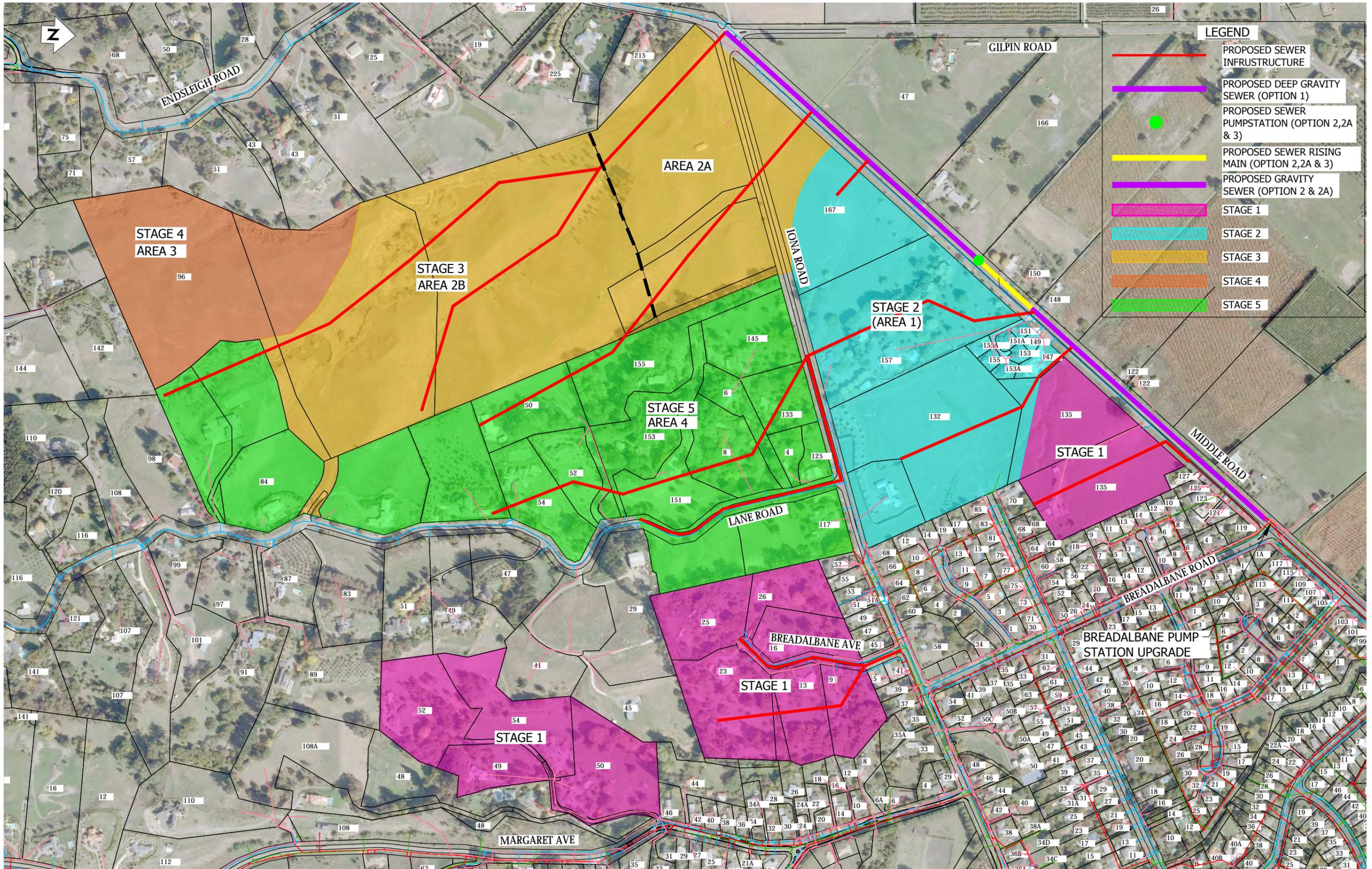
REV	DESCRIPTION	DATE	BY	CHECKED	APPROVED
A	WORKING PLOT	01/2016			

Name	Date
SURVEYED	
DESIGNED	ELIAS GANDASHANGA 01/2016
DESIGN CHECK	
DRAWN	PAUL CHILTON 01/2016
DRAWING CHECK	
APPROVED	



HASTINGS DISTRICT COUNCIL - MWH ALLIANCE
 IONA TRIANGLE PROJECT
 MIDDLE ROAD TRUNK SEWER
 PLAN OPTION 2A - GRAVITY SEWER AND PUMP STATION

Status Stamp	WORKING PLOT	
Date Stamp	10/02/2016	
SCALES (A1) AS SHOWN	Drawing No.	Sheet No.
	80508576	C002A
		Rev.
		A



- LEGEND**
- PROPOSED SEWER INFRASTRUCTURE
 - PROPOSED DEEP GRAVITY SEWER (OPTION 1)
 - PROPOSED SEWER PUMPSTATION (OPTION 2,2A & 3)
 - PROPOSED SEWER RISING MAIN (OPTION 2,2A & 3)
 - PROPOSED GRAVITY SEWER (OPTION 2 & 2A)
 - STAGE 1
 - STAGE 2
 - STAGE 3
 - STAGE 4
 - STAGE 5

ORIGINAL SIZE A1
200 mm DO NOT SCALE - IF IN DOUBT, ASK

NOT FOR CONSTRUCTION

REV	DESCRIPTION	PAC	EG	DATE	APPROVED
A	WORKING PLOT			01/2016	
	REVISIONS				

	Name	Date
SURVEYED		
DESIGNED	ELIAS GANDASHANGA	01/2016
DESIGN CHECK		
DRAWN	PAUL CHILTON	01/2016
DRAWING CHECK		
APPROVED		



HASTINGS DISTRICT COUNCIL - MWH ALLIANCE
 IONA TRIANGLE PROJECT
 MIDDLE ROAD TRUNK SEWER
 PLAN OPTION 3 - GRAVITY SEWER AND LIFT STATION

Status Stamp	WORKING PLOT	
Date Stamp	04/02/2016	
SCALES (A1) AS SHOWN	Drawing No.	Sheet No.
	80508576	C003
		Rev. A

Appendix D Cost Estimates

SCHEDULE OF PRICES

Contract Name: Middle Iona Wastewater Options

Cost Estimate Summary



Item	Option 1	Option 2	Option 2A	Option 3
Preliminary and general (Inc. Contingency sum)	\$ 779,000	\$ 758,000	\$ 719,000	\$ 806,000
Contingency sum (25%)	\$ 502,000	\$ 487,000	\$ 459,000	\$ 521,000
Sewer works				
Stage 1	\$ -	\$ -	\$ -	\$ -
Stage 2 - Trunk Sewer	\$ 1,055,374	\$ 744,134	\$ 1,369,515	\$ 881,955
Stage 2 - Pumping Stations	\$ 375,000	\$ 475,500	\$ 465,500	\$ 475,500
Upgrades for Full Breadalbane PS catchment	\$ 500,000	\$ 650,000	\$ -	\$ 650,000
TOTAL (Excl GST)	\$ 2,709,374	\$ 2,627,634	\$ 2,554,015	\$ 2,813,455
TOTAL (Excl Contingency and GST)	\$ 2,207,374	\$ 2,140,634	\$ 2,095,015	\$ 2,292,455
Difference to Option 2	\$ 81,740	\$ -	-\$ 73,619	\$ 185,821
Total Excluding P&G and Contingency	\$ 1,930,374	\$ 1,869,634	\$ 1,835,015	\$ 2,007,455
	\$ -	\$ -	\$ -	\$ -
Prunk Sewer	\$ 1,481,268.85	\$ 1,045,825.97	\$ 1,906,121.67	\$ 1,236,062.93
Pumps	\$ 526,330.78	\$ 668,280.51	\$ 647,893.33	\$ 666,414.86

B.4.8 SCHEDULE OF PRICES

Contract Name: Middle Iona Concept Cost Estimate
 Option 1 - Deep Trunk Sewer connected to the PS and alterations to PS



MWH.



HASTINGS DISTRICT COUNCIL

It is the tenderer's responsibility to check the accuracy of this spreadsheet prior to tender submission (including cell references).

Item	Description	Unit	Quantity (A)	Rate (B)	Price (A x B)	Totals
100	PRELIMINARY AND GENERAL					
101	Establishment and disestablishment (10%)	LS	201000	1	\$201,000.00	
102	Traffic management plan	LS	6000	1	\$6,000.00	
103	On site traffic management	LS	20000	1	\$20,000.00	
104	Safety plan	LS	4000	1	\$4,000.00	
105	On site safety management	LS	20000	1	\$20,000.00	
106	Survey control and setting out	LS	10000	1	\$10,000.00	
107	Consultation and liaison with effected parties	LS	4000	1	\$4,000.00	
108	Supply As built information	LS	12000	1	\$12,000.00	
109	Contingency sum (25%)	LS	502000	1	\$502,000.00	
SUBTOTAL						\$779,000.00
	Stage 1					
412	Pumping Stations					
412.1	Breadalbane Pumping Stations Alterations - pumps upgrade					
412.5	Upgrade pumps	LS	0	75000	\$0.00	
SUBTOTAL						\$0.00
	Stage 2 - Trunk Sewer					
	Construct gravity mains - Trunk Sewer					
401.4	Supply and lay 225mm dia PVC main up to 3m	m	851	300	\$255,300.00	
401.6	Supply and lay 225mm dia PVC main extra over for deeper sewer installation (3m to 3.5m depth)	m	79.2	300	\$23,760.00	
401.7	Supply and lay 225mm dia PVC main extra over for deeper for in road construction	m	771	50	\$38,550.00	
401.8	Supply and lay 300mm dia PVC main up to 3m	m	728	425	\$309,400.00	
401.1	Supply and lay 300mm dia PVC main extra over for deeper sewer installation (4.0m to 5m depth)	m	439	400	\$175,600.00	
401.11	Supply and lay 300mm dia PVC main extra over for in road construction	m	583	50	\$29,150.00	
401.12	Supply and lay 375mm dia PVC main (4.5m -5m depth)	m	1	1314	\$1,314.00	
402	Construct manhole	each	31	6500	\$201,500.00	
402.1	Extra over for deeper manhole installation	each	5	1000	\$5,000.00	
411	Closed circuit TV (CCTV) inspection	LS	1	15800	\$15,800.00	
SUBTOTAL						\$1,055,374.00
	Stage 2 - Pumping Stations					
412.1	Breadalbane Pumping Stations Alterations					
412.2	Redundant existing pumping station (demolition and amendments to existing structures)	LS	1	30000	\$30,000.00	
412.3	Upgrade power supply	LS	1	30000	\$30,000.00	
412.4	Upgrade switch board	LS	1	60000	\$60,000.00	
412.6	Build 4m DIA wet well 5m deep only (reuse existing valve chamber, hardstand etc.)	LS	1	120000	\$120,000.00	
412.7	Build additional storage - 36m of 1600dia concrete storage tank with water spray cleaning system	LS	1	65000	\$65,000.00	
412.8	Additional pipework	m	50	200	\$10,000.00	
412.9	Upsize Pumps	LS	1	60000	\$60,000.00	
SUBTOTAL						\$375,000.00
1000	Future Full Breadalbane Catchment Development					
	Pumps	LS	1	75000	\$75,000.00	
	Additoional Storage	LS	1	65000	\$65,000.00	
	OD 400 PE 100 PN 16 Rising Main	m	600	600	\$360,000.00	
SUBTOTAL						\$500,000.00
TOTAL (Excl GST)						\$2,709,374.00

B.4.8 SCHEDULE OF PRICES

Contract Name: Middle Iona Concept Cost Estimate
Option 2 - Gravity Sewer and New Pumping Station



MWH.



HASTINGS DISTRICT COUNCIL

It is the tenderer's responsibility to check the accuracy of this spreadsheet prior to tender submission (including cell references).

