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Residential



**WANGANUI DISTRICT COUNCIL
DISTRICT PLAN REVIEW**

Phase 2: Residential

**INFILL CAPACITY
ASSESSMENT REPORT**

DISCUSSION PAPER 2C

8 February 2012

Summary

This report looks at potential areas for infill development within the Residential Zone. Areas were examined to understand their current capacity to support an increase in demand; this, along with market demand, is observed to assist in creating a framework for effective growth management.

Potential infill clusters are identified and closely examined in order to draw conclusions on the most practical areas to promote development. It is recognised through this report that Wanganui East, Aramoho and Castlecliff have the capacity to support development; however, there is low market demand. St Johns Hill, Springvale and Otamatea have the market demand for development but do not currently have the available capacity.

Purpose

The following report seeks to understand potential development areas and patterns within the Wanganui District Residential Zone. Clusters of potential infill lots have been identified and analysed to determine credible growth areas for future development within the existing residential zone.

Through the understanding of potential infill areas, efficient and effective growth management can occur. It is important to assess the current infrastructure and utilities to determine which areas will better cope with an increase in demand. Utilising and promoting existing potential subdividable lots will assist with planning for future residential growth and reduce development costs.

Draft Wanganui Growth Strategy 2008 - 2038

This project aligns with the Draft Wanganui Growth Strategy (WGS) 2008 – 2038 to create a better understanding of the potential growth patterns within the Wanganui area. As stated in the WGS, a market driven approach to development has led to sporadic development with few constraints. An increase in unplanned density generates larger cost for the Council and in turn the rate payer, when the cost should be carried by the developer.

This creates limitations for the Council when planning for growth management within the district. It is therefore important to understand all aspects of potential development within the Wanganui region. This project is a step towards a dynamic framework that will assist the Council to be more proactive rather than reactive as stated in the WGS; from this will lead more efficient and effective growth management.

The WGS states that infill development can lead to future implications; for example, changing traffic patterns, increased flow of storm water and waste water, and an increase in pressure on existing infrastructure. It is such implications that this project looks to avoid or mitigate before problems occur.

Process

Lots larger than 400m² within the Wanganui Residential Zone were identified. With the use of Geographical Information Systems (G.I.S), a map was configured with the following layers:

- Contours
- Urban photography 2008
- Residential boundary
- City boundary
- Residential sites larger than 400m²
- Land after building coverage
- Potential development editing layer

With the use of these layers, the land form and existing development on each site were examined to determine potential vacant or subdividable lots. The number of potential 500m² lots on each site was determined through dividing the available land after building coverage number by approximately 500m². Each lot was labelled with either a blue star, for 'yes it can be developed', or a red star, for 'no it can not be developed'.

Once the residential area was complete, the overall image was examined to draw out clusters of potential development areas. Clusters were chosen in a superficial way base purely on where several potential 'yes' lots seemed to be bunched together. Areas not included as clusters are not excluded, although will be looked at in a more broad sense.

For the purpose of this report, clusters will be defined as medium or large; consisting of approximately 20–39 and 40+ lots respectively. Such clusters warrant further investigation. Utilities, liquefaction, heritage sites, archaeological sites, and land form will be studied along with market demand and trends to assess each cluster's suitability for infill development.

From the overall residential image it was clear that clusters of unsuitable development areas exist. This is primarily due to steep land form and existing built up environments.

Discussions with the Senior Water Engineer, Wastewater Engineer, Resource Management Planner and Real Estate Agents were set up to endeavour to find clarification on the suitability of development in each cluster and Wanganui in general.

Further mapping layers were examined to create a breadth of knowledge about each cluster. Maps were developed that looked at parks, stormwater pipes, wastewater pipes, water pipes, level of liquefaction, Wanganui contours, heritage sites, archaeological sites, Tsunami Zones, 100 year and 50 year flood lines within the area.

The last step in this project was to create a percentage for each of the clusters to reflect their attractiveness to the buyer. Parks and recreational areas, storm and waste

water infrastructure, water infrastructure, heritage or archaeological sites, land form and market demand were each given a weighting. All weightings, except for market demand, are consistent with the Draft Wanganui Growth Strategy outlined in appendix 1. For this project, market demand is considered to have more bearing on what is being examined, therefore has been giving a weighting of 2.0 as opposed to 1.6 as it has been in the WGS.

