



Auckland City and City Fringe

Residential Intensification Opportunities

Fine Grained Analysis

By Patrick Fontein, 17th November 2014

1.0 Executive Summary

Studio D4 has carried out a number of fine grained analysis (FGA's) for Auckland Council, since the gestation of the Auckland Plan. The analysis part that has not yet been undertaken has been a thorough and robust residential FGA of the Auckland City Centre and City Fringe, which this FGA covers.

SD4 have used a methodology similar to other FGA's completed for Auckland Council, but adapted this to suit the particular nuances of the city and fringe. We have carefully reviewed each land parcel's zoning permissiveness, the capital values and relative improvements of each parcel, the sale price premium likely to be achieved for each neighbourhood, which has culminated in a development attractiveness score for each land parcel. This has then led to SD4 carrying out a fine grained analysis on the residential development potential of every city and fringe land parcel.

SD4 has consciously taken an aggressive stance in reviewing the development potential of each city and fringe land parcel. We did this as the city and fringe are areas where there is generally less resistance to development. The analysis and tables provided in the Report highlight that 46,817 extra residential dwellings could be provided in the central city area, with a further 26,356 dwellings in the fringe, totalling 73,173.

Whilst the results provided are realistic, they are aggressive and will need very favourable market demand and development finance availability conditions for large parts of the 30 year period, for the numbers to be achieved (ie a good 2-3 upswing market cycles as is being experienced in 2014).

With the city and fringe residential FGA completed, we felt it prudent to provide a November 2014 update of the likely intensification dwellings possible within all the other zoned areas, taking account of market conditions that have prevailed during the 13-14 months since the Unitary Plan's release.

SD4's updated assessment of all the intensification dwellings likely within greater Auckland, show that there are approx 180,000 intensification dwellings likely, which is a shortfall of 100,000 from the Auckland Plan target of 280,000. The Report concludes with an updated review on how the 100,000 intensified dwelling shortfall could be reduced. A series of suggestions are provided, that if implemented, could bridge much of the 100,000 gap.

2.0 Introduction / Background to this FGA.

Studio D4 has carried out a number of fine grained analysis (FGA's) for Auckland Council, since the gestation of the Auckland Plan. (see SD4 FGA Background in Section 7.0). The analysis part that has not yet been undertaken has been a thorough and robust residential FGA of the Auckland City Centre and City Fringe, which this FGA will cover.

There have been a series of FGA's completed for all the other zoning areas, and this City Centre and Fringe FGA will close the loop to provide a more definitive capacity analysis of these areas.

On the 28th February 2014, Studio D4 made a submission to the Unitary Plan. The chart below highlights the latest numbers that had been analysed in FGA's by SD4 on behalf of Auckland Council, at that time.¹

Categories		Dec 2011 Auckland Plan		June 2013 UP - SD4 No.		Sept 2013 UP - SD4 No.	
1	City Centre - City Fringe	43,000	11%	35,000	9%	35,000	9%
2	Metropolitan Centres	48,000	12%	25,000	6%	20,000	5%
3	Town and Local Centres	95,000	24%	40,000	10%	25,000	6%
4	THAB/Attached Housing	63,000	16%	50,000	13%	55,000	14%
5	Suburban Infill	19,000	5%	30,000	8%	15,000	4%
6	Greenfields	132,000	33%	220,000	55%	250,000	63%
Total		400,000		400,000		400,000	

Intensification Dwellings	268,000	180,000	150,000
Intensification %	67.0%	45.0%	37.5%
Intensification Shortfall	-12,000	-100,000	-130,000

Figure 1: Studio D4 Residential Intensification numbers, from SD4's 28th Feb 2014 Unitary Plan submission

This City and Fringe FGA will review the residential intensification capacity in these areas, and provide an updated overview of the other residential intensification areas, to provide an updated SD4 view on the likely intensification dwellings able to be absorbed in the greater Auckland area.

The fresh overview of the other residential intensification areas will take account of development market activity during the last 14 months, taking special account of how the development market has responded to the new opportunities afforded by the Special Housing Area (SHA) introduction, the residential land price increases with the booming house prices and it's effect on intensification opportunities and actions.

This Report will conclude with updated perspectives on how SD4 believe the 240-280,000 intensification dwelling target (ie 60-70% intensification of the 400,000 extra dwellings anticipated through the Auckland Plan), could be met.

This FGA has been completed with the strong assistance of Auckland Council's Research Investigations and Monitoring Unit (RIMU), who have crunched the data, provided modelling and produced the Maps.

¹ Chart from SD4 submission to the Auckland Council Unitary Plan

3.0 Methodology for the Auckland City Centre and Fringe FGA

SD4 has provided methodologies for assessing the development capacity of previous Auckland residential intensification FGA's completed for Auckland Council. These methodologies have primarily been based on:

1. The maximum extra dwellings able to be developed on each site
2. The likely capacity utilisation of property owners who chose to redevelop (excl refurbishments)
3. The development chance of properties to develop within each meshblock over the next 30 years

This FGA will consider similar aspects, but within the higher density confines and alternate use opportunities within the City Centre and Fringe, a fresh approach was required. After much review, the following aspects were considered most important in considering the residential development intensification opportunity, and thus residential development capacity.

1. **Zoning permissiveness:** primarily based on the height limit (in storeys) and how this could enable higher density residential development.
2. **Capital Values** of a site: the likely cost (in \$/m²) for a developer to purchase the site.
3. **Relative Improvements:** the parcel improvement value to capital value (\$IV/\$CV), dictating how much extra over land value a developer will have to pay to purchase the site.
4. **Sales Price Premium:** the likely sales price differential for selling a similar product in a different location. This will affect the sales price in \$/m² which is a key driver in apartment feasibilities.
5. **Overall Development Attractiveness:** This is a parcel specific site score obtained from combining all of the 4 factors above.

In considering all of the above, SD4 also took account of the current number of dwellings in each meshblock or neighbourhood. This enabled a detailed review of the current average net residential density to be provided, followed by the development chance for intensification and the capacity utilisation within each property parcel. This would then lead to the to the likely residential intensification in dwelling numbers per meshblock, the results of which will provide the future average net density within each meshblock and neighbourhood.

The sections below describe in a little more detail each of the issues described above.

3.1 Zoning Permissiveness

This is the critical planning lever that dictates the extent of likely future development potential of any given land parcel.

Within the city and fringe areas there are a number of property zones. For this FGA analysis we considered:

- A city fringe extent generally within 3-4 km of the city centre and covering the main likely residential intensification opportunities within this area. The extent of this fringe went from Ponsonby and St Mary's Bay, across to the western end of the Grey Lynn ridge of Gt North Rd, through Kingsland, Newton, Grafton, onto Newmarket and then rounding up through Parnell.

- all of the land parcels that permitted residential development, and were of a zoning of mixed house urban or greater.
- We analysed lots of scoring mechanisms considering the various machinations of the mixed house urban zone v THAB, v city centre etc. In the end analysis, the zoning permisiveness was almost fully correlated with the allowable height in storeys for each site. We thus provided a score of a point per allowable story of height, to each individual land parcel.
- Appendix 1 shows the Map of all the sites within the fringe boundaries that permit residential development, with the height permisiveness of each individual land parcel.

3.2 Capital Values of each Land Parcel

Whilst the latest CV is not the actual amount a developer will have to pay, if the CV is close to the actual valuation of the property, it has a large bearing on the purchase price. Therefore the CV is the item that most assimilates what a developer will have to pay to purchase a site.

The capital values of each land parcel are provided in Appendix 2.

3.3 Relative Improvements of each Land Parcel

The relative improvements to a property can be considered as the \$ amount extra above the land value, that a developer has to pay to purchase a site. The more the relative improvements, the greater the premium that a developer will have to pay for a site, viz the bare land value.

The relative improvements of each land parcel are provided in Appendix 3.

3.4 Sales Price Premium of each Land Parcel

One of the key considerations of any property development feasibility analysis is the likely sales price that is able to be achieved, for any given type of property product provided, on a \$/m² basis. i.e. a 150m² apartment in Parnell will likely sell at a substantial premium compared to the same quality and size apartment in (say) Taumaranui.

Whilst the differences in precincts within the city and fringe are not likely to be as great as the above example, the fact is that a 150m² apartment in Parnell or St Mary's Bay, will be able to sell at a higher price than the equivalent apartment in (say) Kingsland. The other main factor in the areas that are given a higher "sales price premium" score, is that apartments in these locations are likely to be able to withstand a higher overall \$ figure in total price, which means that a developer can provide higher priced apartments when completing the development. i.e. an apartment with an individual price of \$3m is often viable in Parnell, but not (at least yet) in Kingsland.

The sales price premium is often a key driver of the land price, so this factor counter-balances land price somewhat. The considered sales price premiums for each land parcel are provided in Appendix 4.

3.5 Development Attractiveness of each Land Parcel

The development attractiveness is a function of the above four factors. A scoring system was carefully modelled that took account of all of the following:

Zoning Permissiveness score x Capital Values score x Relative Improvements score x Sales Price Premium

Appendix 5 shows the development attractiveness of each land parcel. This is the key (but not determining) consideration in evaluating the development potential of each land parcel. Armed with the information provided within Appendix 1-5, SD4 began to undertake the FGA for each land parcel and meshblock within the study area. This is defined in the section below.