Item	Description	Unit	Quantity (A)	Rate (B)	Price (A x B)	Totals
100	PRELIMINARY AND GENERAL					
101	Establishment and disestablishment (10%)	LS	\$195,000	1	\$195,000.00	
102	Traffic management plan	LS	6000	1	\$6,000.00	
103	On site traffic management	LS	20000	1	\$20,000.00	
104	Safety plan	LS	4000	1	\$4,000.00	
105	On site safety management	LS	20000	1	\$20,000.00	
106	Survey control and setting out	LS	10000	1	\$10,000.00	
107	Consultation and liaison with effected parties	LS	4000	1	\$4,000.00	
108	Supply As built information	LS	12000	1	\$12,000.00	
109	Contingency sum (25%)	LS	\$487,000	1	\$487,000.00	
SUBTOTAL						\$758,000.00
	Stage 1					
412	Pumping Stations					
412.1	Breadalbane Pumping Stations Alterations - pumps upgrade					
412.5	Upgrade pumps	LS	0	75000	\$0.00	
SUBTOTAL						\$0.00
	Stage 2 - Trunk Sewer					
400	SEWER WORKS					
401	Construct gravity mains - Trunk Sewer					
401.1	Supply and lay 225mm dia PVC main	m	447	300	\$134,100.00	
401.2	Supply and lay 225mm dia PVC main extra over for deeper sewer installation (3m to 3.5m depth)	m	79.2	300	\$23,760.00	
401.3	Supply and lay 225mm dia PVC main extra over for deeper for in road construction	m	560.0	50	\$28,000.00	
401.4	Supply and lay 300mm dia PVC main	m	728	300	\$218,400.00	
401.5	Supply and lay 300mm dia PVC main extra over for deeper sewer installation (4.0m to 5m depth)	m	0	400	\$0.00	
401.6	Supply and lay 300mm dia PVC main extra over for in road construction	m	155.0	50	\$7,750.00	
401.7	Supply and lay 375mm dia PVC main (4.5m -5m depth)	m	1	1314	\$1,314.00	
402	Construct manhole	each	29	6500	\$188,500.00	
402.1	Extra over for deeper manhole installation	each	5	1000	\$5,000.00	
408	Construct Rising Main				\$0.00	
408.1	Supply and lay 160mm OD PE main	m	405	300	\$121,500.00	
411	Closed circuit TV (CCTV) inspection	LS	1	15810	\$15,810.00	
SUBTOTAL						\$744,134.00
	Stage 2 - Pumping Stations					
412	New Middle Road Pumping Station					
412.1	New Pumping Station Wet Well, 5m deep	LS	1	80000	\$80,000.00	
412.2	New Valve chamber	LS	1	60000	\$60,000.00	
412.3	New Pumps, 10l/s @ 120 kPa (?)	LS	1	30000	\$60,000.00	
412.4	New Power Supply and cables	LS	1	40000	\$40,000.00	
412.5	New Emergency Storage (30m3 ?)	LS	1	30000	\$30,000.00	
412.6	New Water Supply	LS	1	3500	\$3,500.00	
412.7	New Telemetry	LS	1	5000	\$5,000.00	
412.8	New Hard Stand	LS	1	2000	\$2,000.00	
413	Breadalbane Pumping Stations Alterations					
413.1	Upgrade power supply	LS	1	30000	\$30,000.00	
413.2	Upgrade Switch board	LS	1	60000	\$60,000.00	
413.3	Upgrade pumps	LS	1	60000	\$60,000.00	
413.4	Build additional storage - 18m of 1600dia concrete storage tank with water spray cleaning system	LS	1	35000	\$35,000.00	
413.5	Additional pipework	m	50	200	\$10,000.00	
SUBTOTAL						\$475,500.00
1000	MISCELLANEOUS ITEMS					
	Pumps	LS	1	75000	\$75,000.00	
	Additoional Storage	LS	1	65000	\$65,000.00	
	OD 400 PE 100 PN 16 Rising Main	m	600	600	\$360,000.00	
	Wet well 4m dia	LS	1	150000	\$150,000.00	
SUBTOTAL						\$650,000.00
TOTAL (Excl GST)						\$2,627,634.00

B.4.8 SCHEDULE OF PRICES

Contract Name: Middle Iona Concept Cost Estimate

Option 2a - Gravity Sewer, New Pumping Station and rising Main to connect to the 600mm gravity



It is the tenderer's responsibility to check the accuracy of this spreadsheet prior to tender submission (including cell references).

Item	Description	Unit	Quantity (A)	Rate (B)	Price (A x B)	Totals
100	PRELIMINARY AND GENERAL					
101	Establishment and disestablishment (10%)	LS	184000	1	\$184,000.00	
102	Traffic management plan	LS	6000	1	\$6,000.00	
103	On site traffic management	LS	20000	1	\$20,000.00	
104	Safety plan	LS	4000	1	\$4,000.00	
105	On site safety management	LS	20000	1	\$20,000.00	
106	Survey control and setting out	LS	10000	1	\$10,000.00	
107	Consultation and liaison with effected parties	LS	4000	1	\$4,000.00	
108	Supply As built information	LS	12000	1	\$12,000.00	
109	Contingency sum (25%)	LS	459000	1	\$459,000.00	
SUBTOTAL						\$719,000.00
	Stage 1					
412	Pumping Stations					
412.1	Breadalbane Pumping Stations Alterations - pumps upgrade					
412.5	Upgrade pumps	LS	0	75000	\$0.00	
SUBTOTAL						\$0.00
	Stage 2b					
400	SEWER WORKS					
401	Construct gravity mains - Trunk Sewer					
401.1	Supply and lay 225mm dia PVC main	m	447	300	\$134,100.00	
401.2	Supply and lay 225mm dia PVC main extra over for deeper sewer installation (3m to 3.5m depth)	m	79.2	300	\$23,760.00	
401.3	Supply and lay 225mm dia PVC main extra over for deeper for in road construction	m	312.9	50	\$15,645.00	
401.4	Supply and lay 300mm dia PVC main	m	729	300	\$218,700.00	
401.5	Supply and lay 300mm dia PVC main extra over for deeper sewer installation (4.0m to 5m depth)	m	0	400	\$0.00	
401.6	Supply and lay 300mm dia PVC main extra over for in road construction	m	13.0	50	\$650.00	
401.7	Supply and lay 375mm dia PVC main (4.5m -5m depth)	m	0	1314	\$0.00	
402	Construct manhole	each	29	6500	\$188,500.00	
402.1	Extra over for deeper manhole installation	each	5	1000	\$5,000.00	
408	Construct Rising Main					
408.1	280mm OD PE100 PN12.5 Sewer Rising Main	m	1660	380	\$630,800.00	
408.2	Supply and Install Air Valve and Fittings	ea	6	6500	\$39,000.00	
408.7	280mm RISING MAIN BRIDGE CROSSING					
408.8	280mm Rising Main Crossing - Herehere Stream	L.S	1	30000	\$30,000.00	
408.9	280mm Rising Main Crossing - Mangarau Stream	L.S	1	30000	\$30,000.00	
409	CONSTRUCT DISCHARGE MANHOLES with vent	L.S	1	15000	\$15,000.00	
410	PRESSURE TEST NEW SEWER RISING MAIN	L.S	1	10000	\$10,000.00	
411	Closed circuit TV (CCTV) inspection	LS	1	28360	\$28,360.00	
SUBTOTAL						\$1,369,515.00
412	Pumping Stations					
412.1	New Pumping Station Wet Well, 5m deep	LS	1	80000	\$80,000.00	
412.2	New Valve chamber	LS	1	60000	\$60,000.00	
412.3	New Pumps, 10l/s @ 200kPa (?)	LS	1	60000	\$60,000.00	
412.4	New Power Supply and cables	LS	1	60000	\$40,000.00	
412.5	New Emergency Storage (30m3 ?)	LS	1	30000	\$30,000.00	
412.6	New Water Supply	LS	1	3500	\$3,500.00	
412.7	New Telemetry	LS	1	5000	\$5,000.00	
412.8	New Hard Stand	LS	1	2000	\$2,000.00	
413	Breadalbane Pumping Stations Alterations					
413.2	Upgrade power supply	LS	1	30000	\$30,000.00	
413.3	Upgrade Switch board	LS	1	60000	\$60,000.00	
413.4	Build additional storage - 18m of 1600dia concrete storage tank with water spray cleaning system	LS	1	35000	\$35,000.00	
413.5	Upgrade pumps	LS	1	60000	\$60,000.00	
SUBTOTAL						\$465,500.00
1000	MISCELLANEOUS ITEMS					
					\$0.00	
					\$0.00	
SUBTOTAL						\$0.00
TOTAL (Excl GST)						\$2,554,015.00

B.4.8 SCHEDULE OF PRICES

Contract Name: Middle Iona Concept Cost Estimate
Option 3 - Gravity Sewer and Lift Pumping Station



MWH.

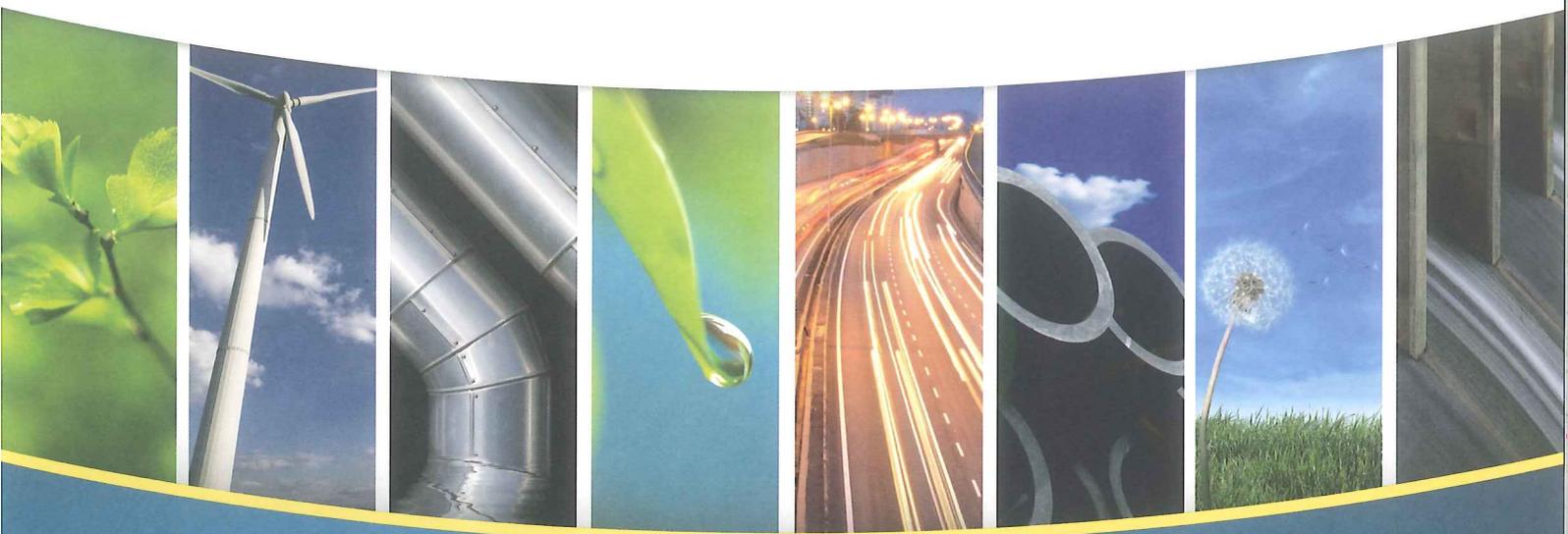


HASTINGS DISTRICT COUNCIL

It is the tenderer's responsibility to check the accuracy of this spreadsheet prior to tender submission (including cell references).

Item	Description	Unit	Quantity (A)	Rate (B)	Price (A x B)	Totals
100	PRELIMINARY AND GENERAL					
101	Establishment and disestablishment (10%)	LS	209000	1	\$209,000.00	
102	Traffic management plan	LS	6000	1	\$6,000.00	
103	On site traffic management	LS	20000	1	\$20,000.00	
104	Safety plan	LS	4000	1	\$4,000.00	
105	On site safety management	LS	20000	1	\$20,000.00	
106	Survey control and setting out	LS	10000	1	\$10,000.00	
107	Consultation and liaison with effected parties	LS	4000	1	\$4,000.00	
108	Supply As built information	LS	12000	1	\$12,000.00	
109	Contingency sum (25%)	LS	521000	1	\$521,000.00	
SUBTOTAL						\$806,000.00
	Stage 1					
412	Pumping Stations					
412.1	Breadalbane Pumping Stations Alterations - pumps upgrade					
412.5	Upgrade pumps	LS	0	75000	\$0.00	
SUBTOTAL						\$0.00
	Stage 2b					
400	SEWER WORKS					
401	Construct gravity mains - Trunk Sewer					
401.1	Supply and lay 225mm dia PVC main	m	761	300	\$228,300.00	
401.2	Supply and lay 225mm dia PVC main extra over for deeper sewer installation (3m to 3.5m depth)	m	79.2	300	\$23,760.00	
401.3	Supply and lay 225mm dia PVC main extra over for deeper for in road construction	m	675.7	50	\$33,785.00	
401.4	Supply and lay 300mm dia PVC main	m	728	300	\$218,400.00	
401.5	Supply and lay 300mm dia PVC main extra over for deeper sewer installation (4.0m to 5m depth)	m	0	400	\$0.00	
401.6	Supply and lay 300mm dia PVC main extra over for in road construction	m	728.0	190	\$138,320.00	
401.7	Supply and lay 375mm dia PVC main (4.5m -5m depth)	m	0	1314	\$0.00	
402	Construct manhole	each	29	6500	\$188,500.00	
402.1	Extra over for deeper manhole installation	each	5	1000	\$5,000.00	
408	Construct Rising Main				\$0.00	
408.1	Supply and lay 160mm OD PE main	m	100	300	\$30,000.00	
411	Closed circuit TV (CCTV) inspection	LS	1	15890	\$15,890.00	
SUBTOTAL						\$881,955.00
	SEWER WORKS					
412	Pumping Stations					
412	Lift Pumping Stations					
412.1	New Pumping Station Wet Well, 5m deep	LS	1	80000	\$80,000.00	
412.2	New Valve chamber	LS	1	60000	\$60,000.00	
412.3	New Pumps, 2x pump 10l/s @ 80kPa (?)	LS	1	30000	\$60,000.00	
412.4	New Power Supply and cables	LS	1	40000	\$40,000.00	
412.5	New Emergency Storage (30m3 ?)	LS	1	30000	\$30,000.00	
412.6	New Water Supply	LS	1	3500	\$3,500.00	
412.7	New Telemetry	LS	1	5000	\$5,000.00	
412.8	New Hard Stand	LS	1	2000	\$2,000.00	
413	Breadalbane Pumping Stations Alterations				\$0.00	
413.2	Upgrade power supply	LS	1	30000	\$30,000.00	
413.3	Upgrade Switch board	LS	1	60000	\$60,000.00	
413.4	Upgrade pumps	LS	1	60000	\$60,000.00	
413.6	Build additional storage - 18m of 1600dia concrete storage tank with water spray cleaning system	LS	1	35000	\$35,000.00	
413.7	Additional pipework	m	50	200	\$10,000.00	
SUBTOTAL						\$475,500.00
1000	MISCELLANEOUS ITEMS					
	Pumps	LS	1	75000	\$75,000.00	
	Additoional Storage	LS	1	65000	\$65,000.00	
	OD 400 PE 100 PN 16 Rising Main	m	600	600	\$360,000.00	
	Wet well 4m dia	LS	1	150000	\$150,000.00	
SUBTOTAL						\$650,000.00
TOTAL (Excl GST)						\$2,813,455.00

HAWKES BAY
1st Floor, 100 Warren Street South, Hastings 4122
PO Box 1190, Hastings 4156
TEL +64 6 873 8900
FAX +64 6 873 8901
www.mwhglobal.co.nz



In New Zealand we provide services covering these disciplines:

- Asset Management
- Business Solutions
- Civil and Structural Engineering
- Energy Generation
- Environmental Science and Management
- Geoscience and Geotechnical
- Mechanical, Electrical and Building Services
- Planning, Policy and Resource Management
- Programme Management
- Roads and Highways
- Solid Waste
- Stormwater
- Surveying
- Transport Planning
- Water Resources
- Water Supply
- Wastewater



MWH[®]

BUILDING A BETTER WORLD

Hastings District Council
Private Bag 9002
Hastings 4156

Attention: Rowan Wallis

Dear Rowan

Middle and Iona Rd Proposed Development, Havelock North - Stormwater Assessment Summary

This document has been prepared to summarise the findings and recommendations of Tonkin + Taylor's (T+T) stormwater assessments completed for the proposed Middle and Iona Rd development in Havelock North.

