

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.

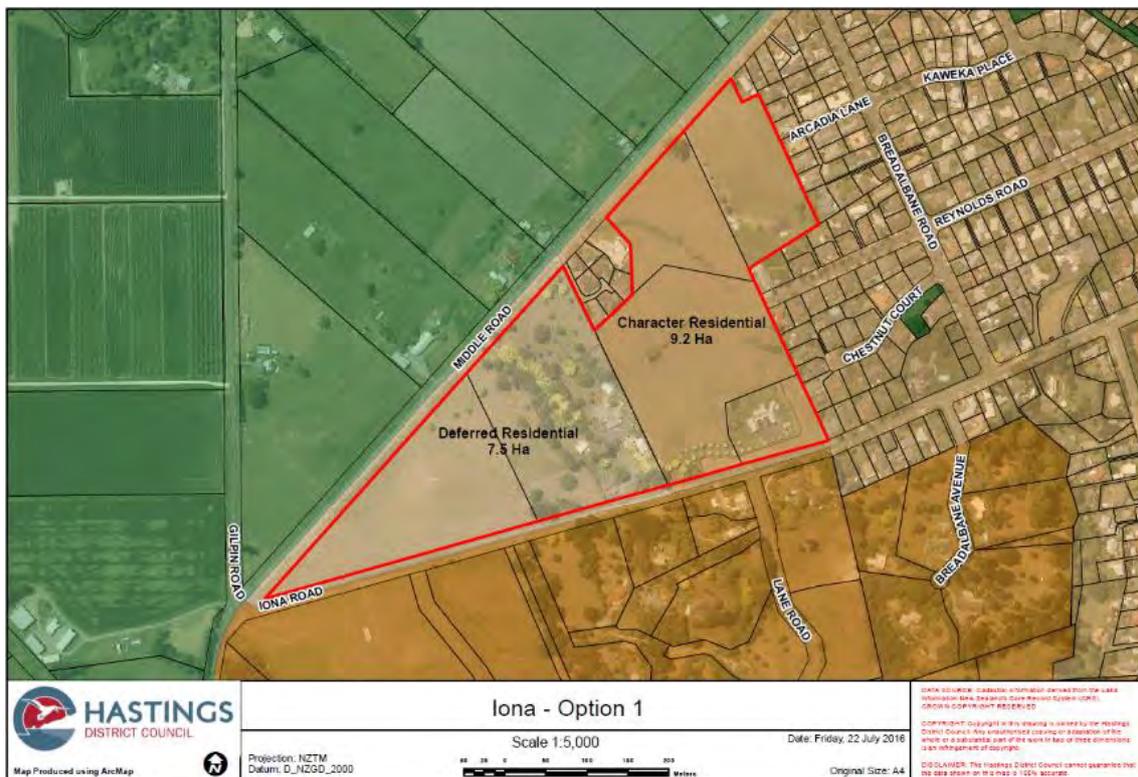
## SUMMARY OF OPTIONS FOR LAND DEVELOPMENT

### Option 1 - The Iona Triangle

- Between Middle Road and Iona Road
- 16.7 hectares
- Yield some 210 dwellings (average section size of 650m<sup>2</sup>)
- 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**



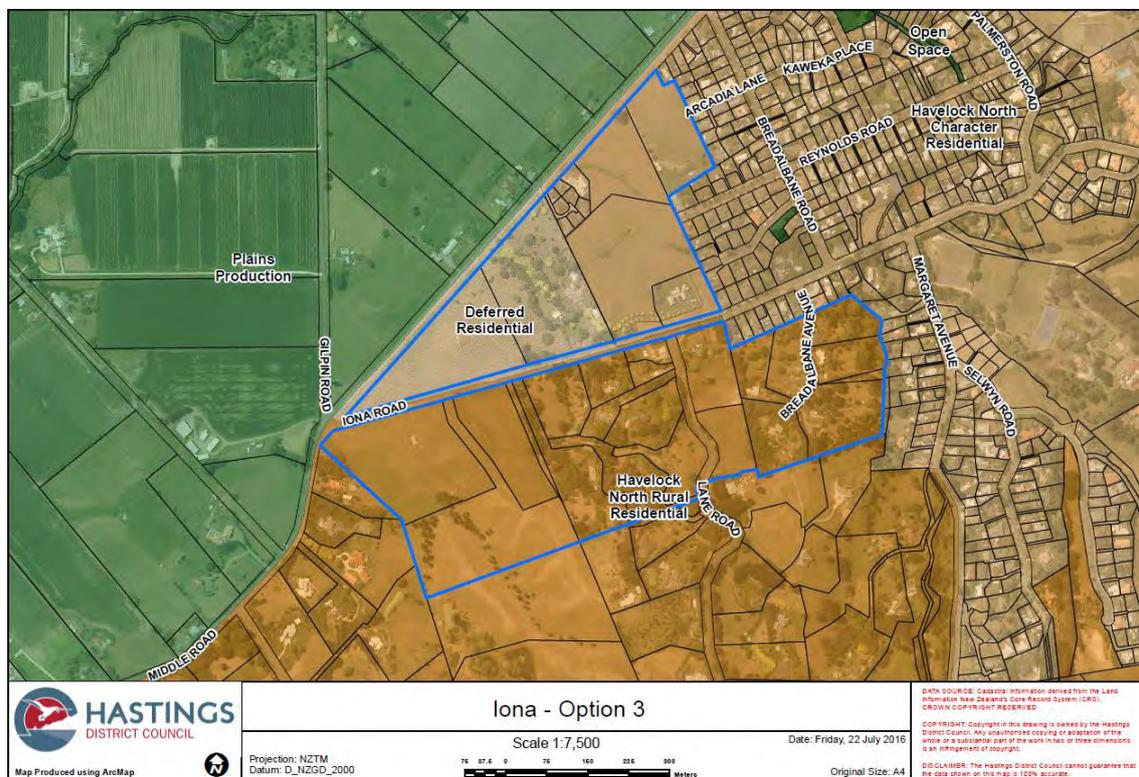


## Option 3 - The Iona Triangle & Lower Hills Area (HPUDS)

- 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 3<sup>rd</sup> 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