3.6 Carrying out the City and Fringe Fine Grained Analysis

With the base information as described in Sections 3.1 to 3.5 and highlighted in Appendix 1-5, SD4 was able to commence its City and Fringe FGA. SD4 has intimate knowledge of all the neighbourhoods considered, having partaken in property development activity within Auckland throughout the last 20 years. Fresh site visits were made of the main development areas to ensure our view was up to date as at September to November 2014. With a combination of Google Maps, Google Street View, Council GIS data, the site specific information of each land parcel (as Appendix 1-5) and Property Guru (which provides all the relevant upto date sales statistics of all properties), analysis was made which considered:

1. The maximum extra dwellings able to be developed on each land parcel
2. The likely capacity utilisation of property owners who chose to redevelop (excl refurbishments)
3. The residential development chance of properties within each meshblock over the next 30 years, especially considering the parcel's potential re-development to other uses, e.g. office.

A total of 607 meshblocks of property were analysed, which covered a gross area of 1,683 hectares, of which 470 hectares was the net medium-high density residential developable area. The existing residential dwellings within the 470 hectares was 30,725, which equates to a current residential dwelling per hectare density (R value) of 65.

With Auckland Council targetting 60-70% of the new dwellings over the next 30 years to be in an intensified form, and as all previous SD4 FGA analysis had shown that this target was not being achieved, SD4 has taken a very aggressive stance on the development potential of each parcel. We did this because it is likely that the NIMBY pressures on intensification in many other urban areas of Auckland will continue to provide intensification hurdles (unless there is a major upzoning elsewhere), developers will thus choose areas where it is easier to develop and where there is less community resistance.

We purposely considered what could be the most dwellings able to be provided on each parcel (taking account of the AC minimum apartment size rules and the new AC Urban Design Manual). We then considered the capacity utilisation and development chance of each parcel, which then related to the meshblock potential. Whilst the results in the next section are realistic, they are aggressive and will need very favourable market demand and finance availability conditions for large parts of the 30 year period, for the numbers to be achieved (ie a good 2-3 upswing market cycles as is being experienced in 2014).

4.0 The City and Fringe FGA Results

The results of the city and fringe FGA are provided in summary form in the Table below. It shows a residential intensification capacity of 46,817 in the city and 26,536 in the fringe, for a total of 73,173 extra dwellings within the combined city and fringe. This is in excess of the 35,000 originally anticipated by SD4. The next section will review the reasons, and comment on the implications for greater Auckland.

City & Fringe FGA Results by Suburb	Med-High Density Land Hect	Existing Dwellings	Current Density R=dw/hect	SD4 Residential Capacity	Future Density R=dw/hect
City Centre					
Auck Central East	50.26	7,230	144	17,484	492
Auck Central West	56.75	7,460	131	25,499	581
Auck Harbourside	40.53	5,328	131	3,834	226
City Centre Sub-Tot	147.54	20,018	136	46,817	453
City Fringe					
Arch Hill	12.14	262	22	1,078	110
Eden Terrace	18.37	828	45	1,668	136
Epsom North	12.76	120	9	1,188	103
Freemans Bay	22.60	962	43	1,023	88
Grafton East	8.69	128	15	671	92
Grafton West	18.45	1,836	100	6,427	448
Grey Lynn East	15.81	290	18	1,734	128
Herne Bay	6.43	226	35	143	57
Kingsland	13.93	281	20	1,727	144
Mt Eden North	19.69	466	24	1,549	102
Mt Hobson	15.27	103	7	628	48
Mt St John	4.97	50	10	324	75
Newmarket	40.76	1,110	27	2,101	79
Newton	17.09	696	41	2,154	167
Parnell East	5.24	207	40	213	80
Parnell West	51.62	1,701	33	2,187	75
Ponsonby East	7.37	230	31	433	90
Remuera West	11.03	512	46	266	71
Sherbourne	2.23	5	2	223	102
St Mary's Bay	18.04	694	38	619	73
City Fringe Sub-Tot	322.49	10,707	33	26,356	115
Total	470.03	30,725	65	73,173	221

Figure 2: Studio D4 residential intensification numbers for the city and fringe

4.1 Graphical Presentation of the FGA Results on Maps

The Table in the section above is a summary of the data obtained by analysing each land parcel and meshblock. To review the impact of each neighbourhood and meshblock in a clearer manner, the AC RIMU team have provided Maps to show the following:

- The current average net residential dwelling density of each neighbourhood, in Appendix 6
- The future average residential dwelling net density for each neighbourhood, by meshblock, taking account of the extra dwellings as anticipated within this FGA, in Appendix 7.
- The likely additional dwelling numbers within each meshblock, in Appendix 8. Care must be taken when reviewing this Map, as each current meshblock land area is provided by Statistics NZ, and assimilates a land area in which there are approx 100 existing residential dwellings. So there are some meshblocks with a large land area, where historically there have not been many residential dwellings, that will show up as substantially intensifying (eg Wynyard Quarter). The map in Appendix 8 should thus be read in conjunction with the map in Appendix 7.
- SD4's "development chance" scoring for each meshblock is provided in Appendix 9. This is the main map where:
 - existing predominant uses are considered (ie where there are already a very high level of recent improvements provided).
 - the likely predominant future use of a parcel within meshblocks will be other activities than residential (eg for the meshblocks within the main Auckland University Campus, SD4 score a 0-10% chance of residential intensification chance during the next 30 years)
- SD4's "capacity utilisation" scoring of each parcel within each meshblock is provided in Appendix 10. This shows SD4's interpretation of when residential development actually occurs, how many dwellings will be provided, relative to the maximum dwellings realistically possible. SD4 has considered capacity utilisation of Auckland residential development during the last 20 years, and international development trends in this assessment. There is some correlation between the capacity utilisation and sales price premium scoring, as the areas in which high value apartments (by total \$ value) are market acceptable, often developers will build fewer, but larger and higher total sale price apartments. (eg the apartments near or on the waterfront in the Viaduct, viz the apartments in upper Nelson St).

4.2 Implications within the City and Fringe of SD4's FGA Projections

Reviewing the difference between Appendix 6 and Appendix 7, will provide the greatest indicator of the major changes that are likely within the city and fringe areas, as assessed by SD4. There are some neighbourhoods that are likely to see major changes in their residential built form, whereas there will be others who will see only little residential change, as they may already be substantially improved, or the development form is likely to be non-residential.

The 46,817 extra dwellings in the city and the 26,356 in the fringe are possible, but will need favourable development conditions to be present for large parts of the 30 year period under consideration. Rather than 2,000 - 3,000 dwellings being built every year, historical Auckland and international residential intensification trends, say it's likely these dwelling numbers will be provided in a highly cyclical manner.

5.0 Implications for the wider Auckland Residential Intensification Numbers

It would be easy to assume that as the residential intensification numbers provided in the city and fringe are approximately double those of earlier SD4 FGA projections, can we increase the assessment for the other areas of Auckland? The sections below provide an updated review of the intensification likely in each of the zoning areas as provided by the Unitary Plan.

The analysis and comments below are a direct review of the property market response to the new Unitary Plan, some 13-14 months after it's release. During this time we have had intensive house pricing pressures, which have led to some of the most favourable property development conditions experienced in a long time. i.e. it is currently boom time in residential property development in Auckland, and what does this mean for the Unitary Plan intensification projections going forward.

We'll start with a review of the Central Government and Auckland Council "Housing Accord" enacted in September 2013, which has provided huge development opportunity to residential developers, through the implementation of Special Housing Areas (or SHA's).

5.1 The Impact of the Housing Accord and Special Housing Areas

Essentially residential land owners can get residential development approvals fast-tracked with the special SHA legislation.

The SHA Map from the SHA section of the Auckland Council website² provides a very good indication where the 80 SHA's are. It is great that the SHA's have enabled a substantial amount of (effective) re-zoning to take place that will provide residential development opportunities. The really useful overview of the response to the SHA's is that land owners or developers can (in a practical sense) consider the development opportunities provided by the new Unitary Plan, and seek development approvals based on the zoning provisions and rules of this Unitary Plan.

It is therefore very interesting to see where the land owner and development community have responded in providing the new residential dwellings, as this will provide a very good indication of how the development community will respond to the Unitary Plan going forward.

SD4 has considered the land owner and development industry response to the Unitary Plan and SHA's to provide the following updated comments for each zoned area.

5.1 Metropolitan Centre Intensification

There has been some promising development proposals accepted by the market, e.g. in New Lynn. However many of the metropolitan centres still have far too restrictive planning policies, e.g. Newmarket. We have reviewed all of the Metropolitan Centres intensification numbers and have increased our assessment from 20,000 to 27,000 dwellings, in the next 30 years. Similar to the city centre and fringe areas, with some increased height beyond what the Unitary Plan currently allows, the residential intensification in this zone could increase further.