1 Initial assessment

T+T prepared a draft report¹ that assessed the potential flood-related effects that may be caused by the proposed Middle and Iona Rd development, and identified mitigation controls that would adequately address these adverse effects. Conclusions from this initial assessment included the following:

- The proposed development has the potential, without mitigation, to increase peak runoff from site due to the increase in impervious area and proposed re-contouring.
- The unmitigated increase was particularly significant at the outlet locations in the southern corner of the Triangle site (Outlets D and E) due to downstream ponding issues and at the northern section of the Triangle site (Outlet G) due to large increases in peak flows.
- The proposed mitigation option for Outlets E and G is a wetland with peak flow attenuation to pre-development levels.
- The proposed mitigation option for the Outlet D catchment is an on-line storage pond located immediately upstream of the 'Spine' road which attenuates peak flows at Outlet D to pre-development levels.
- No formal mitigation was specified for upstream of Outlet I.
- The mitigation options proposed achieved the target peak flows² for the development.

¹ Tonkin + Taylor, "DRAFT Middle and Iona Road Proposed Development, Havelock North – Stormwater Flood Effects Assessment", Prepared for Lowe Corporation Ltd, dated October 2017.

² As per the Hawkes Bay Regional Councils Waterway Guidelines Stormwater Management (May 2009).

2 Peer review

A peer review of the T+T draft report was undertaken by Christensen Consulting Ltd (CCL) on 17 November 2017. The main conclusions stated in this peer review can be summarised as below:

- The curve numbers used in the assessment should be reviewed as the actual soil is likely more permeable than represented.
- Higher intensity short duration events affecting the lower developed areas (i.e. C1 and C2) have not been adequately addressed and direct mitigation to these areas need to be explored. The upstream mitigation currently proposed won't provide sufficient benefit during these events.
- The effects of large scale gully/floodplain filling that is proposed has not been assessed.

3 Addendum

Following consideration of these review comments, an addendum report³ was prepared by T+T. This also followed discussions with Kyle Christensen (CCL), Matthew Kneebone (HDC) and Craig Goodier (HBRC) on 5 December 2017 to address the peer review comments. Conclusions of the addendum can be summarised below:

- The hydrological model was re-run with the Curve Numbers (CN's) shifted up a soil class (to higher permeability) for undisturbed areas (both in the pre and post developed case) and the CN's unchanged for any disturbed areas (in the post developed case).
- The footprint of the wetland for Outlet E and G was increased by 10% and 25% respectively but can still be contained within the development or Lowe family owned land.
- There was no change to the previous recommended mitigation approach upstream of Outlet D.
- An alternative option for a wetland upstream of Outlet D was considered as a means of providing direct runoff mitigation to the lower developed areas at catchments C1 and C2. Sizing for this option was presented, but was T+T's least preferred option because it likely requires diversion of the existing stream and filling in the existing floodplain, both of which are likely to have greater effects than the preferred option (and would probably require separate resource consent).

4 Current position

A peer review of the T+T Addendum report was undertaken by Christensen Consulting Ltd (CCL) on 19 March 2018 and was discussed in a teleconference with CCL, HDC and T+T on 28 March 2018. These discussions and the current position is summarised below:

- The assessment and proposed mitigation options at Outlet E, G and I are generally agreed as per the T+T Addendum report.
- No agreement has been reached in regard to the assessment and proposed mitigation option at Outlet D.
- HDC prefer that developed areas C1 and C2 are directly mitigated. It is understood that HDC are of the opinion that higher intensity short duration rainfall events affecting only the lower developed areas (i.e. spatially varied rainfall) will result in adverse effects downstream of the development.

³ Tonkin + Taylor, "Addendum Report to Stormwater Flood Effects Assessment", Prepared for Lowe Corporation Ltd, dated March 2018.

- T+T are of the opinion that it is unnecessary to consider different design rainfall (recurrence interval or duration) across the catchment for the effects assessment given the small size of the catchment (~1.5km²).
- T+T are of the opinion that whilst it may be possible to directly mitigate developed areas C1 and C2 by providing an additional pond upstream of Outlet D, there are significant disadvantages in comparison to the proposed mitigation. The disadvantages in comparison to the proposed mitigation are primarily due to the potential effects caused by filling in the floodplain and diverting the stream. Secondly, the quantum of earthworks required to construct an offline-pond at Outlet D would be greater than other options, the cost is likely to be higher and there may be a reduction in properties yielded by the Plan Change.

5 Applicability

This report has been prepared for the exclusive use of Hastings District Council, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

Tonkin & Taylor Ltd

Environmental and Engineering Consultants

Report prepared by:

Authorised for Tonkin & Taylor Ltd by:

Mark Pennington

Senior Water Resources Engineer

Jon Rix

Project Manager

CWS

\\ttgroup.local\corporate\aukland\projects\1003185\issueddocuments\iona sw summary report final.docx

Report generated: 30-Mar-2018 from <https://smap.landcareresearch.co.nz>

S-map maps soils at a nominal scale of 1:50,000. At this scale it is common to identify two or more soil siblings that are likely to be present at the selected location. A more detailed resolution is needed to produce map units comprising a single soil sibling. Therefore, it is recommended that users consider the characteristics of each of the identified siblings, the expected proportion of each, and select the S-map sibling that best matches their field observations of the paddock. If no local information is available then it is common practice to select the dominant S-map sibling, i.e. the first listed sibling.

This information sheet describes the typical average properties of the specified soil to a depth of 1 metre, and should not be the primary source of data when making land use decisions on individual farms and paddocks.

Ruataniwhaf

Duric Perch-gley Pallic Soil

Ruat_7a.1 (100% of the mapunit at location (1931580, 5600284), Confidence: Medium)

Key physical properties

Depth class (diggability)	Moderately Deep (74 - 84 cm)
Texture profile	Silty Loam
Potential rooting depth	85 - 95 (cm)
Rooting barrier	Pan
Topsoil stoniness	Stoneless
Topsoil clay range	18 - 28 %
Drainage class	Poorly drained
Aeration in root zone	Limited
Permeability profile	Moderate Over Slow
Depth to slowly permeable horizon	74 - 84 (cm)
Permeability of slowest horizon	Slow (< 4 mm/h)
Profile available water	Moderate to high (136 mm)
	High (91 mm)
	Moderate (47 mm)
	(0 - 100cm or root barrier)
	(0 - 60cm or root barrier)
	(0 - 30cm or root barrier)
Dry bulk density, topsoil	1.22 g/cm ³
Dry bulk density, subsoil	1.42 g/cm ³
Depth to hard rock	No hard rock within 1 m
Depth to soft rock	No soft rock within 1 m
Depth to stony layer class	No significant stony layer within 1 m

Key chemical properties

Topsoil P retention	Low (22%)
---------------------	-----------

About this publication

- This information sheet describes the *typical average properties* of the specified soil to a depth of 1 metre.
- For further information on individual soils, contact Landcare Research New Zealand Ltd: www.landcareresearch.co.nz
- Advice should be sought from soil and land use experts before making decisions on individual farms and paddocks.
- The information has been derived from numerous sources. It may not be complete, correct or up to date.
- This information sheet is licensed by Landcare Research on an "as is" and "as available" basis and without any warranty of any kind, either express or implied.
- Landcare Research shall not be liable on any legal basis (including without limitation negligence) and expressly excludes all liability for loss or damage howsoever and whenever caused to a user of this factsheet.

Additional factors to consider in choice of management practices

Vulnerability classes relate to soil properties only and do not take into account climate or management

Soil structure integrity

Structural vulnerability	Very high (0.71)
Pugging vulnerability	not available yet

Water management

Water logging vulnerability	High
Drought vulnerability - if not irrigated	Low
Bypass flow	Medium
Hydrological soil group	C/D
Irrigability	Flat to very gently undulating land with severe drainage/permeability restrictions and soils with high PAW

Contaminant management

N leaching vulnerability	Very Low
P leaching vulnerability	not available yet
Bypass flow	Medium
Dairy effluent (FDE) risk category	B
Relative Runoff Potential	Medium

Additional information

Soil classification	Duric Perch-gley Pallic Soils
Family	Ruataniwhaf
Sibling number	7
Profile texture group	Silty
Soil profile material	Stoneless soil
Rock class of stones/rocks	Not Applicable
Rock origin of fine earth	From Hard Sandstone Rock
Parent material origin	Alluvium

Characteristics of functional horizons in order from top to base of profile:

Functional Horizon	Thickness	Stones	Clay*	Sand*
Loamy Weak	16 - 20 cm	0 %	18 - 28 %	20 - 50 %
Loamy Weak	24 - 28 cm	0 %	18 - 25 %	20 - 50 %
Loamy Coarse Slightly Firm	32 - 36 cm	0 %	15 - 25 %	15 - 30 %
Loamy Coarse Firm	10 - 15 cm	0 %	18 - 30 %	20 - 40 %
Indurated pan	10 - 15 cm	0 %	10 - 22 %	20 - 50 %

* clay and sand percent values are for the mineral fines (excludes stones). Silt = 100 - (clay + sand)

The following information can be entered in the OVERSEER® Nutrient Budget model. This information is derived from the S-map soil properties which are matched to the most appropriate OVERSEER categories. Please read the notes below for further information.

Soil description page

1. Select **Link to S-map**
2. Under S-map sibling data enter the S-map name/ref: **Ruat_7a.1**

Considerations when using Smap soil properties in OVERSEER

- The soil water values are estimated using a regression model based on soil order, parent rock, soil functional horizon information (stone content, soil density class), as well as texture (field estimates of sand, silt and clay percentages). The model is based on laboratory - measured water content data held in the National Soils Database and other Manaaki Whenua datasets. Most of this data comes from soils under long-term pasture and may vary from land under arable use, irrigation, etc.
- Each value is an estimate of the water content of the whole soil within the target depth range or to the depth of the root barrier (if this occurs above the base of the target depth). Where soil layers contain stones, the soil water content has been decreased according to the stone content.
- S-map only contains information on soils to a depth of 100 cm. The soil water estimates in the > 60 cm depth category assume that the bottom functional horizon that extends to 100 cm, continues down to a depth of 150cm. Where it is known by the user that there is an impermeable layer or non-fractured bedrock between 100 and 150 cm, this depth should be entered into OVERSEER. Where there is a change in the soil profile characteristics below 100 cm, the user should be aware that the values provided on this factsheet for the > 60 cm depth category will not reflect this change. For example, the presence of gravels at 120 cm would usually result in lower soil water estimates in the > 60 cm depth category. Note though that this assumption only impacts on a cropping block, as OVERSEER uses soil data from just the top 60 cm in pastoral blocks.
- OVERSEER requires the soil water values to be non-zero integers (even though zero is a valid value below a root barrier), and the wilting point value must be less than the field capacity value which must be less than the saturation value. The S-map water content estimates supplied by the S-map web service have been rounded to integers and may be assigned minimal values to meet these OVERSEER requirements. These modifications will result in a slightly less accurate estimate of Available Water to 60 cm (labelled PAW in OVERSEER) than that provided on the first page of this factsheet, but this is not expected to lead to any significant difference in outputs from OVERSEER.

Report generated: 1-Apr-2018 from <https://smap.landcareresearch.co.nz>

S-map maps soils at a nominal scale of 1:50,000. At this scale it is common to identify two or more soil siblings that are likely to be present at the selected location. A more detailed resolution is needed to produce map units comprising a single soil sibling. Therefore, it is recommended that users consider the characteristics of each of the identified siblings, the expected proportion of each, and select the S-map sibling that best matches their field observations of the paddock. If no local information is available then it is common practice to select the dominant S-map sibling, i.e. the first listed sibling.

This information sheet describes the typical average properties of the specified soil to a depth of 1 metre, and should not be the primary source of data when making land use decisions on individual farms and paddocks.