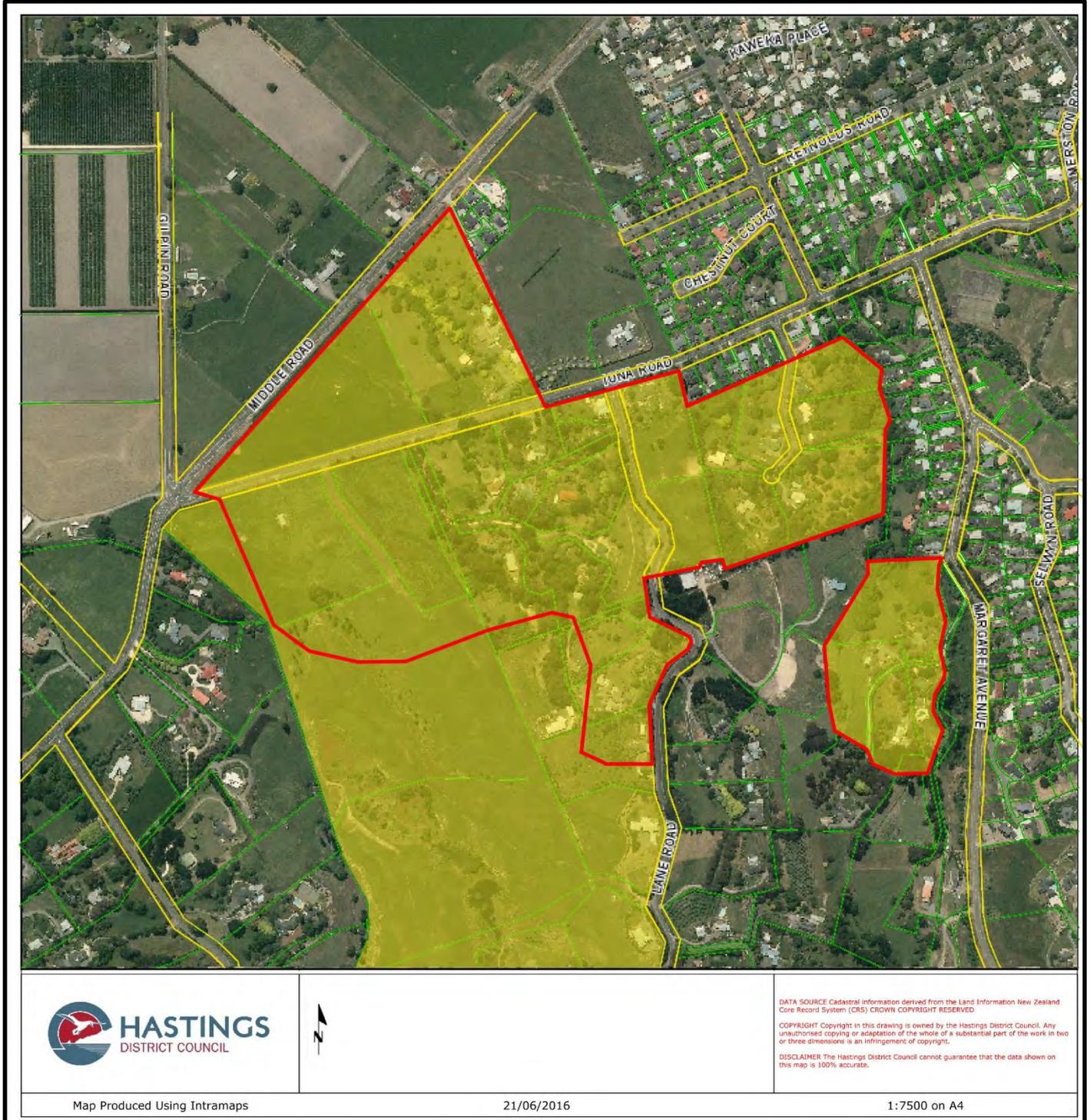
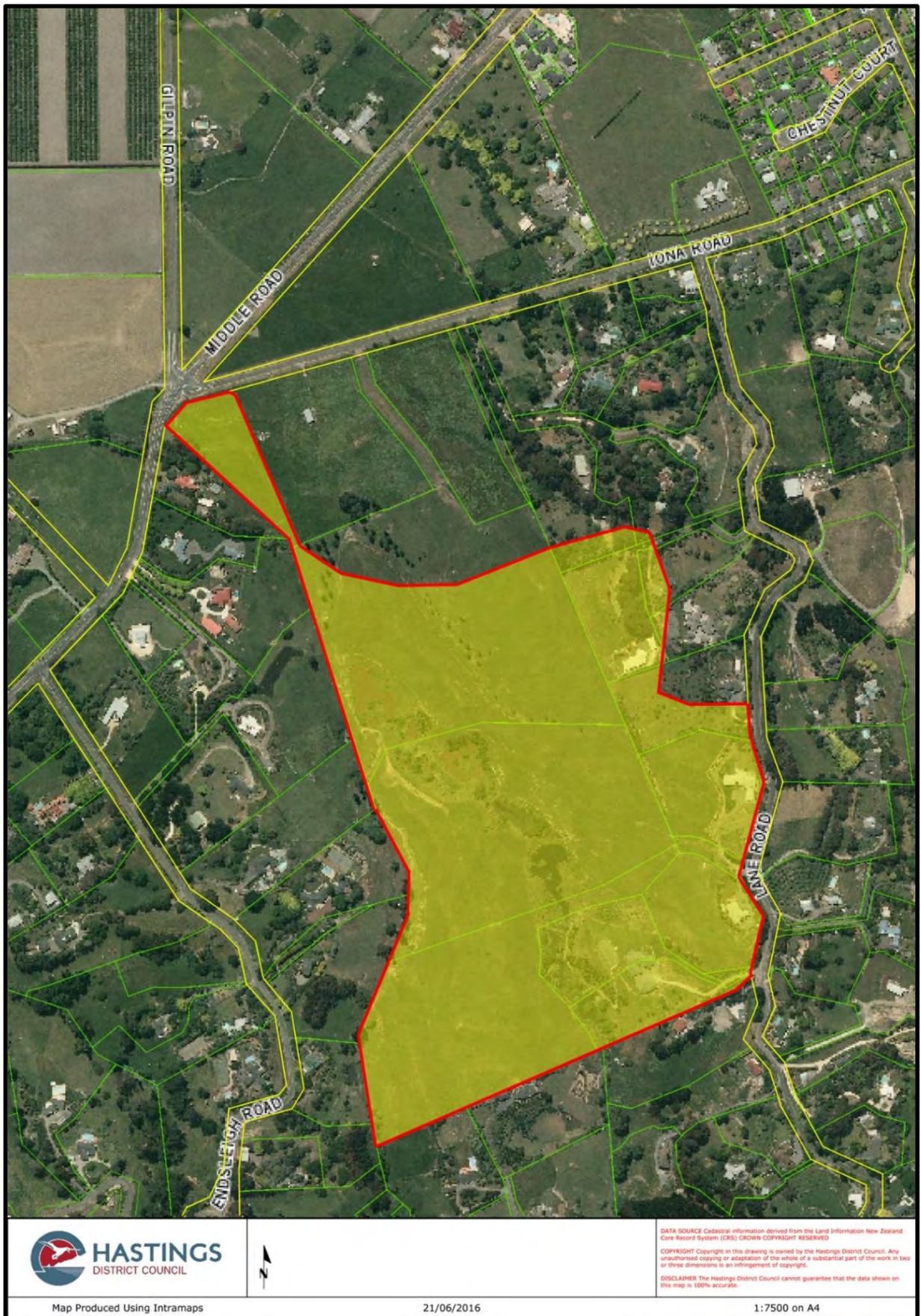