² www.aucklandcouncil.govt.nz/en/ratesbuildingproperty/housingsupply/pages/specialhousingareas.aspx

5.2 Town and Local Centre Intensification

This is the category in which residential intensification is going to become harder and harder. There continues to be a very strong demand for town centre retail premises, which are selling at very strong yields, and thus very high \$ values per m² of land area. It is thus becoming increasingly difficult for developers to buy town centre land and build apartments, especially when the heights within the Unitary Plan are so restrictive in the town centres. The main development numbers are likely to come from developments in the town centres but off the main retail streets. SD4 has reduced its residential intensification dwellings further from 25,000 down to 20,000 over the 30 year time period.

5.3 Terrace House and Apartment Building (THAB) and Mixed Housing Urban (MHU)

This has been the category that SD4 have always been very bullish on. Essentially whereby a current detached house on a residential 6A or 7 site is up-zoned to allow terrace house and / or apartment development, with un-limited dwelling intensity. We have always grouped the MHU zone with the THAB numbers, as the MHU zone will allow substantial density, although with less height than the THAB areas. The extent of MHU is in SD4's view insufficient. Many of the mixed housing suburban areas should be upzoned to MHU.

SD4 are still very bullish on this category and are predicting a total of 45,000 extra dwellings to be provided. Our numbers have reduced slightly due to the following:

- There is not enough up-zoned land available (within the Unitary Plan generally), and land-owners are already "pricing in" the future value of the increased development potential. The SHA's allow development in these areas now, but the overview of the 80 SHA's currently provided, is that there are less within the THAB and MHU zone area, than previously allowed for.
- SD4 are aware of a number of potential development sites with a THAB or MHU zoning, where the current buoyant residential market place, has meant that the land owner is developing at a lower intensity than the Unitary Plan will allow. This is where the land owner or developer is building as to what is permitted under the existing under-lying zoning, or improving the existing housing such that the improvement value makes it harder to re-develop in the future. i.e. sites that would be anticipated to be developed intensively under the THAB or MHU zoning are being taken up with lower intensity uses faster than earlier anticipated.
- 45,00 extra dwellings in this zone is still a huge number of extra dwellings

5.4 Mixed Housing Suburban

This is the zone which promises so much, but for which the Unitary Plan has delivered so little. This is the zone which could answer all the prayers of Auckland housing affordability.

The initial Council officer intention was to provide unlimited residential dwelling density for this zone, as long as stringent urban design controls were followed. This would enable developers to build larger numbers of 2-3 storey terrace style homes on these properties, which would be economical in many parts of Auckland.

The imposition of the density controls to this zone, has almost killed any intensification opportunity stone cold. The reality is that the existing improvement values of most of the properties, mean that the developer land purchase price will be too high to carry out any form of economic development as the extra development potential is too low. Trying to buy up in excess of 1,200 m² to carry out develop down to 200m² of land per dwelling, will be considered too low a reward for the cost of agglomeration. The only realistic development opportunity will be more rear lot sub-divisions and most of these opportunities have already been utilised during the last 10-20 years.

We have maintained our assessment that 15,000 extra houses will be provided in this zone over the 30 year period.

If the density controls in this zone were substantially lessened or removed, this zone still has the potential to supply substantial affordable housing to many areas of Auckland. SD4 are of the view that the 15,000 housing allowance could be increased to 50,000 dwellings with the elimination of the density controls and a strong focus on urban design controls within this zone. Most of the 50,000 extra dwellings will be able to be provided in the affordable category.

5.5 Single House Zone

The density restrictions of the single house zone mean that there will be almost no extra housing provided in this zone. There are some areas that are now zoned single house that will have a more restrictive zoning within the new Unitary Plan, than the existing zone they had under the legacy plans. Whilst there will likely be good levels of construction activity in this zone, instances whereby a land owner uses two sites to build one larger home will cancel out the few opportunities within this zone where one existing site is redeveloped to two dwellings.

5.6 The updated SD4 total residential intensification dwelling number Assessments

The following Table provides the updated Intensification dwellings considered likely, taken account of all the considerations highlighted within this Report.

Categories		Dec 2011 Auckland Plan		June 2013 UP - SD4 No.		Sept 2013 UP - SD4 No.		Nov 2014 UP - SD4 No.	
1	City Centre - City Fringe	43,000	11%	35,000	9%	35,000	9%	73,000	18%
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3	Town and Local Centres	95,000	24%	40,000	10%	25,000	6%	20,000	5%
4	THAB/Attach. Housing	63,000	16%	50,000	13%	55,000	14%	45,000	11%
5	Suburban Infill	19,000	5%	30,000	8%	15,000	4%	15,000	4%
6	Greenfields	132,000	33%	220,000	55%	250,000	63%	220,000	55%
Total		400,000		400,000		400,000		400,000	

Intensification dwelling	268,000	180,000	150,000	180,000
Intensification %	67.0%	45.0%	37.5%	45.0%
Intensification Shortfall	-12,000	-100,000	-130,000	-100,000

Figure 3: Latest Studio D4 Auckland Residential Intensification numbers, November 2014

The above table shows that SD4 is of the view that 180,000 intensification dwellings could potentially be provided in Auckland, under the current Unitary Plan provisions. This is still a very large 100,000 dwelling shortfall from the Auckland Plan targets. The next section will consider how SD4 believe the 100,000 gap could be bridged.

6.0 How could the 60-70% Intensification Targets realistically be met?

Assuming that the Auckland Plan target of 60-70% intensification is what the Auckland community is seeking, how could this be provided in an attractive manner, that once delivered, most Auckland residents would be proud of?

Far greater residential intensification is possible within Auckland, which should take account of the following:

1. Tidy-up Errors / Omissions in Unitary Plan

- With a fine tooth-comb, look for all areas of missed opportunity, have a mind-set of looking for intensification opportunity
- Properly classify Heritage buildings; Allow re-development if not proper Heritage

2. Up-Zone Auckland's City Fringe further.

- Especially the areas around the new City Rail Loop Stations
- Review all areas within 3-5km of CBD, turn to Mixed Use, greater height

3. Increase Heights in Centres.

- Why stop Metro at 18 levels? Why not allow 30 levels as Takapuna did?
- Review town centre development economics: Increase height to 8-12 levels
- Look for Ridge line development opportunities: (Remuera Rd already has 15 levels)

4. Land near Transport Nodes or Corridors intensified much more.

- Vancouver has nice 4-8 lev buildings on transport corridors, so should Auckland

5. High visual amenity land changed from Single House to Med Density

- Change zoning of high amenity single house zoned sites, close to transport.
- Intensification with strong urban design will raise land values for incumbents

6. Eliminate density rules in the mixed house urban and mixed house suburban zoned areas

- This one change will likely have the largest impact on intensification opportunity and be a major boost to the ability to provide affordable housing.

7.0 Conclusions

The residential development potential of the city and fringe had not been extensively reviewed since the Auckland Plan and Unitary Plan release, and this study and Report addresses that gap.

As discussed in this Report, SD4 has consciously taken an aggressive stance in reviewing the development potential of each city and fringe land parcel, as the city and fringe are likely to create easier intensification development opportunities than other areas, where there has been substantial NIMBY pressures.

The analysis and tables provided in the Report highlight that 46,817 extra residential dwellings could be provided in the central city area, with a further 26,356 dwellings in the fringe, totalling 73,173.

Whilst the results provided are realistic, they are aggressive and will need very favourable market demand and development³ finance availability conditions for large parts of the 30 year period, for the numbers to be achieved (ie a good 2-3 upswing market cycles as is being experienced in 2014).

The results are provided by neighbourhood in table form, and in substantial detail on 10 Maps provided in the Appendix.

As the 73,173 intensification dwellings are just over double SD4's 35,000 estimate, we felt it prudent to provide a November 2014 update of the likely intensification dwellings possible within all the other zoned areas, taking account market conditions that have prevailed during the 13-14 months since the Unitary Plan's release.

SD4's updated assessment of all the intensification dwellings likely within greater Auckland, show that there are approx 180,000 intensification dwellings likely, which is a shortfall of 100,000 from the Auckland Plan target of 280,000.

The Report concludes by an updated review on how the 100,000 intensified dwelling shortfall could be reduced. A series of suggestions are provided, that if implemented, could bridge much of the 100,000 gap.

8.0 SD4 Background on carrying out FGA's

1. SD4 has provided substantial property consultancy assistance to Auckland Council in 2011-2012 in its formation of the Auckland Plan, primarily providing expert advice on the property implications of the pending Auckland Plan, and in particular focusing on the development capacity analysis of Auckland: where can / will the extra 400,000 households and industrial land be accommodated?
2. In December 2011, SD4 in conjunction with Jasmax Architecture completed a Report for Auckland Council entitled: *"Auckland Plan: Total Auckland development potential"*. This Report included a series of concluding comments (in relation to the Auckland Plan target of achieving 70% intensification, or 280,000 urban intensified dwellings).
3. SD4 have provided substantial property consultancy assistance to various arms of Auckland Council in 2013, assisting the Local Boards in its understanding of the property implications of the pending Unitary Plan. This consultancy assistance continued right up until the Sept '13 Unitary Plan was notified.
4. SD4 has provided property consultancy assistance to MBIE during 2013, via Dr Nick Smith's team, and wrote a detailed Report for MBIE in August 2013 titled *"Auckland Greenfield and Brownfield Housing Development Land: The Opportunities and Barriers to Unlocking its Potential"*.
5. SD4 has just completed the Auckland Industrial Land FGA for Auckland Council. This analysis is a fact based definitive piece of research, that has looked at every one of the 10,315 Auckland industrial zoned land parcels, and evaluated its current use, ownership, improvements and land value, likely future development prospects and thus quantified the likely availability for development of industrial land that presently exists within greater Auckland.
6. Much of SD4's work for Auckland Council and MBIE has been carried out at the request of, or peer reviewed by, the Property Council of NZ. Ie SD4 has in effect provided detailed property analysis and reviews for PCNZ, on behalf of the wider property industry.
7. All of the above Reports provided by SD4 can be viewed on Studio D4's website, www.studiod4.co.nz.