Hastingsf

Typic Orthic Gley Soil

Hast_29a.1 (100% of the mapunit at location (1931560, 5599920), Confidence: High)

Key physical properties

Depth class (diggability)	Deep (> 1 m)
Texture profile	Loam Over Sandy Loam
Potential rooting depth	Unlimited
Rooting barrier	No significant barrier within 1 m
Topsoil stoniness	Stoneless
Topsoil clay range	19 - 21 %
Drainage class	Poorly drained
Aeration in root zone	Limited
Permeability profile	Moderate Over Rapid
Depth to slowly permeable horizon	No slowly permeable horizon
Permeability of slowest horizon	Moderate (4 - 72 mm/h)
Profile available water	(0 - 100cm or root barrier) High (210 mm) (0 - 60cm or root barrier) Very high (160 mm) (0 - 30cm or root barrier) Very high (83 mm)
Dry bulk density, topsoil	0.94 g/cm ³
Dry bulk density, subsoil	1.22 g/cm ³
Depth to hard rock	No hard rock within 1 m
Depth to soft rock	No soft rock within 1 m
Depth to stony layer class	No significant stony layer within 1 m

Key chemical properties

Topsoil P retention	Medium (38%)
---------------------	--------------

About this publication

- This information sheet describes the *typical average properties* of the specified soil to a depth of 1 metre.
- For further information on individual soils, contact Landcare Research New Zealand Ltd: www.landcareresearch.co.nz
- Advice should be sought from soil and land use experts before making decisions on individual farms and paddocks.
- The information has been derived from numerous sources. It may not be complete, correct or up to date.
- This information sheet is licensed by Landcare Research on an "as is" and "as available" basis and without any warranty of any kind, either express or implied.
- Landcare Research shall not be liable on any legal basis (including without limitation negligence) and expressly excludes all liability for loss or damage howsoever and whenever caused to a user of this factsheet.

Additional factors to consider in choice of management practices

Vulnerability classes relate to soil properties only and do not take into account climate or management

Soil structure integrity

Structural vulnerability	High (0.65)
Pugging vulnerability	not available yet

Water management

Water logging vulnerability	High
Drought vulnerability - if not irrigated	Low
Bypass flow	High
Hydrological soil group	B/D
Irrigability	Gently undulating land with moderate drainage/permeability restrictions and soils with high to very high PAW

Contaminant management

N leaching vulnerability	Very Low
P leaching vulnerability	not available yet
Bypass flow	High
Dairy effluent (FDE) risk category	B
Relative Runoff Potential	Low

Additional information

Soil classification	Typic Orthic Gley Soils
Family	Hastingsf
Sibling number	29
Profile texture group	Loamy
Soil profile material	Stoneless soil
Rock class of stones/rocks	Not Applicable
Rock origin of fine earth	From Hard Sandstone Rock
Parent material origin	Alluvium

Characteristics of functional horizons in order from top to base of profile:

Functional Horizon	Thickness	Stones	Clay*	Sand*
Loamy Weak	5 - 15 cm	0 %	19 - 21 %	6 - 10 %
Loamy Weak	45 - 55 cm	0 %	19 - 21 %	6 - 10 %
Sandy Weak	35 - 45 cm	0 %	1 - 5 %	85 - 95 %

* clay and sand percent values are for the mineral fines (excludes stones). Silt = 100 - (clay + sand)

The following information can be entered in the OVERSEER® Nutrient Budget model. This information is derived from the S-map soil properties which are matched to the most appropriate OVERSEER categories. Please read the notes below for further information.

Soil description page

1. Select **Link to S-map**
2. Under S-map sibling data enter the S-map name/ref: **Hast_29a.1**

Considerations when using Smap soil properties in OVERSEER

- The soil water values are estimated using a regression model based on soil order, parent rock, soil functional horizon information (stone content, soil density class), as well as texture (field estimates of sand, silt and clay percentages). The model is based on laboratory - measured water content data held in the National Soils Database and other Manaaki Whenua datasets. Most of this data comes from soils under long-term pasture and may vary from land under arable use, irrigation, etc.
- Each value is an estimate of the water content of the whole soil within the target depth range or to the depth of the root barrier (if this occurs above the base of the target depth). Where soil layers contain stones, the soil water content has been decreased according to the stone content.
- S-map only contains information on soils to a depth of 100 cm. The soil water estimates in the > 60 cm depth category assume that the bottom functional horizon that extends to 100 cm, continues down to a depth of 150cm. Where it is known by the user that there is an impermeable layer or non-fractured bedrock between 100 and 150 cm, this depth should be entered into OVERSEER. Where there is a change in the soil profile characteristics below 100 cm, the user should be aware that the values provided on this factsheet for the > 60 cm depth category will not reflect this change. For example, the presence of gravels at 120 cm would usually result in lower soil water estimates in the > 60 cm depth category. Note though that this assumption only impacts on a cropping block, as OVERSEER uses soil data from just the top 60 cm in pastoral blocks.
- OVERSEER requires the soil water values to be non-zero integers (even though zero is a valid value below a root barrier), and the wilting point value must be less than the field capacity value which must be less than the saturation value. The S-map water content estimates supplied by the S-map web service have been rounded to integers and may be assigned minimal values to meet these OVERSEER requirements. These modifications will result in a slightly less accurate estimate of Available Water to 60 cm (labelled PAW in OVERSEER) than that provided on the first page of this factsheet, but this is not expected to lead to any significant difference in outputs from OVERSEER.



Housing Re-Zone

Middle Road and Iona Road -
Geotechnical Investigation Report

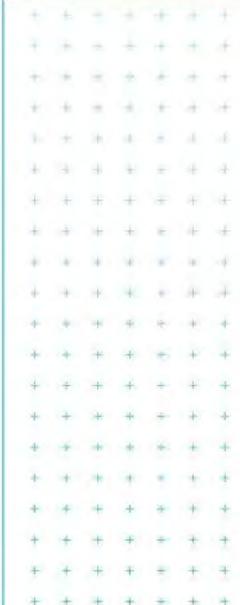
Prepared for
Hastings District Council

Prepared by
Tonkin & Taylor Ltd

Date

April 2016

Job Number
31464.2000



Exceptional thinking together

www.tonkintaylor.co.nz

Distribution:

Hastings District Council

2 copies

Tonkin & Taylor Ltd (FILE)

1 copy

Table of contents

1	Introduction	1
	1.1 General	1
	1.2 Site Description	1
2	Geotechnical Investigations	1
3	Geological Setting	2
	3.1 Regional Geology	2
	3.2 Subsurface Stratigraphy	2
	3.3 Groundwater	2
4	Geotechnical Considerations	3
	4.1 General	3
	4.2 Seismic Assessment	3
	4.2.1 Site Subsoil Class	3
	4.2.2 Seismic loading to be applied to liquefaction assessment	3
	4.2.3 Liquefaction potential	3
	4.3 Slope Stability	4
	4.4 Earthworks	4
	4.5 Foundations	4
5	Conclusions	5
6	Applicability	6
Appendix A :	Site Investigation Plan	
Appendix B :	Test Pit Logs	

1 Introduction

1.1 General

Hastings District Council (HDC) has engaged Tonkin + Taylor Ltd (T+T) to undertake a preliminary geotechnical assessment of a block of land in Havelock North. This geotechnical assessment was carried out as part of the proposed zone (land use) review that HDC are currently undertaking.

This report presents the results of geotechnical investigations undertaken on sites between Middle Road and Iona Road, Hastings, in February 2016 and outlines the potential geotechnical issues that may affect future residential development at those sites.

The scope of work undertaken for this report comprised:

- Geotechnical investigations comprising 22 No. test pits;
- Development of a geological model for the site;
- Development of recommended geotechnical design parameters including site seismic design characteristics,
- Assessment potential geotechnical risks that may affect future residential development;
- Assessment of potential foundation options; and
- Preparation of this report.

1.2 Site Description

The sites being considered as part of the re-zone review are located in a triangular shaped section between 119 to 167 Middle Road and 58 to 132 Iona Road in Havelock North, Hastings, as shown on Figure 1 in Appendix A. The geotechnical assessment covered approximately 16.5 ha of land.

At present, the sites are a mix of private residential property and grazing land. The site generally slopes down from the higher south-eastern Iona Road side to the lower northern Middle Road side. The site has small hills and gullies, with one main knoll in the southern lot and a main stream gully crossing a northern lot that contains a stormwater outlet. There are also other smaller stream / valley paths and a pond in the middle lot that borders Iona Road (highlighted on 31464.2000 – Figure 1 in Appendix A).

2 Geotechnical Investigations

Investigations were carried out between 3 and 4 February 2016 under the supervision of a geotechnical engineer from T+T. The investigation comprised 22 No. test pits (TP01 to TP22) excavated using a 6 tonne excavator supplied and operated by Gair Contracting Ltd. On completion, test pits were backfilled with material excavated from the pits and nominal compaction was applied with the excavator bucket.

The locations of the geotechnical investigations are presented on the layout plan (ref. Figure 1) in Appendix A.

Test pits were excavated to depths of 0.55 m to 2.2 m below existing ground level to assess sub-surface conditions. The information obtained from the investigations has been used in developing a typical ground model for the site.

3 Geological Setting

3.1 Regional Geology

Published geology¹ indicates the site is underlain by a variable group of middle to late Pleistocene alluvial fan deposits, collectively known as the Kidnappers Group². These typically consist of extremely to very weak siltstones and sandstones. A weathered cap of sandy silt often overlies the sandstone rock.

Our preliminary geotechnical investigations have generally confirmed the published geology.

3.2 Subsurface Stratigraphy

Topsoil was encountered across the entire site, which was generally underlain by siltstones and sandstones of the Kidnappers Group. Test pits TP04, 12, 19, & 22 were positioned within gully features and encountered sands and gravels that were identified as alluvium; bedrock was not proven in these test pits. These deposits are consistent with historical T+T investigations within nearby gullies.

The general stratigraphy of the site is summarised in Table 3.1.

Table 3.1: Geological Profile of the Site

Layer No.	Unit	Description	Depth to top of layer (m begl)	Layer thickness (m)
1	Topsoil	Sandy SILT; brown, rootlets present. Firm, dry.	0	0.1 - 0.3
2	Residual soil	Sandy SILT; light brown/grey, rootlets present. Dry	0.15 – 0.3	0.1 – 0.55
3	Alluvium (Present in test pits TP04, 12, 19, and 22 only)	Sandy/clayey SILT; fine sand, light brown mottled with light grey, rounded gravels/cobbles often present. Firm/Stiff.	0.2 – 0.4	> 0.55 Depth of alluvium not proven in gully features
4	Kidnappers Group	Highly Weathered light brown SANDSTONE, extremely weak.	0.3 – 1.6	Extent not proven

3.3 Groundwater

Groundwater was not encountered in any of the test pits in this investigation.

We note that some seasonal fluctuations in groundwater levels should be expected and the groundwater regime should be subject to further assessment.

¹ Lee, J.M. et al (2011). *Institute of Geological & Nuclear Sciences 1:250 000 Geological Map 8*. Geology of the Hawke's Bay area. GNS Science.

² Kingma, J.T. (1971). *Geological Map of New Zealand 1:63 360, Sheets N134 Napier and Hastings and N135 Kidnappers*. Department of Scientific and Industrial Research.

4 Geotechnical Considerations

4.1 General

Recommendations and opinions in this report are based on data from a site walkover, and subsurface investigations at point locations. The nature and continuity of subsurface conditions away from the test locations are inferred and it must be appreciated that actual conditions may vary from the assumed model.

4.2 Seismic Assessment

4.2.1 Site Subsoil Class

A seismic assessment has been undertaken for the proposed development in accordance with the recommendations in the NZTA Bridge Manual³ and the New Zealand Code of Practice NZS 1170.5:2004⁴.

The design earthquakes for serviceability and ultimate limit states have been adopted as 1 in 25 years and 1 in 500 years respectively, with a building Importance Level 2. Should the Importance Level change during the design, the seismic assessment will need to be revised.

As the depth to rock is generally shallow we have classified the site as Class B – Rock, with the exception of the alluvial area where further investigations are required.

4.2.2 Seismic loading to be applied to liquefaction assessment

The peak ground acceleration (PGA) for liquefaction assessment under serviceability limit state and ultimate limit state are set out in Table 5.1 below. The design PGA is derived based on the recommended return periods (T) in NZS 1170.5:2004⁴ and using the following formula, as given in NZTA Bridge Manual³ (which is considered more appropriate for liquefaction analysis)

$$PGA = C_{0,1000} Ru/1.3 f g$$

where:

- $C_{0,1000} = 0.40$ for Subsoil Class B, Hastings
- $Ru = 1.0$ and 0.25 for (T = 1 in 500 and 1 in 25 years respectively)
- $f = 1.0$, Subsoil Class B

Table 4.1: Design Peak Ground Acceleration for Liquefaction Assessment

Design Life* (years)	Serviceability Limit State (SLS)		Ultimate Limit State (ULS)	
	Annual Exceedance Probability	Peak Ground Acceleration	Annual Exceedance Probability	Peak Ground Acceleration
50	1/25	0.08g	1/500	0.31g

4.2.3 Liquefaction potential

As part of this report, T+T has not undertaken quantitative liquefaction analysis. A qualitative analysis has been undertaken from a visual appraisal of the materials within the test pits.

³ The NZ Transport Agency's Bridge Manual Sp/M/022, Third Edition, Amendment 0, May 2013

⁴ NZS1170.5:2004. *Structural Design Actions – Earthquake Actions (New Zealand)*, SANZ.

The liquefaction susceptibility across the majority of the proposed site is generally very low due to the presence of the Kidnappers Group sandstone at shallow depth and the absence of groundwater. The weathered soils of the Kidnappers Group are generally stiff and cohesive in nature, accordingly are very unlikely to liquefy in an earthquake event.

Gully features and areas underlain by alluvial soils may be susceptible to liquefaction in the event of an earthquake. However, we recommend further investigation is undertaken to characterise and delineate alluvial materials.