Figure 2 - Havelock Hills Lower



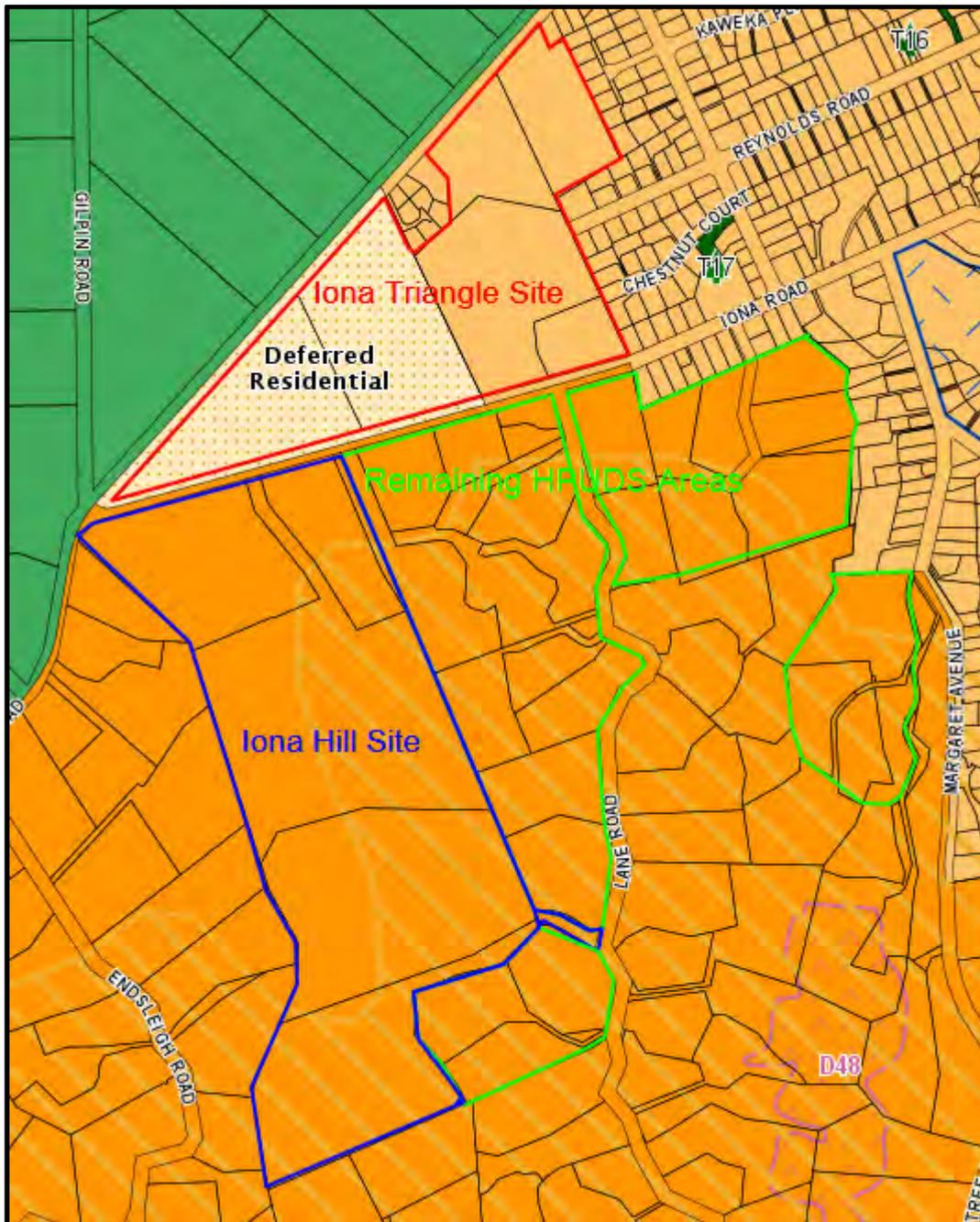
## Description of the Iona Residential Growth Areas