Appendices

Appendix 1: Zoning Permissiveness Map

Appendix 2: Capital Values Map

Appendix 3: Relative Improvements Map

Appendix 4: Sales Price Premium Map

Appendix 5: Development Attractiveness Map

Appendix 6: Current Average Net Density Map

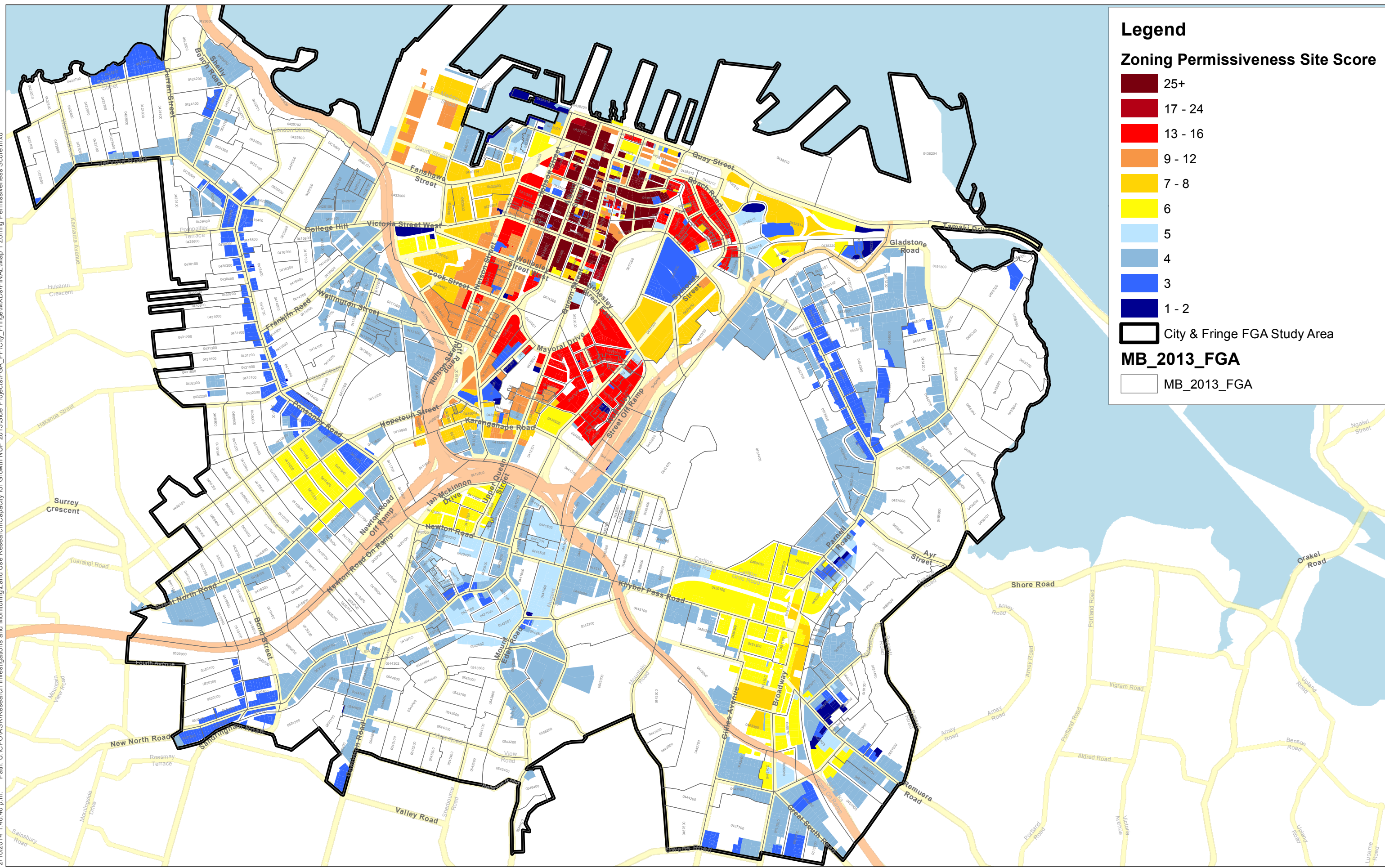
Appendix 7: Future Average Net Density Map

Appendix 8: Likely Residential Intensification Map

Appendix 9: Development Chance (%) Map

Appendix 10: Capacity Utilisation (%) Map

User: balderk Date Saved: 2/10/2014 1:46:46 p.m. Path: U:\CPO\ASRI\Research Investigations and Monitoring\Land Use Research\CapeCity for Growth NUP 2013\Side Projects\FGA_PFI\City_Fringe\WXDs\FINAL\Map 1_Zoning Permissiveness Score.mxd



Legend

Zoning Permissiveness Site Score

- 25+
- 17 - 24
- 13 - 16
- 9 - 12
- 7 - 8
- 6
- 5
- 4
- 3
- 1 - 2

City & Fringe FGA Study Area

MB_2013_FGA

MB_2013_FGA

City & Fringe Residential FGA

1. Combined Site Zoning Permissiveness Score

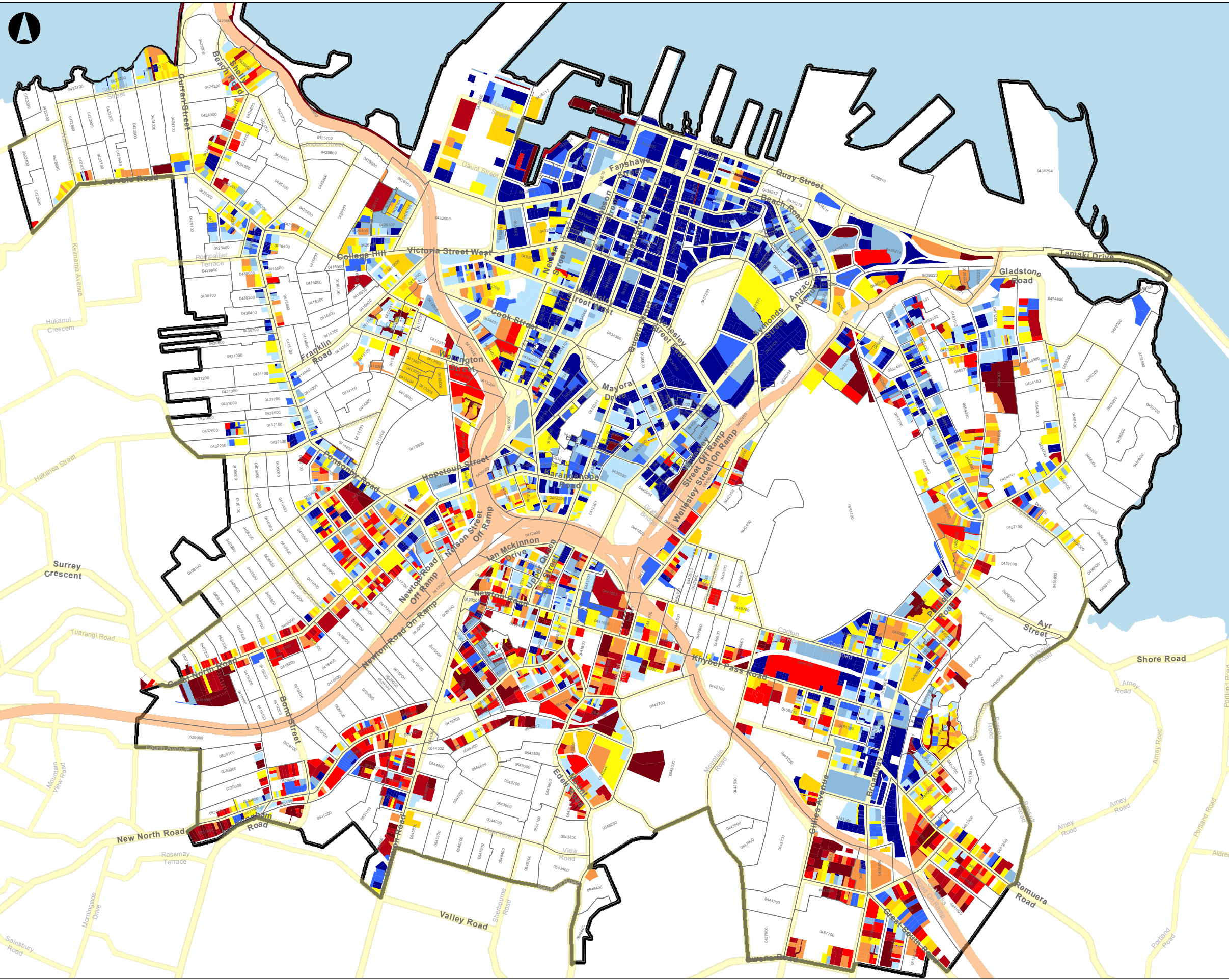
(Primarily based on Height Limit (in Storeys) and enabling higher density Residential development)