4.3 Slope Stability

In general the site comprises flat, slightly rolling topography with the exception of the knoll forming the centre west of the site. No signs of instability were observed during the site walkover.

We do not recommended cut platforms exceed grades of more than 1V:4H. However, sites that do not conform to this grade could be developed with site specific analysis and suitably developed retention measures.

4.4 Earthworks

We expect that minor earthworks will be required to form the required dwelling platforms and roads. Some filling of the gullies may be required to raise levels across the site.

Gullies and areas with thick alluvial deposits may require some form of ground improvement such as removal and replacement with engineered fill or pre-loading. We recommend further investigations such as machine boreholes, laboratory testing and cone penetration tests (CPTs) be undertaken to characterise and delineate such soils if these areas are to be utilised for residential development.

The 22 No. test pits that were excavated as part of this geotechnical investigation were backfilled and compacted only with the excavator bucket. If buildings or access roads are to be located across these test pits, care should be taken to excavate and backfill the pits with engineered fill.

4.5 Foundations

Based on the results of the site investigations, we consider shallow foundations in accordance with NZS 3604:2011⁵ bearing "good ground" will be generally appropriate for typical residential structures.

During detailed design, lot specific investigations such as hand augers (with shear vane measurements), Scala penetrometers and additional test pits should be carried out to determine bearing capacities for each proposed site.

Site specific foundation design should be undertaken where alluvial soils were encountered.

⁵ NZS 3604:2011. *Timber-framed buildings*. SANZ.

5 Conclusions

Based on the results of the site investigation, we believe the investigation area is generally suitable for residential development. The key conclusions of our assessment are as follows:

- 1 The site is typically underlain by Kidnappers Group sandstone and siltstone. Pockets of alluvial deposits (interbedded sand and silt) were encountered in localised gullies across the site.
- 2 The Kidnappers Group is considered to have negligible susceptibility to liquefaction. For alluvial and gully deposits, further investigation and laboratory testing are recommended to further characterise and delineate these materials.
- 3 Minor earthworks may be required to form platforms and fill gullies.
- 4 Areas with thick alluvial deposits may require some form of ground improvement such as removal and replacement with engineered fill or pre-loading.
- 5 We recommend that site specific foundation assessments be carried out where alluvial soils were encountered to allow site specific earthwork and foundation design.
- 6 Shallow foundations in accordance with NZS 3604:2011⁵ bearing on "good ground" are considered to be generally appropriate for typical residential structures.
- 7 During detailed design, lot specific investigations such as hand augers (with shear vane measurements), Scala penetrometers and additional test pits should be carried out to confirm the underlying geological conditions for each proposed site.

6 Applicability

This report has been prepared for the exclusive use of Hastings District Council, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

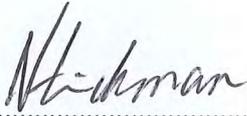
Recommendations and options in this report are based on data from test pits undertaken at point locations. The nature and continuity of subsoil away from the test pits are inferred but it must be appreciated that actual conditions could vary from the assumed model.

During excavation and construction, the site should be examined by an engineer or engineering geologist competent to judge whether the exposed subsoils are compatible with the inferred conditions on which the report has been based. We would be pleased to provide this service to Hastings District Council or future property developers and believe the development would benefit from such continuity. However, it is important that we be contacted if there is any variation in subsoil conditions from those described in the report.

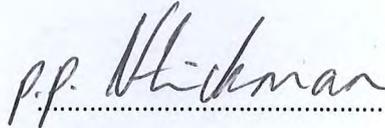
Tonkin & Taylor Ltd

Report prepared by:

Report reviewed by:



.....
Dang Ngoc Tran
Nathan Hickman
Geotechnical Engineer



.....
Andy Pomfret
Senior Geotechnical Engineer

Authorised for Tonkin & Taylor Ltd by:



.....
Robert Hillier
Project Director

dnt
p:\31464\31464.2000\workingmaterial\report docs\2016-03.nah.gir.docx

Appendix A: Site Investigation Plan

L:\31464\31464.2000\WorkingMaterial\CAD\FIG\31464.2000-F1.dwg, F01, 2/03/2016 12:09:03 p.m., agds



LEGEND

- Tonkin & Taylor Ltd Test Pit Location (Feb. 2016)
- Zones of Potential Deeper Alluvium (Further Investigation Required)

A3 SCALE 1:3000

ORIGINAL IN COLOUR

NOTES:

- Aerial photo sourced from Linz Data Service <<https://data.linz.govt.nz/set/2-nz-aerial-imagery/#>>, licensed by LINZ for re-use under the Creative Commons Attribution 3.0 New Zealand licence (CC BY 3.0 NZ)

105 Carlton Gore Road, Newmarket, Auckland
www.tonkintaylor.co.nz

DRAWN	AGDS Mar. 16
DRAFTING CHECKED	
APPROVED	
CADFILE :	3 1464.2000-F 1.dwg
SCALES (AT A3 SIZE)	
1:3000	
PROJECT No.	3 1464.2000

HASTINGS DISTRICT COUNCIL
POTENTIAL RE-ZONING IN HAVELOCK NORTH
MIDDLE ROAD & IONA ROAD
 Site Investigation Plan

FIG. No. Figure 1

REV. 0

Appendix B: Test Pit Logs

- TP01 to TP22

EXCAVATION LOG

EXCAVATION No: TP01
 Hole Location: 167 Middle Road
 SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road	LOCATION: Havelock North	JOB No: 31464.2000
CO-ORDINATES: 5600087 mN 1931215 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 3/2/16
R.L. 11.80 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 3/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 1.4m x 2.5m x 0.44	CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL				
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 50 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
				11.5	[Symbol]	TOPSOIL: Sandy SILT; brown, rootlets. Dry.	D	F		TOPSOIL	
					[Symbol]	Sandy SILT; light brown, rootlets present. Firm, dry [Residual Soil].				KIDNAPPERS GROUP	
					[Symbol]	Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW			
				0.5		END OF TEST PIT AT 0.44m.					
				11.0		Unable to excavate further. No groundwater encountered.					
				1.0							
				10.5							
				1.5							
				10.0							
				2.0							
				9.5							



EXCAVATION LOG

EXCAVATION No: TP02
Hole Location: 167 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600141.6 mN 1931275.48 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 3/2/16
R.L. 11.20 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 3/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2.5m x 0.9m	CHECKED BY: JWY

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)				ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
											10	25	50	100		
				11.0		[Symbol]		TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F					TOPSOIL	
				10.5	0.5	[Symbol]		Sandy SILT; light brown/light grey, rootlets present. Firm, dry; sand, fine. [Residual Soil]							KIDNAPPERS GROUP	
				10.5		[Symbol]		Highly weathered, light brown fine grained SANDSTONE. Very weak. 0.8m: trace calcareous nodules.		VW						
				10.0	1.0			END OF TEST PIT AT 0.9m. Unable to excavate further. No groundwater encountered.								



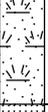
EXCAVATION LOG

EXCAVATION No: TP03
Hole Location: 167 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600129.28 mN EXPOSURE TYPE: TEST PIT EXCAV. STARTED: 3/2/16
 1931354.88 mE EQUIPMENT: 6 Tonne Digger EXCAV FINISHED: 3/2/16
 R.L. 10.00 m OPERATOR: Gair Contracting LOGGED BY: DNT
 DATUM NZTM DIMENSIONS: 0.7m x 2m x 0.6m CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL						
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)			ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
									10	25	100		
				10.0		TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F				TOPSOIL	
				9.5		Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW				KIDNAPPERS GROUP	
				9.0		END OF TEST PIT AT 0.6m. Unable to excavate further. No groundwater encountered.							



EXCAVATION LOG

EXCAVATION No: TP04
Hole Location: 167 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600136.91 mN EXPOSURE TYPE: TEST PIT EXCAV. STARTED: 3/2/16
 1931384.43 mE EQUIPMENT: 6 Tonne Digger EXCAV FINISHED: 3/2/16
 R.L. 10.80 m OPERATOR: Gair Contracting LOGGED BY: DNT
 DATUM NZTM DIMENSIONS: 0.7m x 2.5m x 2.4m CHECKED BY: JWY

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)			ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
									10	25	100		
				10.5	[Symbol]	TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F				TOPSOIL	
				0.5	[Symbol]	Silty, fine SAND; light brown/light grey, trace rootlets. Loose, dry.		L				ALLUVIUM	
				10.0	[Symbol]	SILT, with fine sand; light brown. Firm, moist.	M	F					
			● UTP	1.0	[Symbol]	Clayey SILT; light brown, mottled with grey/black, dark brown. Very stiff, moist.		VSt					
				1.5	[Symbol]	- becoming more clayey; light brown, mottled dark brown/grey, speckled inclusions of black. Moist. 1.6m: becoming firmer.							
				2.0	[Symbol]								
				2.4	[Symbol]	2.4m: Clayey SILT, trace sand, trace organics. Moist, low plasticity. END OF TEST PIT AT 2.4m.							
						No groundwater encountered.							



EXCAVATION LOG

EXCAVATION No: TP05
Hole Location: 167 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600198.72 mN EXPOSURE TYPE: TEST PIT EXCAV. STARTED: 3/2/16
 1931421.47 mE EQUIPMENT: 6 Tonne Digger EXCAV FINISHED: 3/2/16
 R.L. 18.30 m OPERATOR: Gair Contracting LOGGED BY: DNT
 DATUM NZTM DIMENSIONS: 0.7m x 2.5m x 2.2m CHECKED BY: JWY

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)			ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
											10	25	100		
				18.0	0.5	[Symbol: Dotted with 'x' marks]		TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F				TOPSOIL	
				17.5	1.0	[Symbol: Dotted]		Sandy SILT; light brown/light grey, rootlets present. Firm, dry; sand, fine. [Residual Soil]						KIDNAPPERS GROUP	
				17.0	1.5	[Symbol: Dotted]		Silty, fine SAND; light brown. Stiff, weakly cemented. [Completely weathered SANDSTONE]		St					
				16.5	2.0	[Symbol: Dotted]		1.8m: becoming very stiff.		VSt					
				16.0				2.2m: becoming moist. END OF TEST PIT AT 2.2m. No groundwater encountered.	M						



EXCAVATION LOG

EXCAVATION No: TP06
Hole Location: 167 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road	LOCATION: Havelock North	JOB No: 31464.2000
CO-ORDINATES: 5600175.66 mN 1931517.6 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 3/2/16
R.L. 16.00 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 3/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2m x 0.6m	CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL						
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
				16.0				TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F		TOPSOIL	
				15.5	0.5			Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW		KIDNAPPERS GROUP	
				15.0	1.0			END OF TEST PIT AT 0.6m. Unable to excavate further. No groundwater encountered.					
				14.5	1.5								
				2.0									



EXCAVATION LOG

EXCAVATION No: TP07
Hole Location: 167 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600255 mN 1931481 mE EXPOSURE TYPE: TEST PIT EXCAV. STARTED: 3/2/16
 EQUIPMENT: 6 Tonne Digger EXCAV FINISHED: 3/2/16
 R.L. 14.10 m OPERATOR: Gair Contracting LOGGED BY: DNT
 DATUM NZTM DIMENSIONS: 0.7m x 2m x 0.65m CHECKED BY: JWY

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)			ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
											10	25	100		
				14.0		[Symbol]		TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F				TOPSOIL	
						[Symbol]		Sandy SILT; light brown/light grey. Stiff, dry. [Residual Soil]		St				KIDNAPPERS GROUP	
				13.5	0.5	[Symbol]		Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW					
								END OF TEST PIT AT 0.65m. Unable to excavate further. No groundwater encountered.							



EXCAVATION LOG

EXCAVATION No: TP08

Hole Location: 167 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600328.07 mN 1931439.94 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 3/2/16
R.L. 10.00 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 3/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2m x 0.65m	CHECKED BY: JWY

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
			10.0		TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F		TOPSOIL	
					Sandy SILT; light brown/light grey, rootlets present. Stiff, dry; sand, fine. [Residual Soil]		St		KIDNAPPERS GROUP	
			9.5		Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW			
					END OF TEST PIT AT 0.65m. Unable to excavate further. No groundwater encountered.					



EXCAVATION LOG

EXCAVATION No: TP09
Hole Location: 157 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600314 mN 1931513 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 3/2/16
R.L. 13.00 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 3/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2m x 0.75m	CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL				
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 50 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
				13.0		TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F		TOPSOIL	
						Sandy SILT; light brown/light grey, rootlets present. Stiff, dry; sand, fine. [Residual Soil]		St		KIDNAPPERS GROUP	
				12.5 0.5		Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW			
				12.0 1.0		END OF TEST PIT AT 0.75m. Unable to excavate further. No groundwater encountered.					
				11.5 1.5							
				2.0							



EXCAVATION LOG

EXCAVATION No: TP10

Hole Location: 157 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600207 mN 1931574 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 3/2/16
R.L. 17.10 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 3/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2m x 0.6m	CHECKED BY: JWY

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

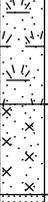
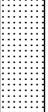
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)				ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
											10	25	100	200		
				17.0				TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F					TOPSOIL	
								Sandy SILT; light brown/light grey, rootlets present. Stiff, dry; sand, fine. [Residual Soil]		St						
				0.5				Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW					KIDNAPPERS GROUP	
				16.5				END OF TEST PIT AT 0.6m> Unable to excavate further. No groundwater encountered.								