The percentage is of the optimum weight result of 11.4. The score of each cluster was then divided by the optimum (11.4) and multiplied by 100.

Cluster Assessment

Cluster one:

Location: Castlecliff – South of Seafront Road

Size: Large

500m² Lots: Approximately 48

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0	2	Close to large parks and recreational areas, including beach.
Storm Water and Waste Water infrastructure	2.0	2	Capacity available
Water Infrastructure	2.0	2	Capacity available
Liquefaction			Low to moderate liquefaction
Historic or Archaeological Sites	1.6	2	No sites
Land form	1.8	1	Low rise hills
Tsunami Zone			Orange Zone
Market Demand	2.0	0	Low demand
Total (as percentage of optimum)		78.94%	

Cluster Two:

This cluster has been left unscored as it has already been developed.

Location: Springvale – Along/end of Devon Road

Size: Large

500m² lots: Approximately 73

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0		Close to existing parks and recreational areas
Storm Water and Waste Water infrastructure	2.0		Known strain within the area
Water Infrastructure	2.0		Capacity available
Liquefaction			Moderate bordering on low
Historic or Archaeological Sites	1.6		One heritage site
Land form	1.8		Flat land
Tsunami Zone			N/A
Market Demand	1.6		High market demand
Total (as percentage of optimum)	Developed		

Cluster Three:

Location: Springvale – Parsons Street end of Devon and Surrey Road

Size: Medium

500m² lots: Approximately 33

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0		Close to existing parks and recreational areas
Storm Water and Waste Water infrastructure	2.0		Known strain within the area
Water Infrastructure	2.0		Capacity available
Liquefaction			Moderate bordering on low
Historic or Archaeological Sites	1.6		No sites
Land form	1.8		Flat land
Tsunami Zone			N/A
Market Demand	2.0		High market demand
Total (as percentage of optimum)	Developed		

Cluster Four:

Location: Castlecliff – North-West of Cross St

Size: Large

500m² lots: Approximately 65

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0	2	Close to parks, beach and recreational facilities.
Storm Water and Waste Water infrastructure	2.0	2	Capacity available for development
Water Infrastructure	2.0	2	Capacity available for development
Liquefaction			Low liquefaction
Historic or Archaeological Sites	1.6	2	No sites
Land form	1.8	1	Low rise hills
Tsunami Zone			Yellow Zone
Market Demand	2.0	0	Low market demand
Total (as percentage of optimum)		78.94%	

Cluster Five:

Location: Putiki – Metropolitan Motorway end of Putiki Drive.

Size: Large

500m² lots: Approximately 68

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0	1	Riverside park and reserve
Storm Water and Waste Water infrastructure	2.0	1	Known strain in the area
Water Infrastructure	2.0	2	Capacity available for development
Liquefaction			High liquefaction
Historic or Archaeological Sites	1.6	0	Two heritage and one archaeological
Land form	1.8	2	Flat land
Tsunami Zone			Yellow Zone
Market Demand	2.0	0	Low Demand
Total (as percentage of optimum)		52.63%	

Cluster Six:

This cluster has been left unscored as it has already been developed.

Location: Springvale – Adjacent to Peaks Road.

Size: Large

500m² lots: Approximately 47

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0		Close to existing parks and recreational areas
Storm Water and Waste Water infrastructure	2.0		Known strain within the area
Water Infrastructure	2.0		Capacity available for development
Liquefaction			Low liquefaction
Historic or Archaeological Sites	1.6		No sites
Land form	1.8		Flat land and low raise hills
Tsunami Zone			N/A
Market Demand	2.0		High market demand
Total (as percentage of optimum)		Developed	

Cluster Seven:

Location: Otamatea – Far end of Great North Road

Size: Large

500m² lots: Approximately 61

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0	1.5	Close to parks and recreational facilities; however, may need more in the immediate vicinity
Storm Water and Waste Water infrastructure	2.0	0	Storm and waste water infrastructure is already under strain and will be costly to upgrade
Water Infrastructure	2.0	1	Water pressure issues apparent
Liquefaction			Unmapped
Historic or Archaeological Sites	1.6	2	No sites
Land form	1.8	1.5	Flat / gentle rolling
Tsunami Zone			N/A
Market Demand	2.0	2	Known high demand
Total (as percentage of optimum)		70.17%	

NB: There is one protected tree within the cluster.

Cluster Eight:

Location: Wanganui East – No. 3 Line end of Eastown Road

Size: Large

500m² lots: Approximately 52

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0	2	Large recreational park close by
Storm Water and Waste Water infrastructure	2.0	2	Capacity available
Water Infrastructure	2.0	2	Capacity available
Liquefaction			Majority no liquefaction adjoining sites of moderate
Historic or Archaeological Sites	1.6	2	No sites
Land form	1.8	1.5	Majority flat and gentle rolling land; backs on to larger hills
Tsunami Zone			N/A
Market Demand	2.0	1	Low to moderate market demand
Total (as percentage of optimum)		92.10%	

Cluster Nine:

Location: Aramoho – Between Gibson Ave and Mitchell Street

Size: Medium

500m² lots: Approximately 38

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0	2	Close to parks, reserves and the river
Storm Water and Waste Water infrastructure	2.0	2	Capacity available
Water Infrastructure	2.0	2	Capacity available
Liquefaction			Moderate adjoining sites low
Historic or Archaeological Sites	1.6	2	No sites
Land form	1.8	1.5	Majority flat land; however, a stream or gully passes through some lots
Tsunami Zone			N/A
Market Demand	2.0	0	Low market demand
Total (as percentage of optimum)		83.33%	

NB: This cluster is located near the Seismic Fault line.

Cluster Ten:

Location: Aramoho – Patterson Street

Size: Large

500m² lots: Approximately 88

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0	2	Parks and recreational facilities, including river, near by.
Storm Water and Waste Water infrastructure	2.0	2	Capacity available for development
Water Infrastructure	2.0	2	Capacity available for development
Liquefaction			Moderate adjoining sites low
Historic or Archaeological Sites	1.6	2	No sites
Land form	1.8	1.5	Majority flat land; however, back on to hills and some areas will be undevelopable
Tsunami Zone			N/A
Market Demand	2.0	0	Low market demand
Total (as percentage of optimum)		83.33%	

NB: It is located above the seismic fault line.

Cluster Eleven:

Location: Gonville

Size: Medium

500m² lots: Approximately 25

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0	2	Close to parks and recreational facilities
Storm Water and Waste Water infrastructure	2.0	2	Capacity available
Water Infrastructure	2.0	2	Capacity available
Liquefaction			Majority low
Historic or Archaeological Sites	1.6	2	No sites
Land form	1.8	2	Majority flat land
Tsunami Zone			N/A
Market Demand	2.0	0.5	Low to moderate market demand
Total (as percentage of optimum)		92.10%	

Cluster Twelve:

Location: Aramoho – Either side of Delhi Avenue

Size: Large

500m² lots: Approximately 51

<u>Description</u>	<u>Weight</u>	<u>Score</u>	<u>Notes</u>
Parks and recreational facilities within the area.	2.0	2	Close to parks and recreational facilities
Storm Water and Waste Water infrastructure	2.0	2	Capacity available
Water Infrastructure	2.0	2	Capacity available
Liquefaction			Moderate, near high
Historic or Archaeological Sites	1.6	2	No sites
Land form	1.8	2	Flat land form
Tsunami Zone			N/A
Market Demand	2.0	0	Low market demand
Total (as percentage of optimum)		92.10%	

Ranked clusters:

The total percentage of each cluster has ranked the clusters as below:

Cluster 8 – Wanganui East	92.10%
Cluster 11 – Gonville	92.10%
Cluster 12 – Aramoho	92.10%
Cluster 9 – Aramoho	83.33%
Cluster 12 – Aramoho	83.33%
Cluster 1 – Castlecliff	78.94%
Cluster 4 – Castlecliff	78.94%
Cluster 7 – Otamatea	70.17%
Cluster 5 – Putiki	52.63%

Discussion

The Churton Creek Catchment is under pressure, especially in the urban area, from stormwater. This causes areas in Springvale, St Johns Hill and Otamatea to be very wet with drainage and storm water issues. There are plans to do further investigations over the next three years to manage the problem; however, no capital works are planned in the near future.

There are known storm and waste water capacity issues in the Springvale, St Johns Hill and Putiki. It is perceived that Castlecliff, Wanganui East and Aramoho have greater capacity for development than other areas within the Residential Zone. These networks have not been modelled however and it is possible that capacity is not as vast as perceived.

The Otamatea/St Johns Hill area is known to be an area of high market demand. Increased residential development in the area has put strain on existing infrastructure. The upgrade required to meet the current Residential level of service is unaffordable, and there are no funds available for an upgrade of the infrastructure in the Ten Year Plan. Therefore continued increase in demand will have infrastructure and cost implications.