ZONING PERMISSIVENESS

Map Produced by
Land Use, Built Environment & Infrastructure Team
Research, Investigations & Monitoring Unit
Based on data & analysis provided by:



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Legend

2 City_Fringe_FGA_Parcel_CV/m2 Score

Score	Low Range	High Range
20	\$0	\$1,199
16	\$1,200	\$1,599
14	\$1,600	\$1,999
12	\$2,000	\$2,499
10	\$2,500	\$2,999
8	\$3,000	\$3,999
6	\$4,000	\$5,999
5	\$6,000	\$7,999
4	\$8,000	\$11,999
3	>\$12000	

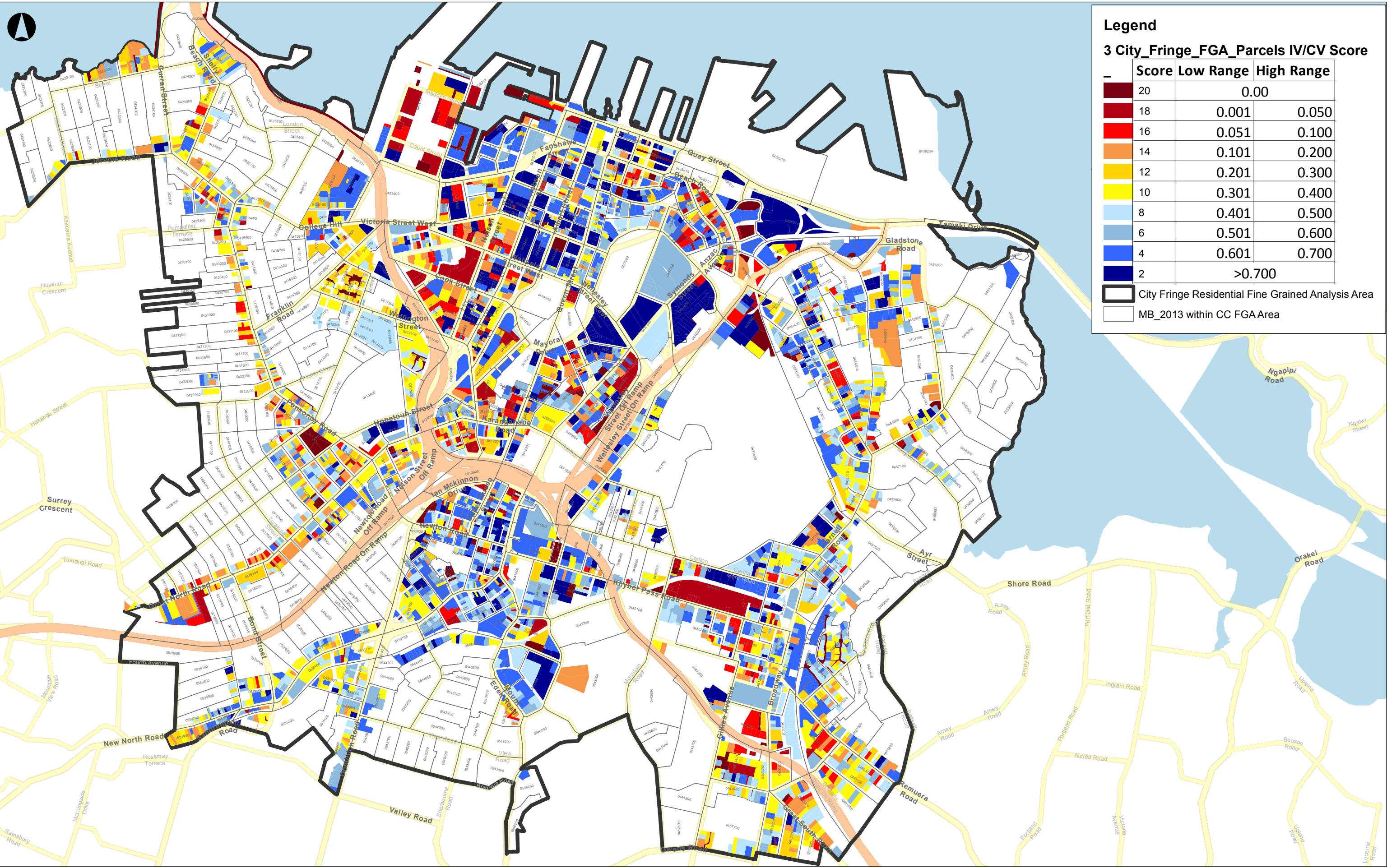
City Fringe Residential Fine Grained Analysis Area
 MB_2013 within CC FGA Area

City & Fringe Residential FGA
 2. Capital Value of each land parcel
(Cost (in \$/m²) for a developer to purchase the site)

CAPITAL VALUES

Map Produced by
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City & Fringe Residential FGA

3. The relative value of improvements on each parcel

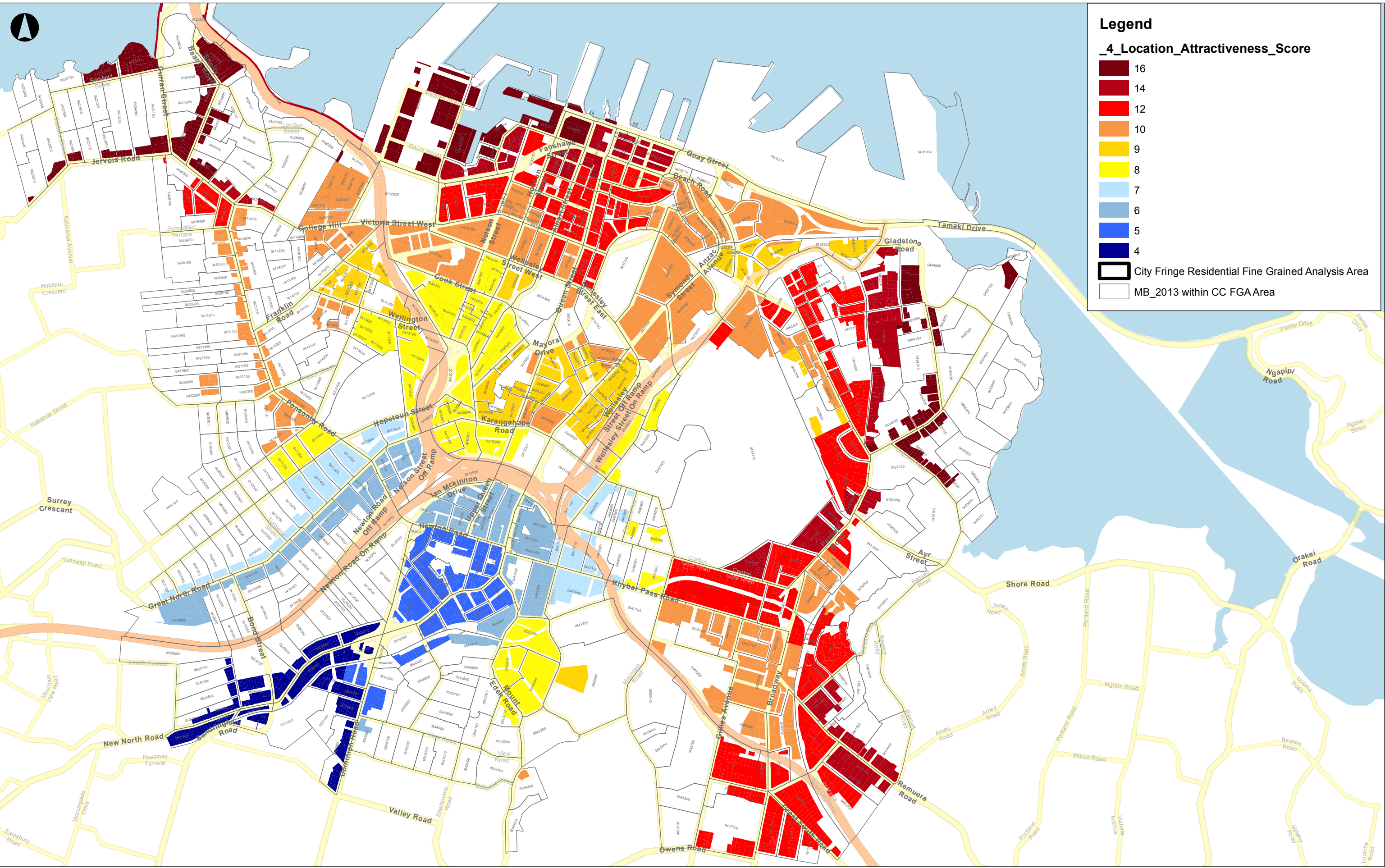
Parcel Improvement Value to Capital Value (\$IV/\$CV) score on valid zoned sites