EXCAVATION LOG

EXCAVATION No: TP11
 Hole Location: 140 Middle Road
 SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road	LOCATION: Havelock North	JOB No: 31464.2000
CO-ORDINATES: 5600603.39 mN 1931684.75 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 3/2/16
R.L. 12.00 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 3/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2m x 0.9m	CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL						
PENETRATION	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
1 2 3				12.5							10 25 50 100 200		
				12.0				TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F		TOPSOIL	
				11.5	0.5			Sandy SILT; light brown/light grey, rootlets present. Firm, dry; sand, fine. Tree branches present. [Residual Soil reworked with Topsoil]				KIDNAPPERS GROUP	
								Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW			
				11.0	1.0			END OF TEST PIT AT 0.9m. Unable to excavate further. Groundwater not encountered.					
				10.5	1.5								
					2.0								



EXCAVATION LOG

EXCAVATION No: TP12
Hole Location: 140 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600534.81 mN EXPOSURE TYPE: TEST PIT EXCAV. STARTED: 3/2/16
 1931624.2 mE EQUIPMENT: 6 Tonne Digger EXCAV FINISHED: 3/2/16
 R.L. 10.70 m OPERATOR: Gair Contracting LOGGED BY: DNT
 DATUM NZTM DIMENSIONS: 0.7m x 2.5m x 1.7m CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL								
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)			ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
											10	25	100		
				10.5		[Symbol]		TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F				TOPSOIL	
				9.5	0.5	[Symbol]		Sandy SILT; light brown, mottled light grey, rootlets present. Firm, dry. [Residual Soil]						ALLUVIUM	
				1.5		[Symbol]		Clayey SILT, with fine sand; light brown mottled with light grey, some rootlets/tree branches present. Stiff, moist.	M	St					
				9.0				END OF TEST PIT AT 1.7m. Groundwater not encountered.							



EXCAVATION LOG

EXCAVATION No: TP13
Hole Location: 130 Iona Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600383.69 mN 1931620.26 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 3/2/16
R.L. 14.00 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 3/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2m x 0.6m	CHECKED BY: JWY

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 50 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
				14.0		TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F		TOPSOIL	
						Sandy SILT; light brown/light grey, rootlets present. Firm, dry; sand, fine. [Residual Soil]				KIDNAPPERS GROUP	
				13.5 0.5		Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW			
						END OF TEST PIT AT 0.6m. Unable to excavate further. No groundwater encountered.					



EXCAVATION LOG

EXCAVATION No: TP14
 Hole Location: 157 Middle Road
 SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road	LOCATION: Havelock North	JOB No: 31464.2000
CO-ORDINATES: 5600385.99 mN 1931618.64 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 3/2/16
R.L. 11.60 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 3/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2m x 0.5m	CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL					
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
				11.5			TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F		TOPSOIL	
							Sandy SILT; light brown, rootlets present. Firm, dry; sand, fine.				KIDNAPPERS GROUP	
				0.5			Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW			
				11.0			END OF TEST PIT AT 0.5m.					
							Unable to excavate further. No groundwater encountered.					



EXCAVATION LOG

EXCAVATION No: TP15

Hole Location: 130 Iona Road,
near driveway

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600265 mN 1931671 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 4/2/16
R.L. 18.50 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 4/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2m x 0.55m	CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL				
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
				18.5		SAND; light brown.	D	F		FILL	
						TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.				TOPSOIL	
						Sandy SILT; light brown/light grey, rootlets present. Firm, dry; sand, fine. [Residual Soil]				KIDNAPPERS GROUP	
						0.3m: Seam of ash/tephra.					
				18.0 0.5		Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW			
						END OF TEST PIT AT 0.55m.					
						Unable to excavate further. No groundwater encountered.					
				17.5 1.0							
				17.0 1.5							
				2.0							



EXCAVATION LOG

EXCAVATION No: TP16
 Hole Location: 130 Iona Road,
 near corner of homestead in
 paddock
 SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road	LOCATION: Havelock North	JOB No: 31464.2000
CO-ORDINATES: 5600321 mN 1931761 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 4/2/16
R.L. 20.00 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 4/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2m x 0.6m	CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL				
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 50 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
				20.0		TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F		TOPSOIL	
						Sandy SILT; light brown/light grey, rootlets present. Firm, dry; sand, fine. [Residual Soil]				KIDNAPPERS GROUP	
				19.5 0.5		Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW			
						END OF TEST PIT AT 0.6m. Unable to excavate further. No groundwater encountered.					
				19.0 1.0							
				18.5 1.5							
				2.0							



EXCAVATION LOG

EXCAVATION No: TP17

Hole Location: 132 Iona Road,
corner of paddock.

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600290.05 mN 1931856.88 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 4/2/16
R.L. 25.00 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 4/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2m x 0.6m	CHECKED BY: JWY

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)			ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
											10	25	100		
				25.0				TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F				TOPSOIL	
								Sandy SILT; light brown/light grey, rootlets present. Firm, dry; sand, fine.						KIDNAPPERS GROUP	
				24.5	0.5			Highly weathered, light brown fine grained SANDSTONE. Very weak. 0.5m: Thin seam of ash/tephra.		VW					
								END OF TEST PIT AT 0.6m.							
								Unable to excavate further. No groundwater encountered.							
				24.0	1.0										
				23.5	1.5										
					2.0										



EXCAVATION LOG

EXCAVATION No: TP18
Hole Location: 130 Iona Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600394.61 mN EXPOSURE TYPE: TEST PIT EXCAV. STARTED: 4/2/16
 1931805.52 mE EQUIPMENT: 6 Tonne Digger EXCAV FINISHED: 4/2/16
 R.L. 19.00 m OPERATOR: Gair Contracting LOGGED BY: DNT
 DATUM NZTM DIMENSIONS: 0.7m x 2m x 0.75m CHECKED BY: JWY

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
				19.0		[Symbol]		TOPSOIL: Sandy SILT; dark brown, rootlets. Firm, dry.	D	F		TOPSOIL	
						[Symbol]		Sandy SILT; very light grey, micaceous, rootlets present. Firm, seam of tephra/ash.				KIDNAPPERS GROUP	
				18.5	0.5	[Symbol]		Highly weathered, light brown fine grained SANDSTONE. Very weak.		VW			
								0.7m: Becomes more cemented.					
								END OF TEST PIT AT 0.75m.					
				18.0	1.0			Unable to excavate further. No groundwater encountered.					
				17.5	1.5								
					2.0								



EXCAVATION LOG

EXCAVATION No: TP19

Hole Location: 130 Iona Road,
middle of paddock

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600452.9 mN 1931717.79 mE	EXPOSURE TYPE: TEST PIT	EXCAV. STARTED: 4/2/16
R.L. 16.20 m	EQUIPMENT: 6 Tonne Digger	EXCAV FINISHED: 4/2/16
DATUM NZTM	OPERATOR: Gair Contracting	LOGGED BY: DNT
	DIMENSIONS: 0.7m x 2.5m x 2.1m	CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL						
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)			ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
									10	25	100		
				16.0		TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F				TOPSOIL	
				15.5		Sandy SILT; light grey, rootlets present. Firm, dry, trace calcareous clasts.		L				ALLUVIUM	
				15.0		Coarse GRAVELS (greywacke) in sandy silt matrix; light brown. Loose, dry; gravel, rounded.							
				14.5		Clayey SILT, some fine sand; light brown/grey. Firm, dry, low plasticity. [CW Mudstone]		F				KIDNAPPERS GROUP	
				14.0		Silty CLAY; light brown/grey. Stiff, moist, moderate to high plasticity. [Completely Weathered MUDSTONE]	M	St					
				14.0		END OF TEST PIT AT 2.1m. No groundwater encountered.							



EXCAVATION LOG

EXCAVATION No: TP20
 Hole Location: 140 Middle Road,
 middle of paddock between
 two stream valleys
 SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600479.44 mN EXPOSURE TYPE: TEST PIT EXCAV. STARTED: 4/2/16
 1931773.09 mE EQUIPMENT: 6 Tonne Digger EXCAV FINISHED: 4/2/16
 R.L. 16.30 m OPERATOR: Gair Contracting LOGGED BY: DNT
 DATUM NZTM DIMENSIONS: 0.7m x 2.1m x 1.1m CHECKED BY: JWY

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 50 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
						TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F		TOPSOIL	
				16.0		Sandy SILT; light brown, rootlets present. Firm, dry; sand, fine. [Residual Soil]				KIDNAPPERS GROUP	
				0.5		Clayey SILT; brown, trace rootlets. Firm, dry. [Completely Weathered SILTSTONE]					
				15.5							
				1.0		Clayey SILT; light brown. Very stiff, slightly moist [CW Siltstone].	M	VSt			
				15.0		END OF TEST PIT AT 1.1m. Unable to excavate further. No groundwater encountered.					
				1.5							
				14.5							
				2.0							
				14.0							



EXCAVATION LOG

EXCAVATION No: TP21
Hole Location: 135 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600581.25 mN EXPOSURE TYPE: TEST PIT EXCAV. STARTED: 4/2/16
 1931836.79 mE EQUIPMENT: 6 Tonne Digger EXCAV FINISHED: 4/2/16
 R.L. 15.50 m OPERATOR: Gair Contracting LOGGED BY: DNT
 DATUM NZTM DIMENSIONS: 0.7m x 2m x 2.2m CHECKED BY: JWY

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL				
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 50 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
				15.5	[Symbol]	TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F		TOPSOIL	
					[Symbol]	0.25-0.35m: Limestone seam.				KIDNAPPERS GROUP	
				15.0 0.5	[Symbol]	Sandy SILT; light brown, rootlets present. Firm, dry; sand, fine. [Residual Soil]					
				14.5 1.0	[Symbol]	Sandy SILT, minor clay; light brown. Firm, dry. [Completely Weathered SANDSTONE]					
				14.0 1.5	[Symbol]	Clayey SILT, with fine sand; light brown. Firm, moist. [Completely Weathered SILTSTONE]	M				
				2.0	[Symbol]	Sandy SILT; light brown. Stiff, moist.		St			
					[Symbol]	Silty SAND, minor clay; light brown, speckled light. Very dense, moist [Completely Weathered Sandstone].		VD			
						END OF TEST PIT AT 2.2m. No groundwater encountered.					



EXCAVATION LOG

EXCAVATION No: TP22
Hole Location: 129 Middle Road

SHEET 1 OF 1

PROJECT: Re-zoning Housing Middle Road LOCATION: Havelock North JOB No: 31464.2000

CO-ORDINATES: 5600692.47 mN EXPOSURE TYPE: TEST PIT EXCAV. STARTED: 4/2/16
 1931759.94 mE EQUIPMENT: 6 Tonne Digger EXCAV FINISHED: 4/2/16
 R.L. 11.60 m OPERATOR: Gair Contracting LOGGED BY: DNT
 DATUM NZTM DIMENSIONS: 0.7m x 2m x 1.35m CHECKED BY: JWY

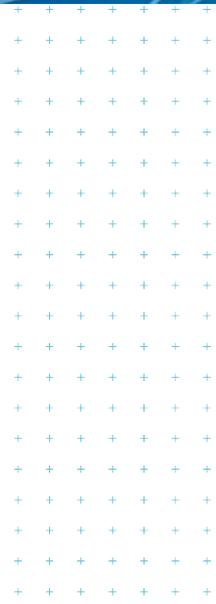
EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)			ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
											10	25	100		
				11.5				TOPSOIL: Sandy SILT; brown, rootlets. Firm, dry.	D	F				TOPSOIL	
					0.5			Sandy SILT, some rounded gravels (greywacke), trace rootlets present; light brown/grey. Firm, dry.						ALLUVIUM	
				11.0				Sandy SILT; brown, mottled orange brown speckled brown/black. Stiff, dry. 0.6m: seam of rounded coarse gravels.							
				10.5				Clayey SILT, with fine sand; light brown. Stiff, moist.	M	St					
								Sandy SILT, with some clay, trace rounded cobbles; light brown. Stiff, moist.							
				10.0	1.5			END OF TEST PIT AT 1.35m. No groundwater encountered.							
				9.5	2.0										





Housing Re-Zone
Iona Hills - Geotechnical Investigation Report
Prepared for
Hastings District Council
Prepared by
Tonkin & Taylor Ltd
Date
March 2018
Job Number
31464.3000.v2



Distribution:

Hastings District Council

2 copies

Tonkin & Taylor Ltd (FILE)

1 copy

Table of contents

1	Introduction	1
2	Site Description	1
3	Geology	2
	3.1 Published Geology	2
	3.2 Site conditions and geomorphology	2
4	Site investigations	3
5	Geotechnical Considerations	3
	5.1 General	3
	5.2 Subsurface conditions	3
	5.2.1 Quaternary Alluvium	3
	5.2.2 Kidnappers Group	3
	5.2.3 Groundwater	3
	5.3 Slope stability	4
	5.4 General Earthworks Recommendations	4
	5.5 Compressible soils	4
	5.6 Seismic conditions and liquefaction potential	4
	5.6.1 Site Subsoil Class	4
	5.6.2 Seismic loading to be applied to liquefaction assessment	5
	5.6.3 Liquefaction potential	5
	5.7 Foundation Recommendations	6
6	Conclusions	7
7	Applicability	8
Appendix A :	Figures	
Appendix B :	Test Pit (TP) logs	

1 Introduction

Tonkin + Taylor Ltd (T+T) has been engaged by Hastings District Council (HDC) to provide a preliminary geotechnical assessment of a large parcel of land south of Iona Road, Havelock North. We understand that this parcel of land is to be assessed for re-zoning to residential

The site, in its current state is largely used for sheep grazing but does include a woolshed on the northern side of the site (adjacent to Iona Road) and several wetland areas. A proposed development concept of the staging of the subdivision has been provided to us by HDC and is attached in Appendix A.

The work has been undertaken in accordance with our proposal¹ which was accepted by the client on 3 February 2016².

Our scope of works has included:

- A site walkover of the site, including the initial stage and stages 2 and 3.
- Geological mapping of any slope instability observed was conducted during the site walkover assessment.
- Limited test pit investigations on the initial stage as shown in the development concept plan.
- Geotechnical preliminary reporting with commentary on ground conditions, geomorphology, groundwater, seismic conditions, liquefaction potential and slope stability concerns.

This preliminary assessment has been undertaken to identify the geology and subsurface conditions likely to be encountered and types of geotechnical works required to achieve acceptable slope stability for a successful residential subdivision development. Further investigations and analyses are required prior to detailed design.

2 Site Description

The site is currently held under a number of titles, and is legally described as Lots 1-9 DP 24404. The site comprises a long rectangular block of land forming the undeveloped land north of Iona Road.

The topography of the site comprises three ridgelines running SE-NW toward Iona Road where the grade flattens on the northern side of Iona Road. The flanks of the ridgelines are generally gently sloping to steep but the terrain does flatten heading to the north.

A number of gullies run parallel to the ridgelines and ultimately overland flow is to the north. The western and northwestern boundary of the site is typically flat and comprises a number of swampy areas. Towards the central and southern central portions of the site a number of small ponds and wetlands have formed between two of the major ridgelines. Typically the slopes on the western side of the site are much steeper than those further east, this could be due to structural contacts within the underlying geology (bedding planes etc).

Land along the southern boundary appears to form a terrace feature with a flat hilltop section.

¹ Letter of engagement, Preliminary Geotechnical Appraisal for potential re-zoning of land in Hastings and Havelock North - Rev1, 29 January 2016, T+T ref: 31464

² Email from Rowan Wallis (HDC) to Andy Pomfret re: Iona Testing, 3 February 2016

3 Geology

3.1 Published Geology

Published geology³ indicates that the site is underlain by early Pleistocene river, lake and shoreline deposits collectively known as the Kidnappers Group. These deposits are often described as very weak to extremely weak sandstones, siltstones and gravels. These deposits form much of the land south and east of Havelock North.

Our preliminary geotechnical investigations have generally confirmed the published geology.

3.2 Site conditions and geomorphology

The site typically comprises gently sloping hill country with steeper slopes along flanks of the ridgelines particularly on the western side of the site. A series of small gullies occupy much of the land between each ridgeline. The northwestern and western side of the site comprises low lying alluvial swamps and wetlands.



Figure 3.1: Typical topography of the Iona Hill site showing NE-SW ridgelines with some gully alluvium infill between the ridges.

Several small historic landslips were observed on the site but were generally small in size or had formed along the edges of the gullies within the site. Other instability was observed along the oversteepened slopes on the western and central parts of the site adjacent to the wetlands.

Generally, with the above exceptions, the slopes on the site did not exhibit signs active or historic landslippage.

Areas of historical refuse disposal were observed on site in the form of a series of rubbish pits likely from historic farming activities.

A geomorphological plan showing the locations of mapped instability has been provided in Appendix A.

³ Kingma, J.T. (1971). *Geological Map of New Zealand 1:63 360, Sheets N134 Napier and Hastings and N135 Kidnappers*. Department of Scientific and Industrial Research.

4 Site investigations

In addition to the mapping, T+T undertook site investigations on the initial stage only (adjacent to Iona Road). The investigations comprised fifteen (15) test pits with a 14 tonne excavator provided by Mantell-Harding Earthworks on 11th February 2016. The test pits were undertaken until refusal in hard ground, until the pit sides collapsed or to the maximum reach of the excavator.

The test pits were logged and supervised by an engineering geologist from T+T to NZGS standards. Shear vane testing was undertaken within cohesive material where the vane could penetrate into the sub-soils.

The test pit logs are provided in Appendix B.

The locations of the test pit investigations are provided on the site plans in Appendix A.

5 Geotechnical Considerations

5.1 General

Recommendations and opinions in this report are based on data from a site walkover, and a subsurface investigation programme consisting of fifteen (15) test pits targeted in the initial areas of proposed residential development. The nature and continuity of subsurface conditions away from the test locations are inferred and it must be appreciated that actual conditions may vary from the assumed model.

5.2 Subsurface conditions

5.2.1 Quaternary Alluvium

Alluvium was observed in test pits 2 and 3 (TP2-3) where sandy silt was underlain by organic clays, organics (decomposing tree stumps) and fine sands. These deposits were typically restricted to the northwestern side of the site in the location of the low lying swamps and streams. These deposits were at least 3m deep in the location of TP2 and TP3. Shear vane readings within the thick alluvial deposits ranged from 61-120 KPa. Water inflow was observed at 2.2m within this layer. The underlying bedrock was not identified in TP2 and 3.

Some alluvium was observed in the small gullies on the north eastern portion of the site however these were generally comprised thin (<1m) layers of hard silts. Shear vane readings within this material were generally in excess of 150Kpa.

5.2.2 Kidnappers Group

Underlying the majority of the northern portion of the site is very weak to extremely weak weathered sandstone of the Kidnappers Group. The test pits were generally terminated within the sandstone where the excavator could not penetrate deeper.

A cap of completely weathered sandstone (very stiff sandy silts and fine sands) overly the rock with up to 300mm of topsoil across the site. Shear vanes were unable to penetrate the Kidnappers Group sandstone.

5.2.3 Groundwater

Groundwater was observed in TP2 and TP3 between 2.2-2.5m below ground level in low lying alluvial areas. The investigations were conducted within alluvial soils on the northwest side of the site. TP 1 and TP4 to 15 did not encounter groundwater during the investigations.

We note that the investigations were conducted during summer and some seasonal fluctuations should be expected.

A number of ponds forming the wetlands along the centre and western side of the site appear to be fed from springs within the sandstone rock.

5.3 Slope stability

In general the majority of the slopes on the site appear to be stable with the exceptions shown as mapped landslip features on Figures 2 and 3 in Appendix A.

No signs of deep-seated instability were observed, as previously mentioned, shallow instability tended to occur on the gully margins or within oversteepened slopes on the margins of the wetland areas.

5.4 General Earthworks Recommendations

Subdivision development should be concentrated along the ridgelines of the site on cut platforms. During detailed design site specific geotechnical investigations should be undertaken to assess cut slope behaviour and undertake slope stability analyses to develop appropriate set-back distances from the crests of the slopes.

We do not recommended cut platforms exceed grades of more than 1V:4H (15 degrees) unless subjected to site specific analyses and the likely implementation of retention measures.

All fill placed on site will need to be compacted to an engineered standard. Compaction criteria could be provided during the detailed design stage following more detailed investigations.

Where development of dwellings are to span both cut and fill due to the differential soil/rock we recommend assessment of suitable foundations be undertaken by a suitably qualified geotechnical engineer.

5.5 Compressible soils

Some thick deposits of alluvial soils were encountered in the north western corner of the site. These deposits included very soft organic clays and silts. These sediments have a high potential for settlement under applied loads. We would recommend that additional site investigations and settlement analyses be undertaken to delineate and characterise these areas should they be designated for residential development or for the purposes of a detention dam.

Areas with thick alluvial deposits would require some form of ground improvement should they be utilised for residential development. Additional deep site investigations such as machine boreholes and cone penetration tests (CPTs) we be required for structures developed within these areas. However, we noted that this area may comprise a stormwater detention pond which would be subject to detailed design.

5.6 Seismic conditions and liquefaction potential

5.6.1 Site Subsoil Class

A seismic assessment has been undertaken for the proposed development in accordance with the recommendations in the NZTA Bridge Manual⁴ and the New Zealand Code of Practice NZS 1170.5:2004⁵. The design earthquakes for serviceability and ultimate limit states are 1 in 25 years

⁴ The NZ Transport Agency's Bridge Manual Sp/M/022, Third Edition, Amendment 0, May 2013

⁵ NZS 1170.0:2004, Structural Design Actions-Part 5: Earthquake actions (New Zealand). SANZ

and 1 in 500 years respectively, with a building Importance Level of 2. Should the Importance Level change during the design, the seismic assessment will need to be revised.

As the depth to rock is generally shallow we have classified the site as Subclass B –Rock with the exception of the alluvial area where further investigations are required.

5.6.2 Seismic loading to be applied to liquefaction assessment

The peak ground acceleration (PGA) for liquefaction assessment under serviceability limit state and ultimate limit state are set out in Table 5.1 below. The design PGA is derived based on the recommended return periods (T) in NZS 1170.5:2004⁵ and using the following formula, as given in NZTA Bridge Manual⁴ (which is considered more appropriate for liquefaction analysis)

$$PGA = C_{0,1000} R_u / 1.3 f g$$

where:

- $C_{0,1000} = 0.40$ for Subsoil Class B, Hastings
- $R_u = 1.0$ and 0.25 for (T = 1 in 500 and 1 in 25 years respectively)
- $f = 1.0$, Subsoil Class B

Table 5.1: Design Peak Ground Acceleration for Liquefaction Assessment

Design Life (years)	Serviceability Limit State (SLS)		Ultimate Limit State (ULS)	
	Annual Exceedance Probability	Peak Ground Acceleration	Annual Exceedance Probability	Peak Ground Acceleration
50	1/25	0.08g	1/500	0.31g

5.6.3 Liquefaction potential

As part of this report, T+T has not undertaken quantitative liquefaction analysis. A qualitative analysis has been undertaken from a visual appraisal of the materials within the test pits.

Given the cohesive nature of the material and the shallow depth to rock encountered in the majority of the test pits, liquefaction is very unlikely to occur in areas underlain by Kidnappers Group sandstones during an earthquake event.

Areas underlain by alluvial soils may be susceptible to liquefaction in the event of an earthquake, a quantitative assessment of the liquefaction potential of these soils should be undertaken through specific investigations during detailed design should these areas be proposed for development.

5.7 Foundation Recommendations

Provided the site is suitably earthworked, dwelling foundations could comprise shallow foundations bearing on the Kidnappers Group sandstone. Some undercutting of the weathered sandstone and topsoil would be required. Any development within the gullies or alluvial soils would require gully muck outs and replacement with engineered fill.

During detailed design, lot specific investigations such as hand augers (with shear vane measurements), Scala penetrometers and additional test pits should be carried out to determine bearing capacities for each proposed site.

The areas underlain by Kidnappers group weathered sandstones (as shown on Figures 1-3 in Appendix A) are likely to meet the criteria for 'good ground' in accordance with NZS 3604. Areas outside of this (particularly in areas underlain by alluvium) foundations will need to be specially designed.

6 Conclusions

According to our findings, and based on previous investigations in the area, we consider the site to be suitable for a residential development generally adopting good ground characterisation in accordance with NZS 3604.

The development will likely require minor earthworks to establish suitable grades and platforms for dwelling sites. Our walkover mapping and limited site investigations have proved the following:

- 1 Apart from areas identified as having thick alluvial deposits, the depth to rock (Kidnappers Group sandstone) is generally less than 1m.
- 2 T+T's limited site investigations have generally confirmed the published geology of the site.
- 3 T+T have mapped any existing instability features across the site. These are shown in our plan in Appendix A.
- 4 We envisage that minor cut platforms will be required to establish dwelling platforms on suitable grades. Site specific investigations will be required to confirm bearing capacities.
- 5 Liquefaction is very unlikely to occur in areas underlain by Kidnappers group rock. Areas underlain by alluvial sediments will require deeper site investigations during detailed design to delineate these zones and confirm the susceptibility to liquefaction.

Further site investigation is required in order to confirm the underlying geological conditions of proposed development sites especially in Stages 2 and 3 where no investigations have been undertaken. Detailed analysis and design can then be undertaken to determine accurate locations, extents and forms of various ground improvement and slope setback requirements in conjunction with development of the final landform.

Based on the information available and on our experience on neighbouring and nearby sites, we consider that the subject site can be satisfactorily engineered to achieve a successful residential development.

7 Applicability

This report has been prepared for the exclusive use of our client Hastings District Council, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

During excavation and construction, the site should be examined by a Geotechnical Engineer or Engineering Geologist competent to judge whether the exposed subsoils are compatible with the inferred conditions on which this report has been based. We would be pleased to provide this service to you and believe your project would benefit from such continuity. However, it is important that we be contacted if there is any variation in subsoil conditions from those described in the report.

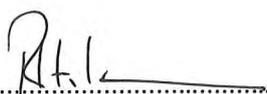
Tonkin & Taylor Ltd

Report prepared by:



Jamie Yule
Engineering Geologist

Authorised for Tonkin & Taylor Ltd by:



Robert Hillier
Geotechnical Group Manager

Report reviewed by:



Andy Pomfret
Senior Geotechnical Engineer

JWY
p:\31464\31464.3000\workingmaterial\iona hills geotech report jwy 20160302.docx

Appendix A: Figures

- **Development Concept Plan**
- **Overall Plan**
- **Geomorphological and site investigation plan (2 sheets)**

LEGEND

- Property Boundaries
- Existing Contour (20m Interval)
- Site Boundary
- Inferred Contact on Kidnappers Group & Alluvium
- Kidnappers Group
- Alluvium

NOTES:

- Aerial photo, contour and property boundaries sourced from Terralink International (Copyright 2002–2005 Terralink International Limited and its licensors).



FIGURE 2

FIGURE 3



Tonkin+Taylor
 105 Carleton Gore Road, Newmarket, Auckland
 www.tonkintaylor.co.nz

DRAWN	JC	Mar.16
DRAFTING CHECKED		
APPROVED		

CAD FILE : 31464.3000-F1_F3.dwg
 SCALES (AT A3 SIZE)
 1:4000
 PROJECT No. 31464.3000

HASTINGS DISTRICT COUNCIL
 IONA HILLS
 IONA ROAD, HASTINGS
 Overall Plan

Fig. No. Figure 1

REV. 0



LEGEND

- Property Boundaries
- - - Existing Contour (20m Interval)
- Site Boundary
- Inferred Contact on Alluvium
- Overland Flow Path
- Kidnappers Group
- Alluvium
- Landslip scarp
- Slip debris
- Testpit Location

NOTES:

1. Aerial photo and property boundaries sourced from Terralink International (Copyright 2002-2005 Terralink International Limited and its licensors).

Tonkin & Taylor Ltd
 March 2016

A3 SCALE 1:2000
 20 40 60 80 100 (m)

Tonkin+Taylor

105 Carlton Gore Road, Newmarket, Auckland
 www.tonkintaylor.co.nz

DRAWN	JC	Mar.16
DRAFTING CHECKED		
APPROVED		

CAD FILE : 31464.3000-F1_F3.dwg
 SCALES (AT A3 SIZE) 1:2000
 PROJECT No. 31464.3000

HASTINGS DISTRICT COUNCIL

IONA HILLS
 IONA ROAD, HASTINGS

Iona Hills-Geomorphological Map and Site Investigation Plan

Fig. No. Figure 2

REV. 0



NOTES:
 1. Aerial photo and property boundaries sourced from Terralink International (Copyright 2002-2005 Terralink International Limited and its licensors).



LEGEND

- Property Boundaries
- - - - - 40 Existing Contour (20m Interval)
- Site Boundary
- - - - - Inferred Contact on Kidnappers Group & Alluvium
- ↑ Overland Flow Path
- ▨ Kidnappers Group
- ▩ Alluvium
- ↘ Landslip scarp
- ↙ Slip debris
- TP1

Tonkin & Taylor Ltd
 Tespit Location
 March 20 16



Tonkin+Taylor
 105 Carleton Gore Road, Newmarket, Auckland
 www.tonkintaylor.co.nz

DRAWN	JC	Mar.16
DRAFTING CHECKED		
APPROVED		

CAD FILE : 31464.3000-F1_F3.dwg
 SCALES (AT A3 SIZE)
 1:2000
 PROJECT No. 31464.3000

HASTINGS DISTRICT COUNCIL
 IONA HILLS
 IONA ROAD, HASTINGS
 Iona Hills—Geomorphological Map and Site Investigation Plan
 Fig. No. 3
 Figure 3
 REV. 0

Appendix B: Test Pit (TP) logs

- TP1-15

EXCAVATION LOG

EXCAVATION No: TP2

Hole Location:

SHEET 1 OF 1

PROJECT: HDC Iona Hills-Rezone LOCATION: Iona Road, Havelock North JOB No: 31464.3000

CO-ORDINATES: 5599975.6 mN EXPOSURE TYPE: TP EXCAV. STARTED: 12/2/15
 1931215.5 mE EQUIPMENT: 14T EX EXCAV FINISHED: 12/2/15

R.L. 6.90 m OPERATOR: Mantell-Harding LOGGED BY: JWY
 DATUM NZTM DIMENSIONS: 3.3 x 3 x 1.2m CHECKED BY:

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
							Sandy TOPSOIL, dark brown. Very stiff, dry.	D	St		TOPSOIL	
		● 120/24					Sandy SILT; dark greyish brown, minor rootlets, some sand lenses. Very stiff, dry.		VSt		ALLUVIUM	
							Organics and rootlets at 1.6m.					
							CLAY, some silt and organics. Soft, wet, high plasticity.	W	S			
							Fine to medium SAND, trace silt, bluish grey. Tightly packed, wet, very weakly cemented		TP			
							Coarse grained pumice clasts at base of pit					
							BASE OF PIT AT 3m.					

Water inflows



EXCAVATION LOG

EXCAVATION No: TP3

Hole Location:

SHEET 1 OF 1

PROJECT: HDC Iona Hills-Rezone LOCATION: Iona Road, Havelock North JOB No: 31464.3000

CO-ORDINATES: 5599939.9 mN EXPOSURE TYPE: TP EXCAV. STARTED: 12/2/15
 1931275 mE EQUIPMENT: 14T EX EXCAV FINISHED: 12/2/15

R.L. 6.90 m OPERATOR: Mantell-Harding LOGGED BY: JWY
 DATUM NZTM DIMENSIONS: 3.3 x 3 x 1.2m CHECKED BY:

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL						
PENETRATION	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
1	2	3									10 25 50 100 200		
								Sandy TOPSOIL, some rootlets; brown. Dry.	D	F		TOPSOIL	
								Silty fine SAND; light brownish grey. Loosely packed, moist.	M	L		ALLUVIUM	
								tree logs and organics -1.4m					
								Sandy SILT, some organics, lenses of very soft organic, clays mixed with bluish grey fine to medium sand. Firm, wet, low plasticity.	W	F			
								medium to coarse SAND, minor shells mixed with pumice clasts wood and lenses of silt and organic clay, bluish grey, loosely packed, wet	W	L			
								BASE OF PIT AT 3.3m. Sides collapsing.					

Water in



EXCAVATION LOG

EXCAVATION No: TP4

Hole Location:

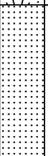
SHEET 1 OF 1

PROJECT: HDC Iona Hills-Rezone LOCATION: Iona Road, Havelock North JOB No: 31464.3000

CO-ORDINATES: 5599934 mN EXPOSURE TYPE: TP EXCAV. STARTED: 12/2/15
 1931326 mE EQUIPMENT: 14T EX EXCAV FINISHED: 12/2/15

R.L. 10.20 m OPERATOR: Mantell-Harding LOGGED BY: JWY
 DATUM NZTM DIMENSIONS: 1.3 x 3.0 x 0.9m CHECKED BY:

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 50 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
	Dry		10				Sandy TOPSOIL; brown. Dry.	D	H		TOPSOIL	
							Highly weathered, dark brown, fine to medium grained SANDSTONE, some silt lenses. Extremely weak, dry, weakly cemented.		EW		KIDNAPPERS GROUP	
				1			BASE OF PIT AT 0.9m. Unable to excavate further.					



EXCAVATION LOG

EXCAVATION No: TP5

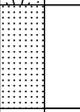
Hole Location:

SHEET 1 OF 1

PROJECT: HDC Iona Hills-Rezone LOCATION: Iona Road, Havelock North JOB No: 31464.3000

CO-ORDINATES: 5599945.8 mN EXPOSURE TYPE: TP EXCAV. STARTED: 12/2/15
 1931398.1 mE EQUIPMENT: 14T EX EXCAV FINISHED: 12/2/15
 R.L. 18.00 m OPERATOR: Mantell-Harding LOGGED BY: JWY
 DATUM NZTM -19 DIMENSIONS: 1.2 x 2.2 x 0.7m CHECKED BY:

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)			ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
											10	25	100		
		Dry		18				Sandy TOPSOIL; brown. Dry.	D	H				TOPSOIL	
								Highly weathered, dark grey, fine grained SANDSTONE, mottled light brown. Very weak, weakly cemented, dry.		VW				KIDNAPPERS GROUP	
				17	1			BASE OF PIT AT 0.7m. Unable to penetrate further.							



EXCAVATION LOG

EXCAVATION No: TP6

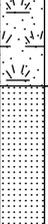
Hole Location:

SHEET 1 OF 1

PROJECT: HDC Iona Hills-Rezone LOCATION: Iona Road, Havelock North JOB No: 31464.3000

CO-ORDINATES: 5599959.2 mN 1931452.1 mE EXPOSURE TYPE: TP EXCAV. STARTED: 12/2/15
 EQUIPMENT: 14T EX EXCAV FINISHED: 12/2/15
 R.L. 16.70 m OPERATOR: Mantell-Harding LOGGED BY: JWY
 DATUM NZTM DIMENSIONS: 1.3 x 3.0 x 0.9m CHECKED BY:

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT WATER	SAMPLES, TESTS	R.L. (m) DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
	Dry		16		Sandy TOPSOIL; brown, with some rootlets. Dry. Highly weathered, dark grey Fe stained SANDSTONE. Extremely weak to weak, weakly cemented.	D EW	H		TOPSOIL KIDNAPPERS GROUP	
			1 15 2 14 3		BASE OF PIT AT 0.9m. Unable to excavate further.					



EXCAVATION LOG

EXCAVATION No: TP7

Hole Location:

SHEET 1 OF 1

PROJECT: HDC Iona Hills-Rezone LOCATION: Iona Road, Havelock North JOB No: 31464.3000

CO-ORDINATES: 5599959.6 mN 1931502.9 mE	EXPOSURE TYPE: TP EQUIPMENT: 14T EX	EXCAV. STARTED: 12/2/15 EXCAV FINISHED: 12/2/15
R.L. 19.10 m	OPERATOR: Mantell-Harding	LOGGED BY: JWY
DATUM NZTM	DIMENSIONS: 1.1 x 2.9 x 1.0m	CHECKED BY:

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL					
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 50 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
1 2 3		Dry		19	1	[Symbol]	Sandy TOPSOIL; brown.	D			TOPSOIL	
					2	[Symbol]	Completely weathered SANDSTONE, brown, silty fine SAND. Tightly packed, dry.	TP			WEATHERED KIDNAPPERS GROUP	
					3	[Symbol]	Highly weathered, dark brownish grey, fine grained SANDSTONE. Extremely weak, weakly cemented.	EW			KIDNAPPERS GROUP	
				18	1		BASE OF PIT AT 1m. Unable to excavate further.					
				17	2							
				16	3							



EXCAVATION LOG

EXCAVATION No: TP8

Hole Location:

SHEET 1 OF 1

PROJECT: HDC Iona Hills-Rezone LOCATION: Iona Road, Havelock North JOB No: 31464.3000

CO-ORDINATES: EXPOSURE TYPE: TP EXCAV. STARTED: 12/2/15
 EQUIPMENT: 14T EX EXCAV FINISHED: 12/2/15
 R.L. OPERATOR: Mantell-Harding LOGGED BY: JWY
 DATUM NZTM DIMENSIONS: 1.2 x 3.0 x 1.2m CHECKED BY:

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL						
PENETRATION	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
1 2 3											10 25 50 100 200		
								Sandy TOPSOIL, with organics; brown. Dry.	D			TOPSOIL	
								Silty, fine SAND, trace rootlets; dark greyish brown. Tightly packed, dry.	TP			ALLUVIUM	
					1			Dark greyish brown SILTSTONE, with carbonaceous material. Very weak, well cemented.	VW			KIDNAPPERS GROUP	
								BASE OF PIT AT 1.2m. Unable to excavate further.					
					2								
					3								



EXCAVATION LOG

EXCAVATION No: TP10

Hole Location:

SHEET 1 OF 1

PROJECT: HDC Iona Hills-Rezone LOCATION: Iona Road, Havelock North JOB No: 31464.3000

CO-ORDINATES: 5600120 mN EXPOSURE TYPE: TP EXCAV. STARTED: 12/2/15
 1931480.5 mE EQUIPMENT: 14T EX EXCAV FINISHED: 12/2/15

R.L. 2.30 m OPERATOR: Mantell-Harding LOGGED BY: JWY
 DATUM NZTM DIMENSIONS: 1.3 x 2.7 x 0.9m CHECKED BY:

EXCAVATION TESTS			ENGINEERING DESCRIPTION				GEOLOGICAL						
PENETRATION 1 2 3	SUPPORT	WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa) 10 25 100 200	ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
			Dry ● 132/42kPa	2				Reworked TOPSOIL and organics in a silty fine sand matrix, some rootlets; dark brown. Very stiff, dry.	VSt			TOPSOIL AND ALLUVIUM	
			● UTP					Highly weathered, dark greyish brown, fine grained SANDSTONE. Extremely weak, weakly cemented.	EW			KIDNAPPERS GROUP	
				1				BASE OF PIT AT 0.9m. Unable to excavate further.					



EXCAVATION LOG

EXCAVATION No: TP15

Hole Location:

SHEET 1 OF 1

PROJECT: HDC Iona Hills-Rezone LOCATION: Iona Road, Havelock North JOB No: 31464.3000

CO-ORDINATES: 5600078 mN EXPOSURE TYPE: TP EXCAV. STARTED: 12/2/15
 1931326.6 mE EQUIPMENT: 14T EX EXCAV FINISHED: 12/2/15

R.L. 9.60 m OPERATOR: Mantell-Harding LOGGED BY: JWY
 DATUM NZTM DIMENSIONS: 1.2 x 2.8 x 1.0 CHECKED BY:

EXCAVATION TESTS ENGINEERING DESCRIPTION GEOLOGICAL

PENETRATION 1 2 3	SUPPORT WATER	SAMPLES, TESTS	R.L. (m)	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	SOIL NAME, PLASTICITY OR PARTICLE SIZE CHARACTERISTICS, COLOUR, SECONDARY AND MINOR COMPONENTS	MOISTURE CONDITION / WEATHERING	STRENGTH / DENSITY CLASSIFICATION	ESTIMATED SHEAR STRENGTH (kPa)			ORIGIN TYPE, MINERAL COMPOSITION, DEFECTS, STRUCTURE	UNIT
										10	25	100		
							Sandy TOPSOIL; dark brown, some rootlets. Dry.	D	H				TOPSOIL	
				9			Sandy SILT; dark brown. Hard, dry, non-plastic.						WEATHERED KIDNAPPERS GROUP	
							Highly to moderately weathered, dark brown SILTSTONE, some fine to medium sand clasts. Very weak, well cemented.		VW				KIDNAPPERS GROUP	
				1			BASE OF PIT AT 1.0m. Unable to excavate further.							