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**

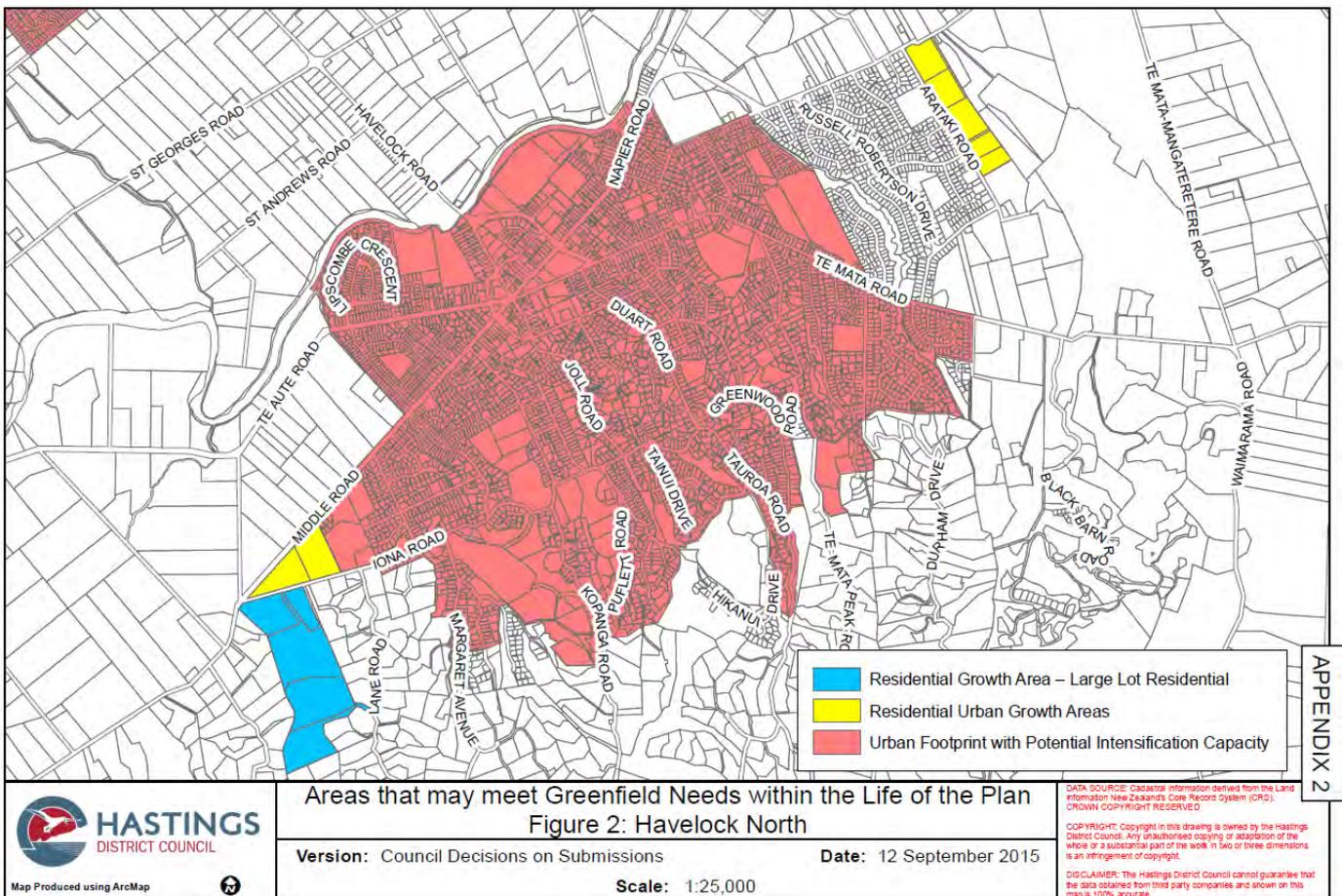
The Iona Triangle site comprises land that is currently in two zones under the Proposed District Plan.

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 (700m<sup>2</sup> 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 470m<sup>2</sup> – 770m<sup>2</sup> with one larger lot of approximately 1,900m<sup>2</sup>. 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 3000m<sup>2</sup> - 5000m<sup>2</sup> 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<sup>s</sup> 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**

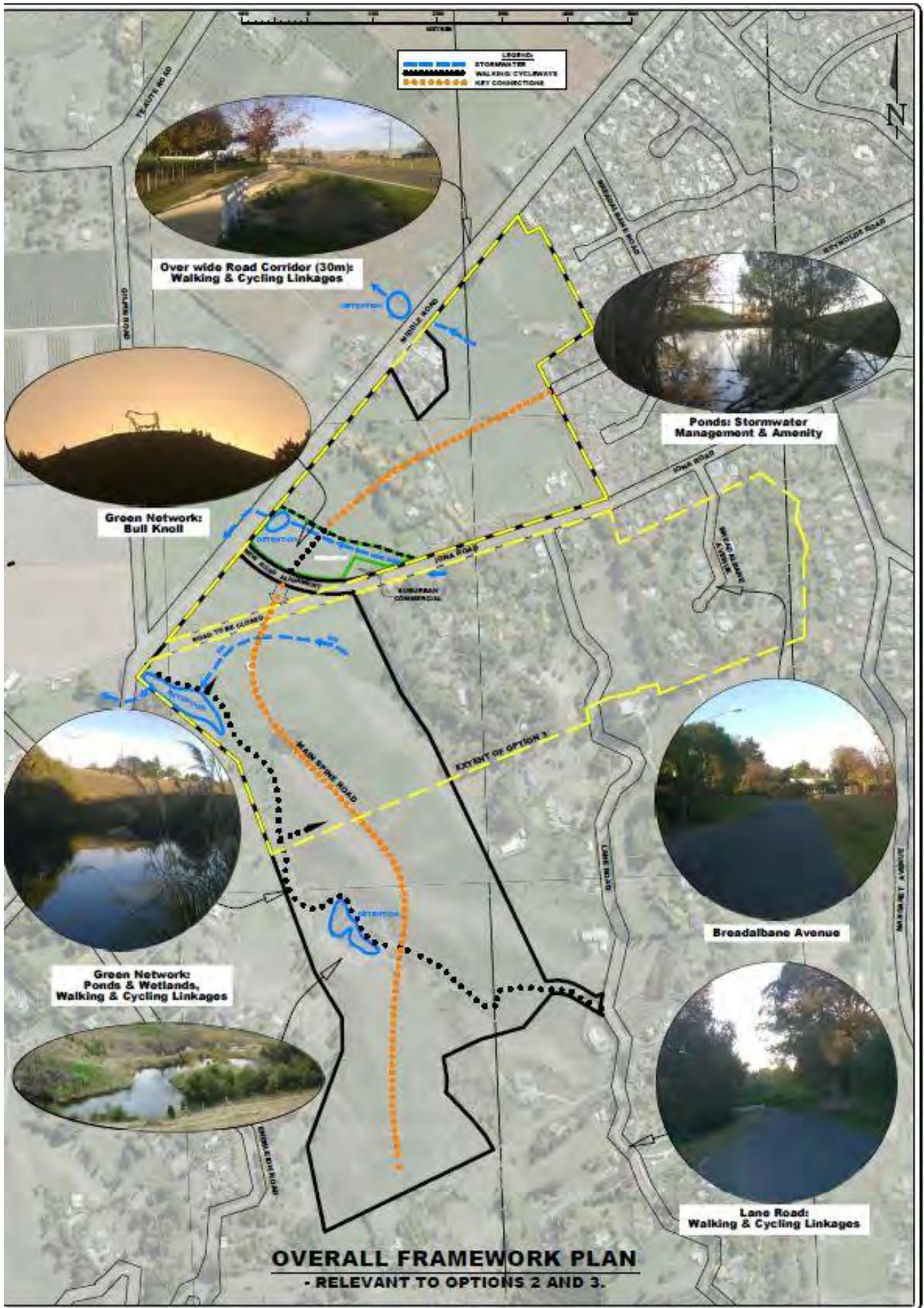
The three options put forward as part of this paper are for the purpose of identifying the best option to proceed to an initial variation to the Proposed District Plan and would include the preparation of a structure plan.

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 3<sup>rd</sup> 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.

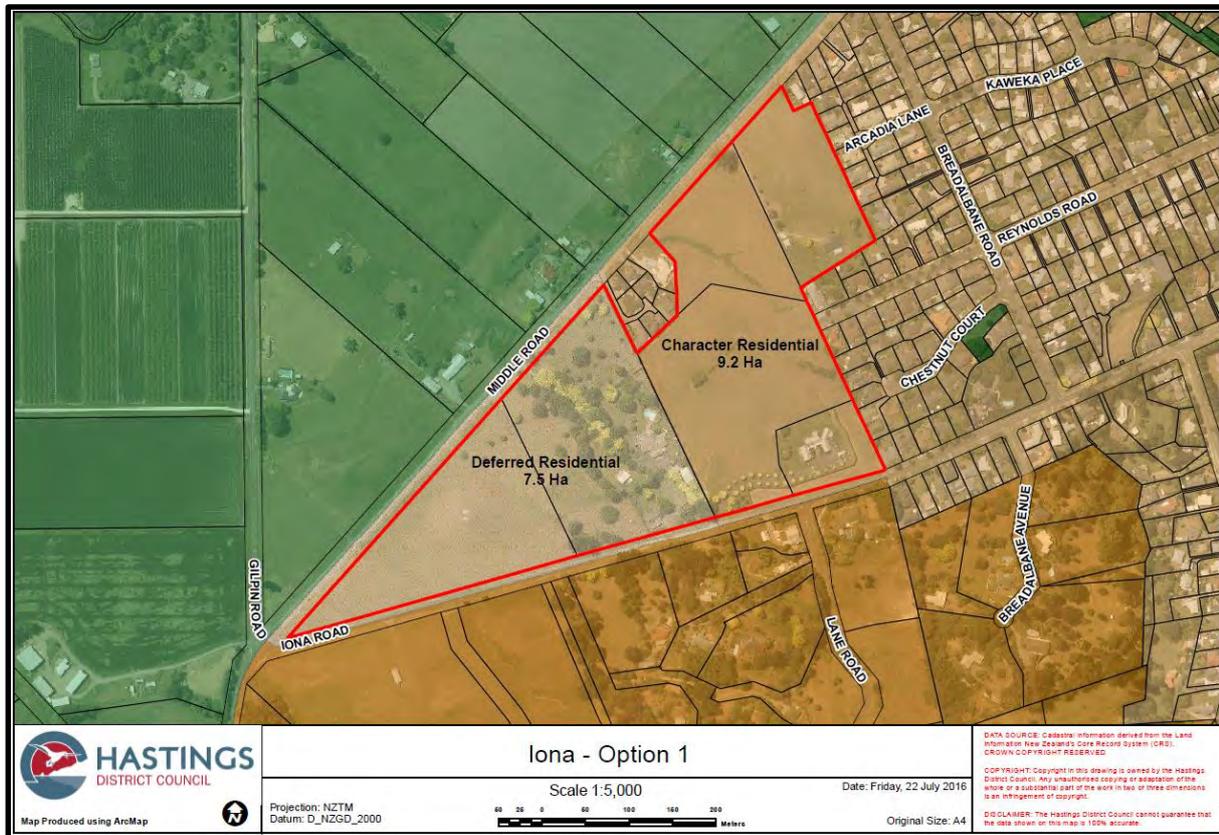
These 3 initial options cover the wider area as well as smaller portions of the land identified as suitable for development. If it is determined that a smaller development area be the subject of an initial plan change, the remaining areas identified as suitable for residential growth will still be factored 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 650m<sup>2</sup> 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 650m<sup>2</sup>. It is possible to have small pockets of townhouse or perhaps duplex development on 250m<sup>2</sup>-450m<sup>2</sup> within the development area, however this would need to be offset by larger sites of perhaps 900m<sup>2</sup>-1000m<sup>2</sup> 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 5000m<sup>2</sup> – 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

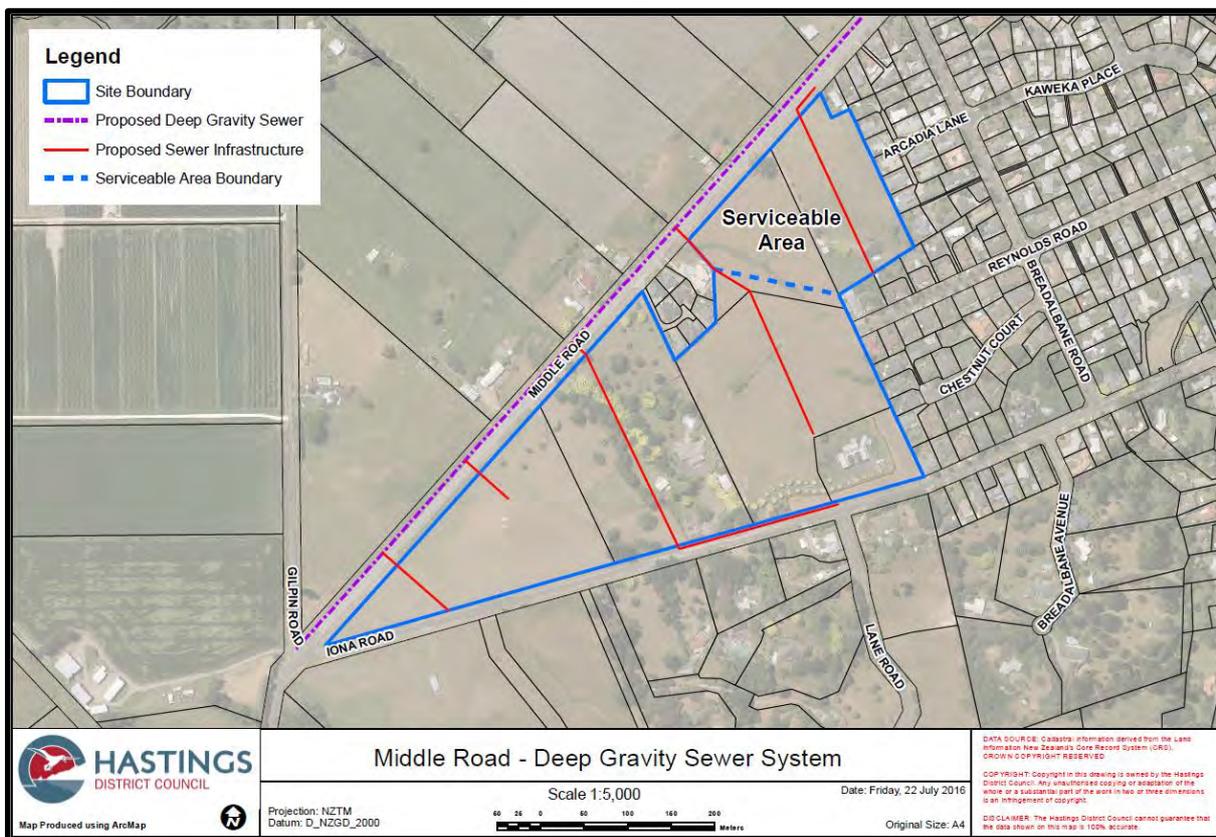
#### Water

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.

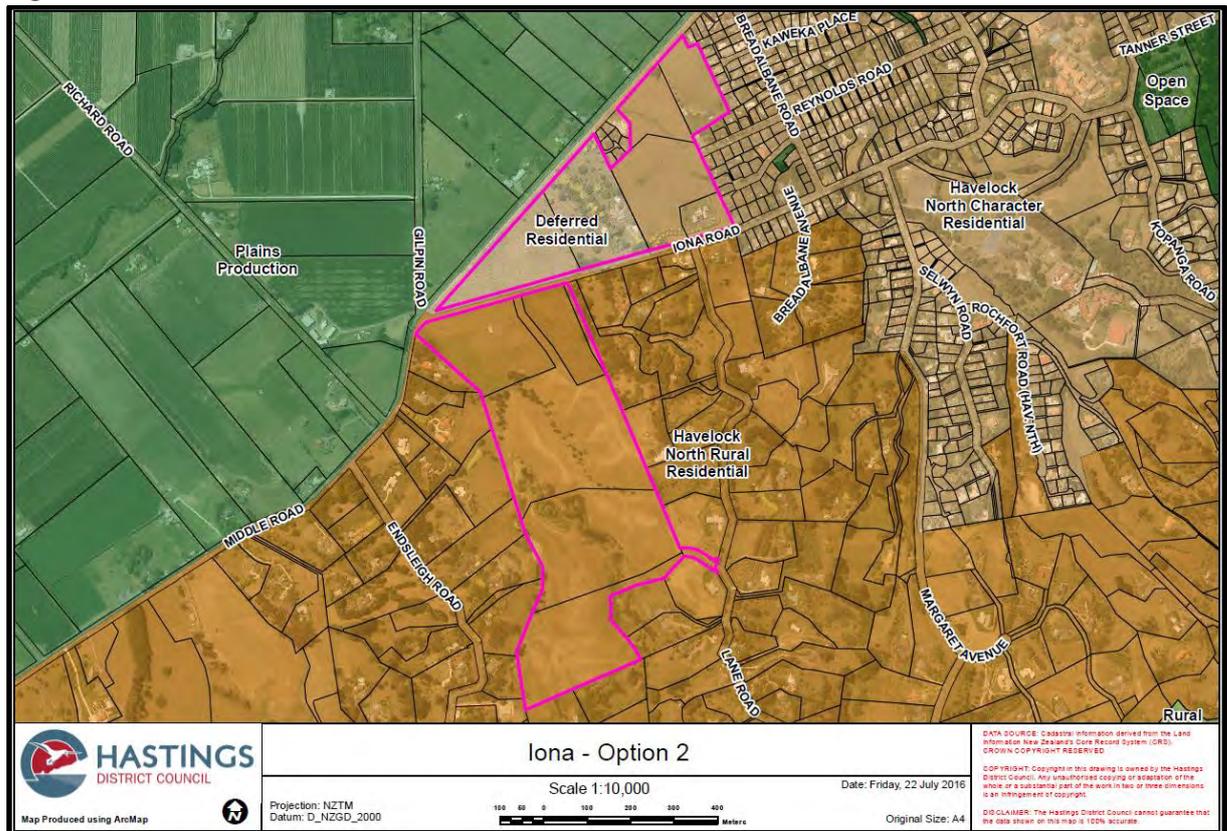
This scenario would delay the need to immediately zone and service the Iona hill land and remaining HPUDS areas for residential development and would provide an approximate 7 year supply based on development rates of 30 dwellings per year. However delaying the cost of servicing and development may not 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 650m<sup>2</sup>

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 5000m<sup>2</sup> – 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

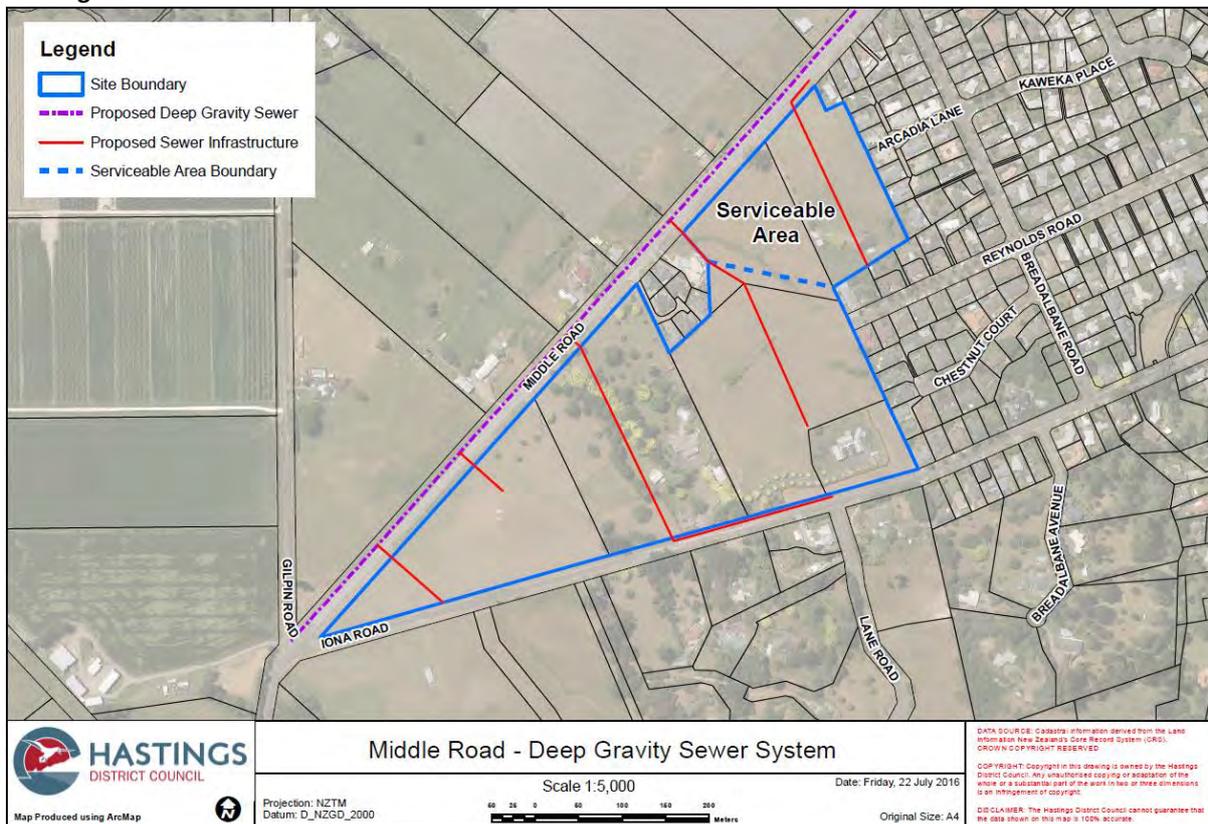
#### Water

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.

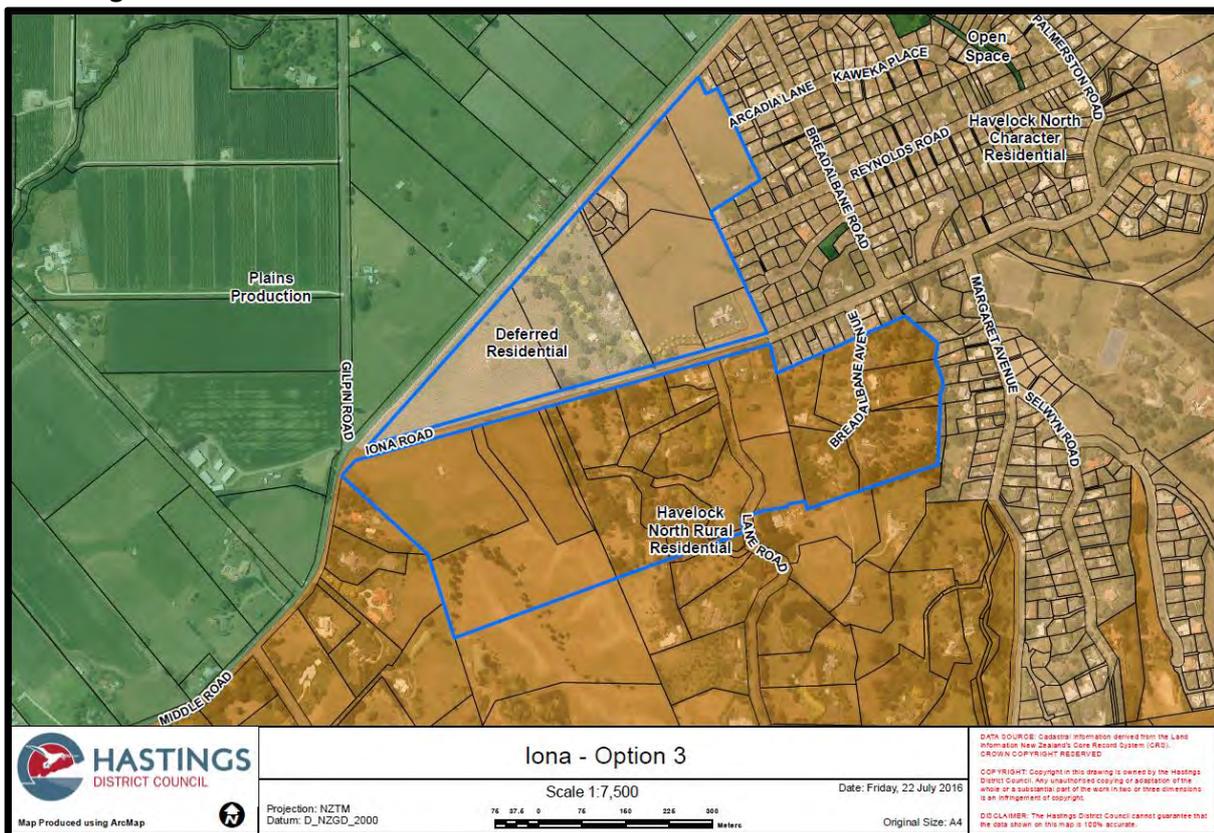
Furthermore, this option would provide for a larger supply of residential land that could service Havelock North for approximately 12 years depending on development rates. This larger area of land will also provide greater efficiencies around the staging of the infrastructure and the ability to bring 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 5000m<sup>2</sup> – 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**

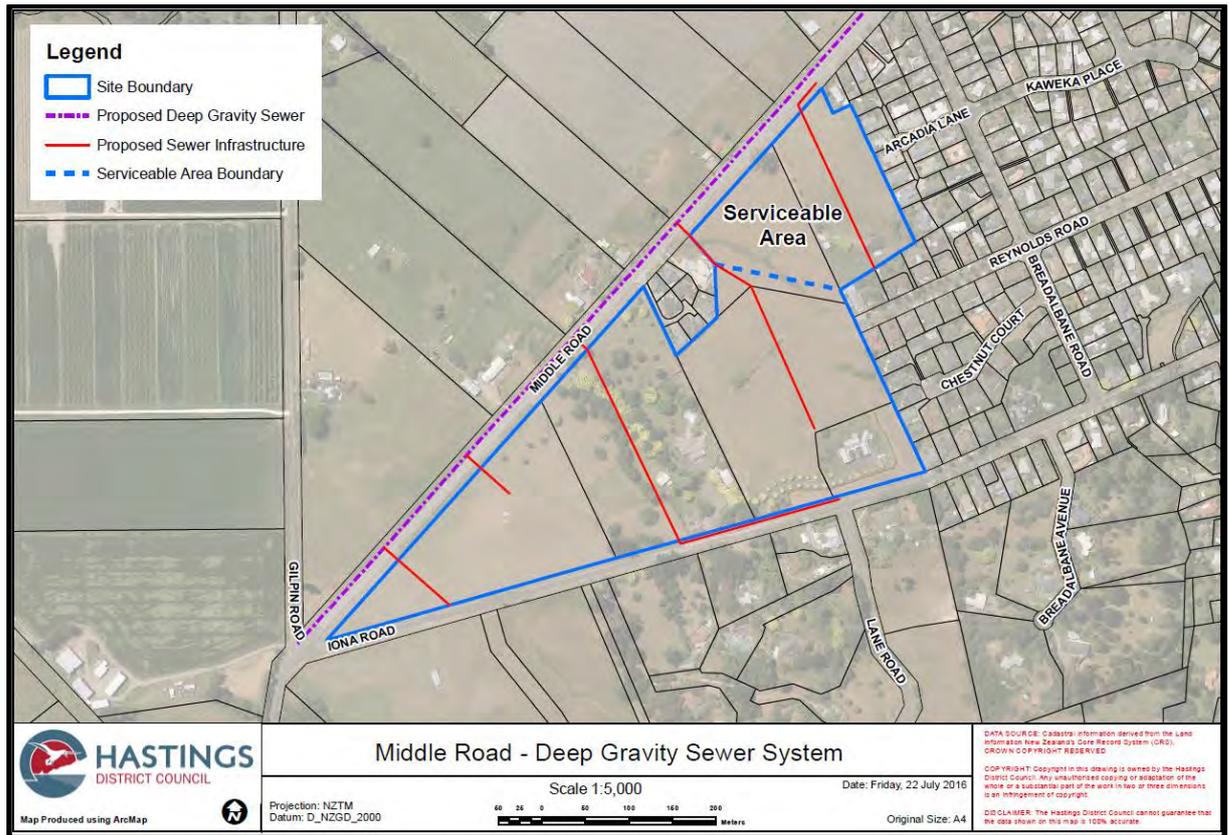
#### **Water**

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.