RELATIVE IMPROVEMENTS

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Legend

_4_Location_Attractiveness_Score

- 16
- 14
- 12
- 10
- 9
- 8
- 7
- 6
- 5
- 4

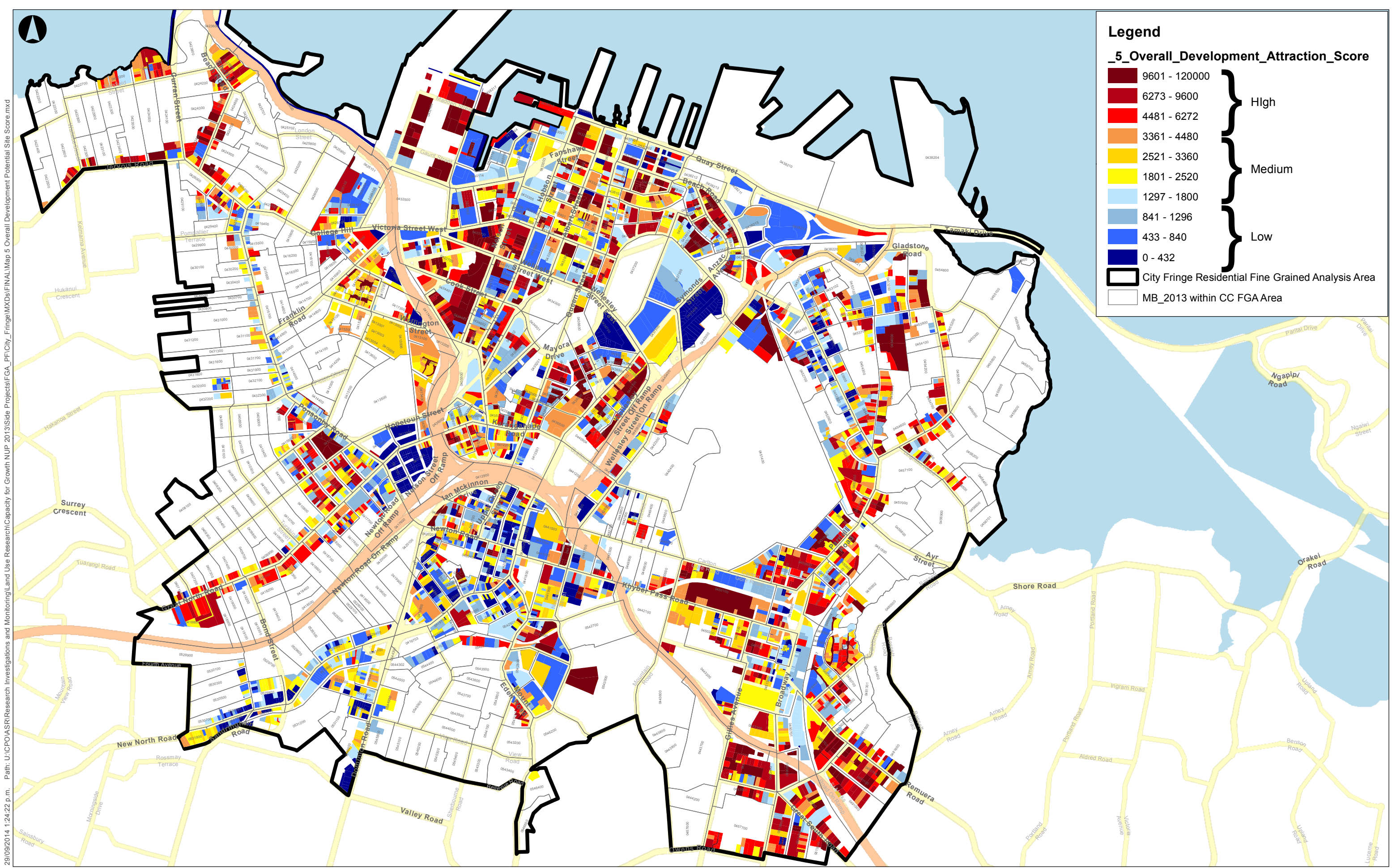
City Fringe Residential Fine Grained Analysis Area

MB_2013 within CC FGA Area

City & Fringe Residential FGA
4: Expected Sale Price Premium for Location
(Likely sales price differential for selling a similar product in a different location)

SALES PRICE PREMIUM

Map Produced by
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City & Fringe Residential FGA

5: Overall Site Development Attractiveness Score

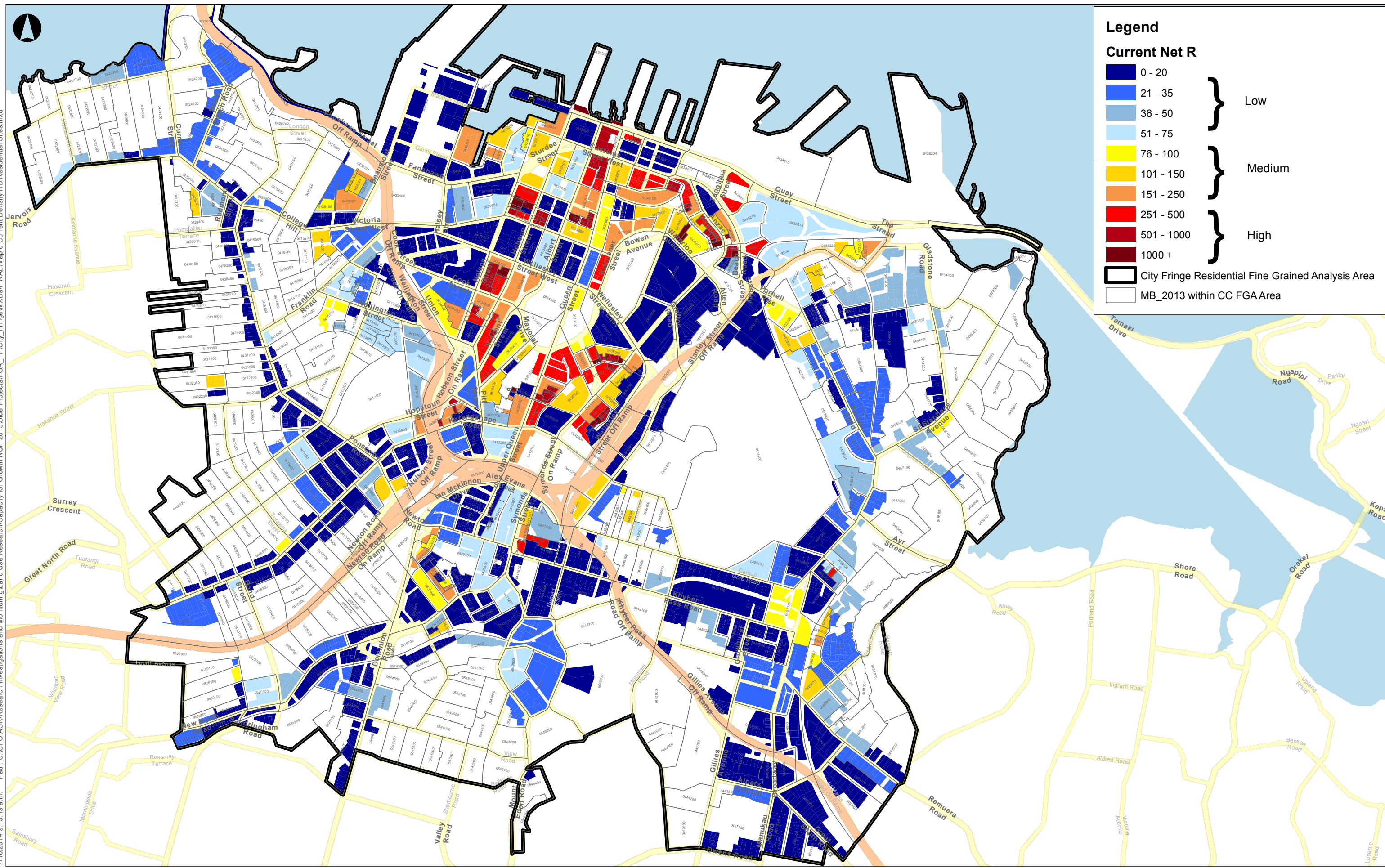
Site Score = (Zoning Permissiveness Score x CV/m² Score x IV:CV Score x Sales Price Premium Score)

DEVELOPMENT ATTRACTIVENESS

Map Produced by
 Land Use, Built Environment & Infrastructure Team
 Research, Investigations & Monitoring Unit
 Based on data & analysis provided by:



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City & Fringe Residential FGA
6: Current MB Average Net Density