There are no known water supply issues within the Residential Zone. There are water pressure concerns in the St Johns Hill and Otamatea area that will become more apparent with an increase in demand. Adequate water pressure is essential in order to meet the New Zealand Fire Service standards.

Subdivisions have generally decreased over the last 18 months. Subdivisions that are occurring involve large areas rather than back/front yard subdivisions that this project intends to promote. As there are few infill subdivisions happening throughout the Residential Zone there is no specific area where infill development is currently obvious. There is an example of a residential section in Springvale that was proposed to be subdivided into four sections; however, as the completed first section has not sold the project has not gone any further as of yet.

Large developments are being proposed on the outer edges of the urban boundary, an example of this is a proposed 30 lot development near Kelsi Street, south of Fitzherbert Avenue. There have been recent large developments within the residential zone; however, they are not selling as expected; this has happened to a development near cluster 11. There is also a large development proposed near cluster 12 which is going to proceed; as well as an approximately 24 lot development within cluster 3.

Cluster 2 is another area which has already had development occurring. There are still many sections available; however, the land is very wet and is thought unlikely to be further developed.

Roads within the Residential Zone will not constrain or define where development may occur.

St Johns Hill and Otamatea are areas of continuous high market demand. Springvale is another area highlighted as of high market demand. There is a perception in the Real Estate industry that wherever land is made available for development there will be demand in that area.

Castlecliff is an area of low market demand and is perceived as an unattractive place to live. Aramoho is another area with low market demand; however, people are generally likely to buy in Aramoho over Castlecliff.

Wanganui East has a mix of low and moderate market demand. Some streets in the area are desired over others. When asked what makes a street more desirable, it was said that street trees and street presentation are a large draw card. Wanganui East is seen as an area for young families and first home buyers.

Analysis

The information gathered has allowed for an informed decision about the suitability for infill development within the Residential Zone.

It is clear that some clusters are more suitable for infill development than others. Cluster five has been excluded for further development due to high liquefaction in the area as well as existing storm water and waste water issues. As these issues are evident now, and there is lack of funds to fix the issue, they will only become more problematic with further development. This cluster is therefore not suitable for infill development and will not be promoted through this project.

There are existing storm water and drainage issues through Otamatea, St Johns Hill and Springvale in due to the Churton Creek Catchment. Although there is high demand as well as high existing and proposed development in these areas, it means that ground areas tend to be extremely wet. Cluster two is an area that falls into this category; it is an area with proposed development with many lots still vacant. The majority of these vacant lots are likely to remain undeveloped due to very wet ground conditions. Due to this factor cluster two has been excluded as a potential infill development cluster.

Although cluster three and six also fall into the Churton Creek Catchment area there are already large infill development proposed within these clusters. This prevents these clusters from being considered as having addition infill development capacity.

From an infrastructure point of view cluster one and four are an ideal place to develop. Capacity for water, waste water and storm water are available; however, they are perceived as an unattractive area with low market demand.

Clusters eight, nine and ten are facing similar issues. They are able to cope with more intensive development; however, market demand may not support the increase in available housing. Cluster 11 in Gonville reiterates this dilemma as it has high infrastructure capacity with low to moderate market demand. This cluster is located near an existing infill development project that is not reaching its fill potential.

Cluster seven and surrounding area is as an area of high demand. However, from a real estate point of view anything in this area can be sold. From a storm water and waste water point of view this area is problematic. There is already known issues and any increase in development will put more strain on the system. Infrastructure in this area will be costly to upgrade; however, due to this high demand, needs further investigation to assess the feasibility of any upgrades

Conclusion

This project has made it clear that a large factor driving development is market demand. Areas where infrastructure has the capacity to sustain development but have low market demand tend not to be developed; these areas include Castlecliff, Aramoho and Wanganui East. However, areas where there is high market demand generally have poor capacity available and can not sustain development at the present time; these areas include Springvale, St Johns Hill and Otamatea.

It has also become apparent that infill development is not in demand within the Residential Zone. There has been very little infill subdivision in Wanganui over the last 18 months. However, if infill development was to be promoted the areas that would be most suitable from an infrastructure point of view would be Castlecliff, Aramoho and Wanganui East. However, investment in the presentation of these areas would be required to make them more attractive to buyers.