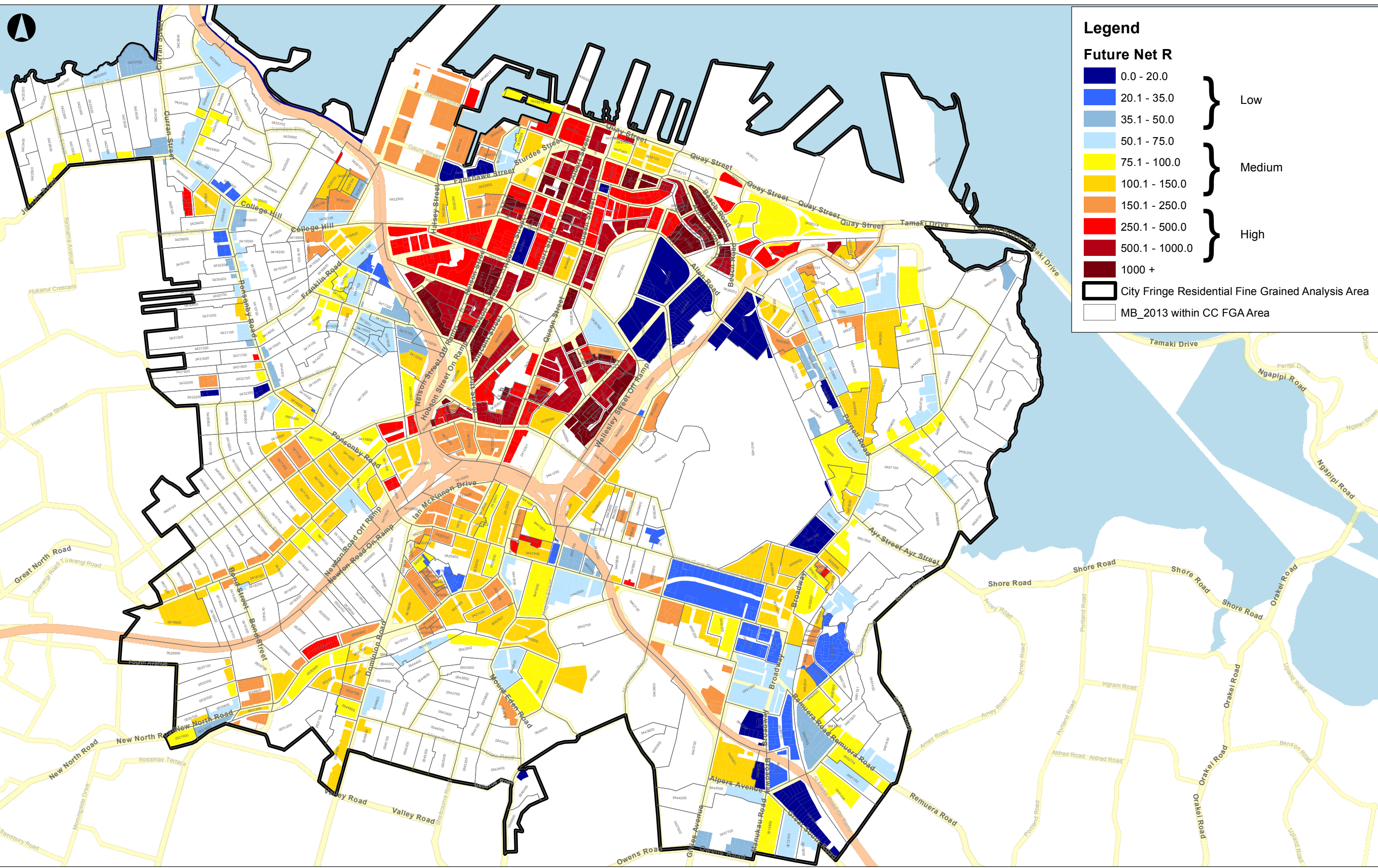
(Net R = The current number of dwellings per net ha (of parcels with zoning that allows Residential Intensification per 2013 MB))

CURRENT AVERAGE NET DENSITY

Map Produced by
 Land Use, Built Environment & Infrastructure Team
 Research, Investigations & Monitoring Unit
 Based on data & analysis provided by:



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Legend

Future Net R

0.0 - 20.0	} Low
20.1 - 35.0	
35.1 - 50.0	
50.1 - 75.0	} Medium
75.1 - 100.0	
100.1 - 150.0	
150.1 - 250.0	} High
250.1 - 500.0	
500.1 - 1000.0	
1000 +	

[Black Outline] City Fringe Residential Fine Grained Analysis Area
 [White Box] MB_2013 within CC FGA Area

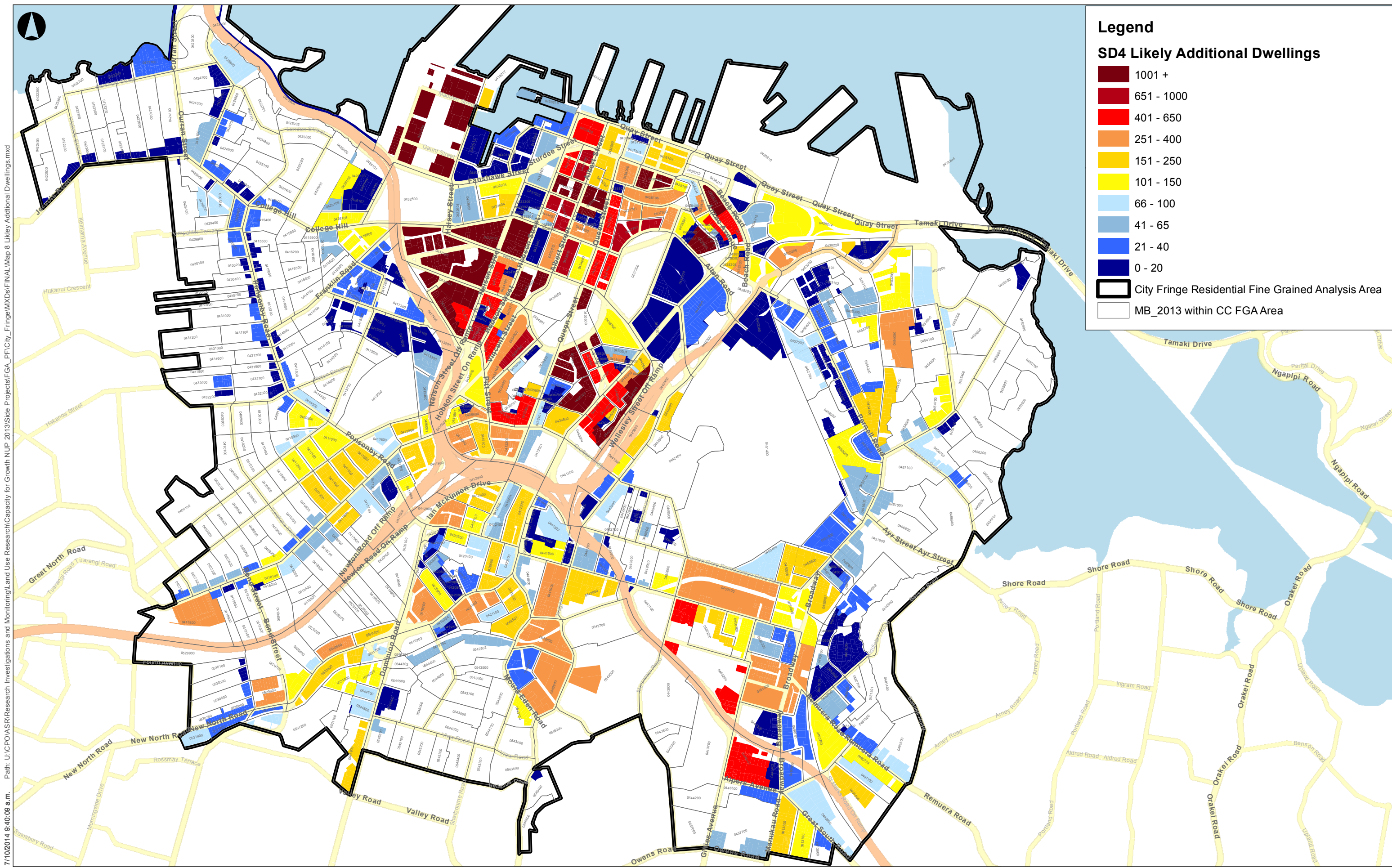
City & Fringe Residential FGA
7: Future MB Average Net Density

FUTURE AVERAGE NET DENSITY

(Future Net R = The total number of dwellings in the future per net ha (of parcels with zoning that allow residential intensification per 2013 MB))

Map Produced by
 Land Use, Built Environment & Infrastructure Team
 Research, Investigations & Monitoring Unit
 Based on data & analysis provided by:





Legend

SD4 Likely Additional Dwellings

- 1001 +
- 651 - 1000
- 401 - 650
- 251 - 400
- 151 - 250
- 101 - 150
- 66 - 100
- 41 - 65
- 21 - 40
- 0 - 20

City Fringe Residential Fine Grained Analysis Area

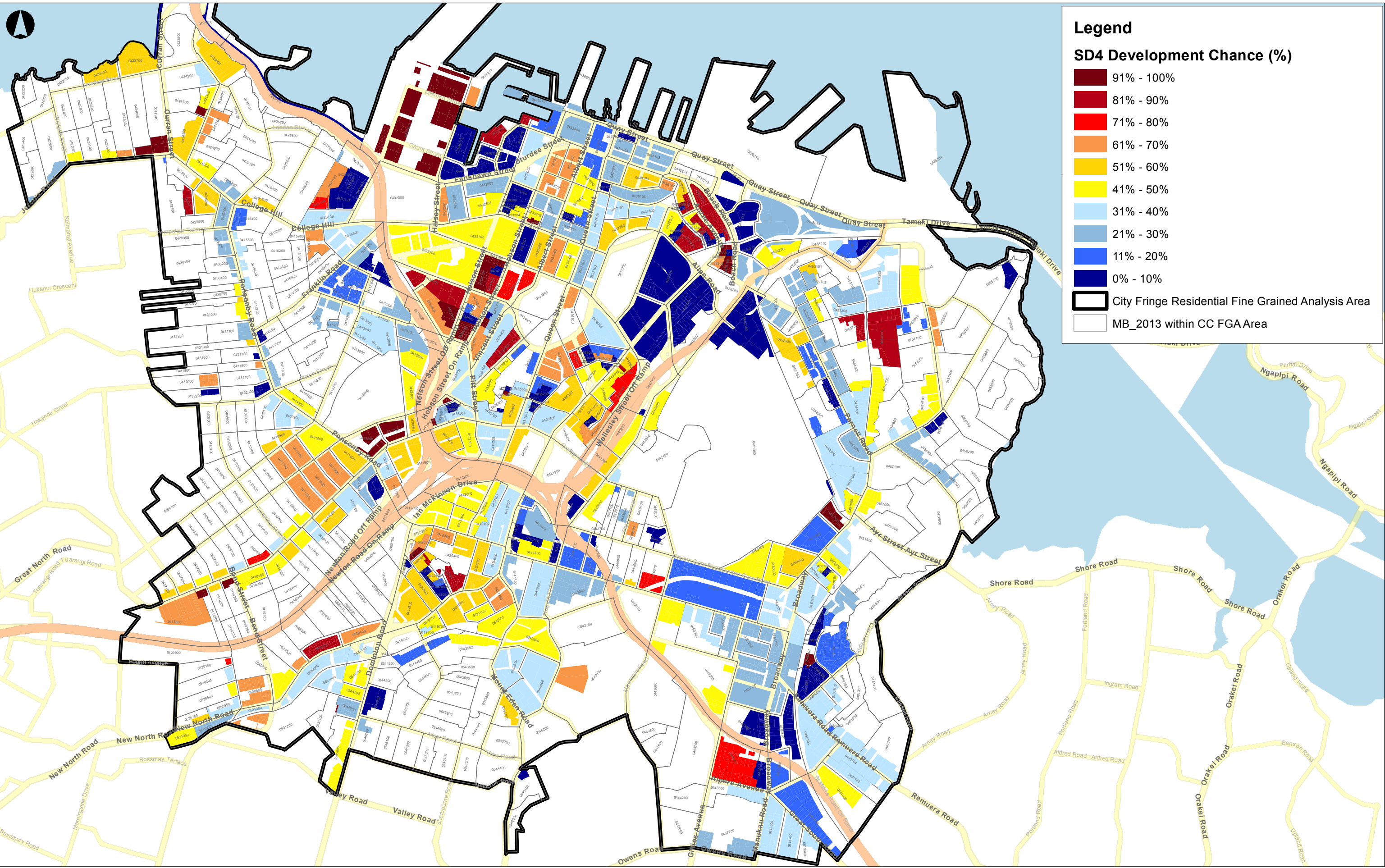
MB_2013 within CC FGA Area

User: baldern Date Saved: 7/10/2014 9:40:09 a.m. Path: U:\CPO\ASRI\Research Investigations and Monitoring\Land Use Research\Capeacity for Growth NUP 2013\Side Projects\FGA_PFI\City_Fringe\MXD\FINAL\Map 8 Likley Additional Dwellings.mxd

City & Fringe Residential FGA
8: Likely Additional Dwellings
(SD4 assessed net additional dwellings per 2013 MB)

LIKELY RESIDENTIAL INTENSIFICATION

User: balderk Date Saved: 7/10/2014 10:52:57 a.m. Path: U:\CPO\ASRI\Research Investigations and Monitoring\Land Use Research\Capacity for Growth NUP 2013\Side Projects\FGA_PFI\City_Fringe\WXDs\FINAL\Map 9_Development Chance.mxd



Legend

SD4 Development Chance (%)

- 91% - 100%
- 81% - 90%
- 71% - 80%
- 61% - 70%
- 51% - 60%
- 41% - 50%
- 31% - 40%
- 21% - 30%
- 11% - 20%
- 0% - 10%

City Fringe Residential Fine Grained Analysis Area

MB_2013 within CC FGA Area

City & Fringe Residential FGA

9: Development Chance

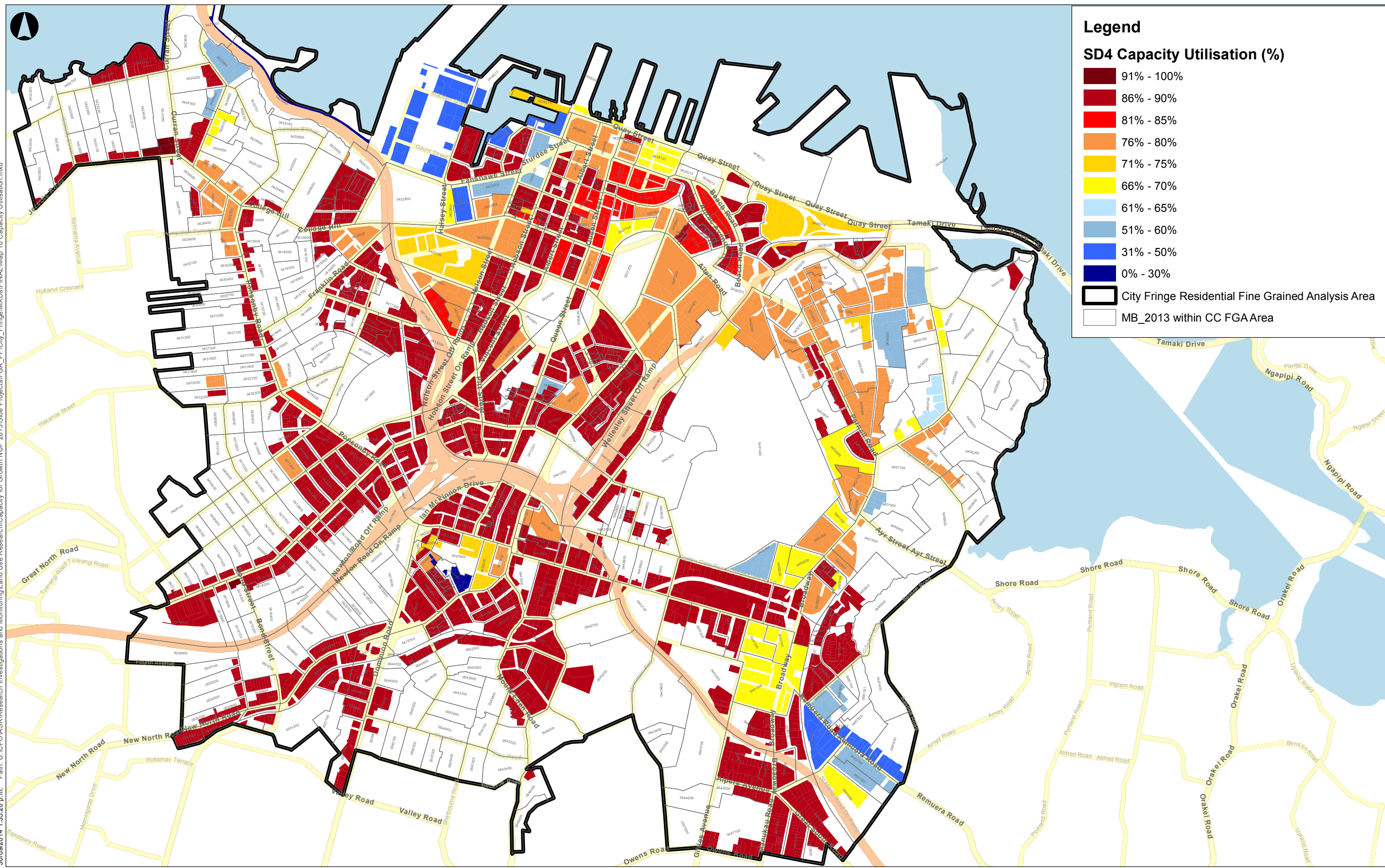
(What is the likelihood of sites being residentially intensified? (by % of opportunities within each MB))

DEVELOPMENT CHANCE (%)

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Legend

SD4 Capacity Utilisation (%)

- 91% - 100%
- 86% - 90%
- 81% - 85%
- 76% - 80%
- 71% - 75%
- 66% - 70%
- 61% - 65%
- 51% - 60%
- 31% - 50%
- 0% - 30%

City Fringe Residential Fine Grained Analysis Area

MB_2013 within CC FGA Area

City & Fringe Residential FGA

10: Capacity Utilisation

(When a site is developed, how many dwellings likely to be provided, relative to the maximum capacity? (by % of opportunities within each MB))

CAPACITY UTILISATION (%)

Map Produced by
Land Use, Built Environment & Infrastructure Team
Research, Investigations & Monitoring Unit
Based on data & analysis provided by:

