BEFORE THE AUCKLAND UNITARY PLAN INDEPENDENT HEARINGS PANEL

IN THE MATTER of the Resource Management Act 1991 and the Local Government (Auckland Transitional Provisions) Act 2010

AND

IN THE MATTER of Topic 013 – RPS Objectives and Policies – B2.1, B2.3 and B2.5

STATEMENT OF EVIDENCE OF PATRICK MARINUS FONTEIN

SUBMITTER 6282, ON TOPIC 013 URBAN GROWTH

1 DECEMBER 2014

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1.0 Executive Summary

1.1 SD4 has provided consultancy services for Auckland Council (AC) on the Auckland Plan during 2011 and for various parts of AC on property development growth and development capacity projections for the Auckland Unitary Plan during 2012 to 2014, all of which I have authored.

1.2 All the FGA Reports carried out by SD4 during 2011 to 2014 have been consistent in concluding that only 20-50% of technically capable residential intensification potential will actually be developed and that Council will need to upzone for 250-400% of the actual dwelling unit numbers desired.

1.3 In this statement of evidence I have summarized my work in development capacity analysis for AC and I have reviewed the "Capacity for Growth Study 2013" (CfGS13), released by AC in early June 2014, and Kyle Balderstone and Doug Fairgray's evidence, which primarily discusses the CfGS13 completed by AC for the Proposed Auckland Unitary Plan (PAUP).

1.4 Mr Balderstone's Statement of Evidence states that: *"The PAUP CfGS does not account for factors other than what the plan enables, including economic or market factors ('financial feasibility'), physical characteristics of the site other than those modelled ('physically possible'), or 'other factors' such as the current owners' intentions, community opposition or other random variables…. The CfGS13 is a starting point for further detailed analysis by others".*

1.5 The work that SD4 has undertaken for AC on a site by site fine grained development capacity analysis during the last 3 years, can be considered as the "work by others".

1.6 SD4 finds that the CfGS13 takes no account of property owners choosing not to develop their sites, or when they do under-utilising the site's development potential.

1.7 In SD4's view the CfGS13 grossly over-states the realistic development capacity by including a large number of sites which whilst they may sit on residentially zoned land, they have a very low chance of being re-developed to residential in the next 10-30 years. These sites include Kings School, St Kents Prep School, Parnell Cathedral and Grounds, Graeme Hart's house and land at 743 Riddell Rd, the

Transpower substation at 109 Golflands Dr Howick, covering 12.2 Hect, the Auckland Golf Club at Middlemore.

1.8 The CfGS13 assumes that sites with major slope, cliff-top, valley and flooding constraints are shown as able to be extensively redeveloped as if they were flat. This is unrealistic and can only be adjusted using a site specific fine grained analysis.

1.9 Mr Fairgray's Report is a desktop assessment, heavily reliant on the CfGS13 data, which has taken no account of a site by site fine grained analysis, the market's view of the upzoning location and what a real developer would actually face when considering developing a site. The capacity numbers provided by Mr Fairgray can not be relied upon.

1.10 SD4's Industrial Land FGA shows that currently there is only 311 hect of vacant ready to build on land, less than the 600 hectares estimated to be required, at any given point of time.

1.11 The Auckland Plan targeted 1,000ha of industrial land to be provided[1] in the Future Urban Zone (FUZ) between the current urbanised area and the Rural Urban Boundary (RUB). SD4 is aware of Structure Plans to provide more industrial land in Silverdale (140 hectares) and Drury South (360 hectares), which are required very quickly to move towards an equilibrium. A minimum of a further 250 hectares is required to achieve the 1,000 hectare target as stated in the Auckland Plan.

1.12 SD4 believes the PAUP has not up-zoned sufficiently in many residential market attractive areas of Auckland and is highly unlikely to achieve its 60-70% residential intensification target.

1.13 The PAUP will only allow 150,000 to 180,000 intensified residential development capacity, which is a shortfall of circa 100,000 to 130,000 dwellings of the target of 280,000 intensified dwellings, anticipated within the Auckland Plan.

[1] Auckland Plan, Section D: Development Strategy, Paragraph 127, Page 48.

2.0 Qualifications and Experience

2.1 My name is Patrick Marinus Fontein. I hold the position of Director of Studio D4 (SD4) and work as a property consultant for SD4.

2.2 I graduated from Auckland University with a BE(Civil) in 1987 and have a MBA majoring in Corporate Finance from the London Open Business School, 1992-1994.

2.3 I was the Founder and sole Director of the Kensington Group of companies in 1995 and between then until 2008 completed 20 commercial and multi-unit residential property development projects, ranging in size from $5-40M each, mainly in Greater Auckland.

2.4 Kensington's Harbourside Business Park was awarded NZ's top property development Award, the Rider Hunt Property Council Supreme Award in 2005.

2.5 I was the founding developer and master-planner of Kensington Park in Orewa, which in 2008 won 3 international property awards.

2.6 I was awarded a Fellowship from the NZ Property Institute in 2005 and in 2006 was awarded the NZ Property Institute "Industry Award" for leadership, innovation and excellence in the NZ property industry.

2.7 I served as Auckland President of the Property Council of New Zealand from 2002 to 2004.

2.8 I have served on Auckland City's (and now Auckland's) Urban Design Panel from 2004 to 2012.

2.9 I have been the Property Council of NZ's Urban Design Champion since 2005.

2.10 I served as the Inaugural Board Chairman of the NZ Green Building Council from 2006-2008.

2.11 I have been providing property consultancy for Studio D4 (SD4) since 2009, including property and urban design consultancy work for Auckland City Council in 2009 and 2010 and Auckland Council from 2011 though to 2014.

3.0 SD4 Background on Development Capacity Analysis.

3.1 SD4 has provided consultancy services for Auckland Council (AC) on the Auckland Plan during 2011 and for various parts of AC on property development growth and development capacity projections during 2012 to 2014, all of which I have authored.

3.2 After the Property Council of NZ (PCNZ), raised concerns on AC's methodology of calculating intensification capacity in early-mid 2011, AC commissioned SD4 to complete a "Total Auckland Development Potential" Report, which was published on 22nd December 2011.

3.3 The SD4 Report used a "Fine Grained Analysis" (FGA) on 14 of Auckland's 109 urban neighbourhoods. These 14 were an agreed cross-section of neighbourhoods that mirrored all of Auckland geographically, demographically and by housing type. The results of the 14 areas were then extrapolated to cover the 109 neighbourhoods that make up urban Auckland. This Report is attached as Appendix 2.

3.4 At AC's request, the SD4 Report was peer reviewed by Martin Udale of Essentia Consulting. Essentia found the SD4 FGA Report, its methodology, assumptions and conclusions robust. The SD4 Report was endorsed by PCNZ. On the basis of AC adopting the intensification actions recommended in the SD4 Report, PCNZ finally supported the AC in its intensification projections of 60:40, which was then adjusted by AC to 70:40.

3.5 The SD4 Reports have been in the public arena for nearly 3 years. The property industry feedback is that SD4's FGA process is robust and has been the most appropriate method of predicting future development capacity across Auckland for the next 10-30 years.

3.6 At PCNZ's request, SD4 reviewed AC's Capacity for Growth Study 2012 (CfGS12) The SD4 Report concluded that the likely accommodation for growth numbers in the "Results" section of the CfGS12 are likely to be over-stated by upto 400%. SD4's review of the CfGS12 is attached as Appendix 3.

3.7 SD4 has provided property consultancy assistance to AC and many of the Local Boards on development capacity analysis and the property implications of zoning rules. This has included seminars presenting on the property implications of the Auckland Plan, the Draft Unitary Plan, followed by the Proposed Auckland Unitary Plan (PAUP) to groups within AC, external companies and industry organisations.

3.8 SD4 has completed a recent FGA for AC on residential intensification opportunities within Auckland City and the City Fringe, dated 17th November 2014. This Report also provides an update on SD4's earlier FGA analysis of the wider Auckland area, taking account of the development markets response in the 14 months since the release of the PAUP. This Report is attached as Appendix 4.

3.9 SD4 has completed a recent FGA for AC on industrial vacant land, dated 20th November 2014. This Report is attached as Appendix 5.

3.10 SD4 completed a Report for MBIE titled: "Greenfield and Brownfield Housing Development Land: The Opportunities and Barriers to Unlocking its Potential", dated 16th August 2013.

3.11 I submitted for SD4 to the PAUP on the 28th February 2014, this submission is attached as Appendix 1.

3.11 This statement of evidence starts with an overview of SD4's FGA's carried out on behalf of AC.

3.12 This statement of evidence also considers the AC Capacity for Growth Study 2013 (CfGS13) Report and follows this up by reviewing the related Kyle Balderston and Doug Fairgray Statements of Evidence, before the Auckland Unitary Plan Independent Hearings Panel, in the Matter of Topic 013 RPS Urban Growth – B2.1, B2.3 and B2.5.

3.13 All of the above Reports can be viewed on Studio D4's website www.studiod4.co.nz

4.0 Overview of SD4's Fine Grained Analysis carried out in 2011 to 2014

4.1 All of the FGA Analysis start with AC's GIS data, from where it uses a series of property aspects to review development potential of each single property parcel in a neighbourhood. SD4's property assimilated mathematical formulae are then "re-run" through the AC GIS. SD4 then physically visited every neighbourhood reviewing the data and sense checking. This ensured schools, churches, retirement villages, infrastructure facilities and other residential zoned properties not likely to be re-developed were excluded from the analysis. Using a combination of the AC GIS, Google Maps, Google Streetview and Property Guru in 6 windows across 3 computer screens, SD4 then assessed the development potential of every property parcel, reported by meshblock, considering:

1. ***"the maximum number of extra dwellings able to be developed"*** in each meshblock.
2. This was then multiplied by a professional judgement on "***the likely capacity utilization***" of property owners who chose to redevelop (as a %).
3. This was then multiplied by "***the development chance"*** of properties within each meshblock over the next 30 years (again as a %).

4.2 The SD4 FGA methodology physically evaluates every property parcel and the Dec 2011 SD4 Report concluded by: ***"the above constraints mean only 20-50% of technically capable intensification potential will actually be developed, Council would therefore need to upzone for 250-400% of the actual dwelling unit numbers desired".***

4.3 FGA Reports carried out by SD4 during 2012 to 2014 have been consistent in concluding that only 20-50% of technically capable intensification potential will actually be developed and that Council will need to upzone for 250-400% of the actual dwelling unit numbers desired.

4.4 Considering SD4's background in assisting AC with Auckland's development potential, in this statement of evidence I will review the

- "Capacity for Growth Study 2013" (CfGS13), released by AC in early June 2014, as an update on my review of the CfGS12, and
- Kyle Balderstone and Doug Fairgray's evidence, which primarily discusses the CfGS13 completed by AC for the Proposed Auckland Unitary Plan (PAUP).

5.0 SD4 Review of Kyle Balderstone's Statement of Evidence.

5.1 Relative to capacity development analysis, SD4 are of the view that Mr Balderstone's statement of evidence can be summarized as *"the CfGS13 is the base theoretical data set of "potential growth", after which more analysis is required to see how much of the base theoretical data set is economically viable, the implications of site constraints etc".* The following are direct extracts from Mr Balderstone's evidence: (Mr Balderstone's comments in *italics*)

5.2 Cl 5.2

The study is not in and of itself a projection of growth, nor an estimate of the feasibility or likelihood of modelled development occurring; instead it provides a rich data source and basis for understanding at a fine grain the potential growth that has been enabled by the PAUP for incorporating into other work such as projections and development feasibility analyses….

5.3 Cl 5.5

As a 'plan-enabled development capacity' assessment, or a measurement of what is possible, the study does not account for factors other than what the plan enables, including economic or market factors ('financial feasibility'), physical characteristics of the site other than those modelled ('physically possible'), or 'other factors' such as the current owners' intentions, community opposition or other random variables.

5.4 Cl 8.3

All assessments are undertaken assuming an effectively flat plane, against the cadastral pattern input, and the zoning pattern developed. Unless specified in the individual assessment methodology, no allowance has been made for consideration of the many and various physical constraints, overlays or other plan criteria that may apply to a particular site or development ….

5.5 Cl 8.25

While in some cases capacity may not be realisable, this is potentially offset by the conservatism and strictness by which the rules modelled are applied, and that many developments can and do occur via resource consent. – on balance I consider the results, particularly where aggregated, and where known issues are

taken into account to provide an accurate view of the capacity enabled by the plan, particularly for the consideration of high level policy.

5.6 Cl 11.1

The PAUP CfGS provides a highly detailed data set that is suitable for both regional assessment of plan enabled capacity, and as a starting point for further detailed analysis.

5.7 Cl 11.4

…The modelling is also relatively conservative, and while not every plan enabled development opportunity is likely to be realised, these totals are considerably higher than the 100,000 dwelling target of the first 10 years of the Auckland Plan Development Strategy, which more or less coincides with the lifetime of the PAUP.

5.8 One can clearly see from all of the above comments that the AC CfGS13 is a **theoretical** base data set, after which more development feasibility and site by site fine grained analysis is required.

5.9 SD4 also agrees that the theoretical model is conservative. The CfGS13 numbers are rounded down and do not include the opportunity of site amalgamation. SD4 are of the view that the 417,043 theoretical "Capacity with Redevelopment" maybe a little higher, probably in excess of 500,000 theoretical capacity.

5.10 SD4's only disagreement with Mr Balderstone's comments above, is the 2nd sentence on 8.25. SD4's very detailed analysis clearly shows that the conservatism of the CfGS13 is **not** balanced to provide the realistic development capacity.

5.11 D4 and PCNZ's view has always been that the PAUP should enable sufficient economically viable development capacity for the 30 years of the Auckland Plan. SD4 has frequently stated that if there is not sufficient land upzoned in the initial stages, then many underutilized development sites will be developed with insufficient capacity to meet the overall Auckland Plan targets of 240-280,000 dwellings.

5.12 The last point of Mr Balderstone's evidence (11.4), is pretty much accepting that the PAUP does not allow for 280,000 intensified dwellings, but it is in excess of 100,000!

6.0 SD4 Review of AC's "Capacity for Growth Study 2013".

6.1 The CfGS13 is a major piece of work by AC's Research, Investigations and Monitoring Unit (RIMU), and follows up on the earlier work by RIMU, which resulted in the CfGS12 released in April 2013. The Methodology and Assumptions, incl Appendices cover some 114 pages. Most of the methodology, assumptions and background analysis is sound, especially the depth and comprehensive nature of including all the various structure plan assumptions and growth projections.

6.2 The CfGS13 Report can be found on the Web at: http://www.aucklandcouncil.govt.nz/EN/planspoliciesprojects/reports/technicalpublications/Pages/capacityforgrowthstudy.aspx

6.3 The Report has a very odd contradiction between the Disclaimer on the very first page, and then follow on pages: The Disclaimer on the very first page (i) of the Methodology and Assumptions states: ***"The study is a measure of current plan enabled capacity and is not a prediction of future growth".***

6.4 However from there on, the CfGS13 purports to highlight growth capacity, eg the very first paragraph of the Introduction, page 3, ***"The Capacity for Growth Study assesses the ability of residential and business land within Auckland to accommodate growth".***

6.5 So the Disclaimer states it is not a predictor of growth, yet the entire CfGS13 from there on purports to assess the ability of residential and business land within Auckland to accommodate growth.

7.0 How well does the CfGS13 Assess Auckland's Growth Capacity?

7.1 Table 2 on page 14 of the CfGS13, states that the "Residential redevelopment" numbers are based on ***"sites being redeveloped to yield the maximum number of dwellings permitted"***.

7.2 Considering the maximum number of dwellings able to be developed on a site is a good start, however there will be a number of property owners who don't want to

redevelop their property, or others that when they do, not build the 8 terrace houses permitted by the District Plan, instead only building 3 better quality town houses. Where does the CfGS13 take account of this? Answer:

the CfGS13 takes no account of property owners choosing not to develop their sites, or when they do under-utilising the site's development potential!!

7.3 Below we will review the CfGS13 assessments of individual specific land parcels and consider whether they accurately reflect residential re-development sites available to residential developers operating in the Auckland region.

8.0 SD4 Review of the CfGS13 Residential Vacant or Vacant Potential Sites

8.1 As part of the 258,487 infill capacity, or 417,043 redevelopment capacity, where will all of these redevelopment properties be located? The following are some of the key findings of SD4's review of the CfGS13 Maps:

8.2 In SD4's view the CfGS13 grossly over-states the realistic development capacity by including a large number of sites which whilst they may sit on residentially zoned land, they have a very low chance of being re-developed to residential in the next 10-30 years.

As examples, all of the sites below are considered "Residential Vacant" and "Residential Vacant Potential & Infill" development sites within the CfGS13:

8.3 A number Private Schools, e.g.

- Kings Prep School on Remuera Rd
- St Kents Prep School on Shore Rd
- The St John's College playing fields on St Johns Rd
- The School of Philosophy at 268 West Tamaki Rd

8.4 Many retirement villages, rest homes and private hospitals, e.g.

- The Mary MacKillop Centre (Rest Home) at 56 Selwyn Ave, Mission Bay
- Little Sisters of the Poor Rest Home, St Mary's Bay
- Mercy Hospice in College Rd, St Mary's Bay
- Ryman's Tropicana in Lynfield

- McAlister Pl, Hillsborough

8.5 Many Churches, e.g.

- Parnell Cathedral and grounds
- The Jehovahs Witness Church and its large grounds in Mahia Rd, Manurewa
- The large Church of Jesus Christ Latter Day Saints, Redoubt Rd, Manukau
- The Samoa Church and School in Wyllie Rd, Papatoetoe

8.6 Large homes on large sections, e.g.

- Graeme Hart's house and land at 743 Riddell Rd, covering 2.0058 Hect.
- 139 Arney Rd, large house on 1.258 Hect, had major recent upgrade
- The Fletcher Estate at 79 Penrose Rd

8.7 Key Infrastructure facilities, e.g.

- The Transpower substation at 109 Golflands Dr, Howick, covering 12.2 Hect
- The Mangere Cemetery and Crematorium, on Kirkbride Rd, Mangere

8.8 Marae and their grounds, e.g.

- Nga Whare Waatea, in Calthorpe Close, Mangere

8.9 Most of the urban golf courses, e.g.

- The Auckland Golf Club in Middlemore
- The Grange Golf Course in Otahuhu
- Titirangi Golf Club
- Pakuranga Golf Course
- The Wattle Downs Golf Club

8.10 As confirmed in Mr Balderstone's evidence in Cl 5.4 above (his Cl 8.3) The CfGS13 takes no account of topography and difficult, sloping sites, and thus there are numerous sites in steep valleys, that often have streams at their bases, with all of these large inaccessible sites shown as "potentially vacant".

8.11 SD4 has closely reviewed all of the Maps provided as part of the CfGS13. Some of the Maps provide numerous sites with "pink" colouring, denoting "potentially vacant" sites. SD4 has in detail reviewed the locations which have large pink areas shown, to in detail review their realistic development potential, i.e. whether a substantial quantity of houses could be provided on these sites.

8.12 Many of the sites with swathes of pink are large narrow sloping sites, often with a large house at or near the top of the site, followed by 2-3,000m2 of inaccessible land that contours steeply below the house.

8.13 The following are examples of these large inaccessible sites that are all shown as "potentially vacant":

- Many sections in Verbena Rd, Birkdale
- The steep cliff top sites in Island Bay Rd, Birkdale
- All the large sites down the sloping driveways of Portland Rd and Victoria St, Remuera, which lead to a steep valley.
- Large sections between 320 – 340 Kohimarama Rd
- Numerous large houses on cliff top sections on Riddell Rd, Glendowie
- Cape Horn Rd, Hillsborough

8.14 SD4 then closely reviewed the CfGS13 methodology, which then assumed that all of these sites showing as having development potential, would be developed 100% to their maximum potential.

8.15 Some of the sites above may be re-developed within a 30 year time frame, but SD4 are of the view that it is very aggressive to include the above sites in residential capacity analysis numbers, without taking any account of these sites realistic development chances.

9.0 SD4 Review of Doug Fairgray's Statement of Evidence

9.1 SD4 is supportive of much of Mr Fairgray's initial statements in Section 4, especially his thoughts on the benefits and costs of compact urban form v greenfield development.

9.2 SD4 have varying views on Mr Fairgray's assessment of the future development capacity numbers, as, in Section "*5 B2.3: Capacity for Housing*", he is primarily relying on the Capacity numbers provided within the CfGS13, which as clearly stated above are only a "theoretical assessment", and contain many sites which have a very low chance of being developed.

9.3 Mr Fairgray's assessment is a "desktop review" that takes no account of the economic and financial feasibility implications and locational nuances that are paramount for any developer who is considering undertaking a property development.

9.4 Mr Fairgray's assessments rely heavily on the CfGS13 data. There is no "sense checking" of the provided data. There are no fine grained assessments of "development chance" or "capacity utilisation" for an owner when undertaking development.

9.5 Whilst Mr Fairgray's assessments rely heavily on the CfGS13 data and Mr Balderstone's statement of evidence, Mr Fairgray takes no account of the numerous cautions or caveats within Mr Balderstone's statement, of the CfGS13.

9.6 Mr Fairgray makes no refererence to the large number of sites that are unlikely to be developed (as highlighted in my sections 8.3 to 8.9 above), that the CfGS13 will require more detailed financial feasibility analysis to be carried out (Mr Balderstone's Cl 5.5 and 11.1) and that the CfGS13 considers all sites on a flat plane (as Mr Balderstone describes in his Cl 8.3) and the effect that this would have on the CfGS13 numbers (as I have detailed with examples in my Cl 8.10 to 8.13 above).

9.7 Mr Fairgray takes no consideration of the development market's ability to economically undertake development in one neighbourhood relative to others. Mr Fairgray makes no assessment on where AC have upzoned it's residential capacity, and whether it is market feasible to develop in these locations. e.g. whether upzoning for 10,000 apartments in Papakura will drive the same development chance and thus yield, over a 10-30 year period, as upzoning for 10,000 apartments in Parnell.

9.8 Mr Fairgray's assessments primarily consider whether there is sufficient theoretical capacity available in any of the given property categories. Mr Fairgray then considers if there is sufficient buffer within the theoretical capacity over the various time periods of the PAUP, not whether the property owner or developer is likely to develop any given land parcel, in any given locale.

9.9 Mr Fairgray's statements in his Cl 7.4 and 7.5 hugely discredit much of the work that he has carried out. Cl 7.5 clearly shows that he is heavily reliant on the results provided by the CfGS13 data. SD4 has provided extremely detailed fine grained residential capacity analysis for Auckland Council and it's RIMU team for the last 3 years, and yet Mr Fairgray is totally unaware of this work. These Reports can all be seen on SD4's website, www.studiod4.co.nz. SD4's work for the last 3 years has been on a site by site fine grained analysis basis, which is exactly what Mr Fairgray has sought, but not considered in any of his assessments.

9.10 Mr Fairgray's Cl 7.15 is at the core of what SD4 and PCNZ, and we believe the community have always considered the Auckland Plan would enable: 280,000 economically achievable intensification dwellings within the 30 year period. Our (and we believe the property industry's) interpretation of the Auckland Plan is that the Unitary Plan would provide certainty where development will occur over the next 30 years[2] with bold multi sector action. Considering the supposed certainty for the property industry and the community about where development would occur for the next 30 years, at no time was a shorter timeframe considered (ie 2026 as now postulated in Mr Fairgray's Cl 7.6), i.e. a 2 stage up-zoning.

9.11 SD4 is strongly supportive of the MfE statement that Mr Fairgray refers to in Cl 7.17, namely that:

> *"the MfE preference for this long term position is the risk that if land is under-zoned in 2014 – that is, at a development capacity which is less than what the market will be seeking in 2040 – then any development on that land in the interim will preclude its future potential to be up-zoned".*

9.12 If a 2 stage upzoning was now to be a key part of the PAUP, I don't believe this has been sufficiently communicated to the property development industry, but more importantly the community. To achieve the 60-70% intensification target for the next 30 years, our detailed development capacity analysis confirms that a further substantial up-zoning will be required. If this upzoning is to be at some later stage (i.e. 2020-2026 rather than by 2016), I don't believe this has been communicated to the wider community and major infrastructure providers.

9.13 In conclusion, Mr Fairgray's Report is a desktop assessment, heavily reliant on the

[2] Auckland Plan, Chapter 11: Auckland's Housing, Paragraph 610, Page 270.

CfGS13 data, which has taken no account of a site by site fine grained analysis, the market's view of the upzoning location and what a real developer would actually face when considering developing a site. The capacity numbers provided by Mr Fairgray can not be relied upon.

10.0 SD4 Review of the CfGS13 Numbers

10.1 Mr Balderstone's Statement of Evidence, as reviewed in section 4 above, clearly states that the CfGS13 considers theoretical capacity, and anticipates further work by others.

10.2 The work that SD4 has undertaken for AC on site by site fine grained development capacity analysis during the last 3 years, can be considered as the "work by others".

10.3 SD4 agrees that the theoretical CfGS13 model is conservative. The CfGS13 numbers are rounded down and do not include the opportunity of site amalgamation, which we agree with Mr Fairgray will add capacity. SD4 are of the considered view that the CfGS13 417,043 theoretical Capacity with Redevelopment maybe a little higher, probably in excess of 500,000 theoretical capacity.

10.4 Having carried out detailed site by site fine grained analysis for Auckland Council during the last 3 years, SD4 consider the realistically feasible capacity to be approx 30% of the theoretical capacity.

10.5 With a theoretical capacity of 500,000 dwellings, and at 30% realistically feasible, the PAUP will provide a maximum of approx 150,000 intensified dwellings. This is substantially short of the 280,000 target set by the Auckland Plan.

10.6 For the recently completed City and City Fringe FGA, SD4 purposely took a very aggressive development chance and capacity utilization perspective. This is due to the insufficient development opportunity that the PAUP provides away from the City and Fringe, most developers will likely take a "line of least resistance" and aggressively pursue the opportunities that the City and Fringe provide. SD4 has thus taken a very aggressive view on the development chance and capacity utilisation in the City and Fringe to a factor over 50% and a total of circa 35% for

Greater Auckland. By taking this very aggressive City and Fringe approach, the development capacity shortfall is still in excess of 100,000 dwellings.

11.0 Overview of SD4's Auckland Industrial Vacant Land FGA

11.1 SD4 has worked alongside AC's RIMU to carry out this FGA analysis during September – November 2014. This FGA 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 it's current use, ownership, improvements and land value, and likely future development prospects and thus quantified the likely availability for development of industrial land that presently exists within Auckland.

11.2 Property Council research has stated that the Auckland wide absorption of greenfield industrial land is circa 40-60 Hectares per annum. This same research states that there is a requirement for at least 10-20 years of zoned, serviced and ready and available industrial land, to allow for an efficient functioning industrial land market. There is therefore a requirement for a supply of at least 600 hectares of zoned, serviced and readily available industrial land to be available at any one time in order to meet this criteria.

11.3 This Industrial Land FGA shows that currently there is only 311 hect of vacant ready to build on land, less than the 600 hectares estimated to be required, at any given point of time.

11.4 The Auckland Plan targeted 1,000ha of industrial land to be provided[3] in the Future Urban Zone (FUZ) between the current urbanised area and the Rural Urban Boundary (RUB). The new Proposed Auckland Unitary Plan (PAUP) does provide a further approx 250 hect of recently zoned industrial land, but most of this is either in Waiuku or the outer West. The PAUP has not yet provided any new industrial land in the market demanded North or South.

11.5 SD4 is aware of Structure Plans to provide more industrial land in Silverdale (140 hectares) and Drury South (360 hectares), which are required very quickly to move

[3] Auckland Plan, Section D: Development Strategy, Paragraph 127, Page 48.

towards an equilibrium. A minimum of a further 250 hectares is required to achieve the 1,000 hectare target as stated in the Auckland Plan.

12.0 Conclusions of this Statements of Evidence.

12.1 AC's CfGS13 Report is a theoretical computer driven exercise, which accepts that further practical reality / sense checking "out in the field" will be required. i.e. a check on: "Does this make sense"?

12.2 AC's CfGS13 Reporting has counted many private schools, churches, retirement facilities, etc.

12.3 The CfGS13 assumes that sites with major slope, cliff-top, valley and flooding constraints are shown as able to be extensively redeveloped as if they were flat.

12.4 All sites that are "under-developed" (incl the schools, churches mentioned above) are assumed by the CfGS13 analysis to be redeveloped to 100% of their maximum potential.

12.5 Much of the CfGS13 Methodology and Background structuring is sound, it is the sense checking of excluding schools, churches etc and assessing the likely capacity utilization and development chance, that has yet to be completed.

12.6 By excluding schools, churches, and retirement facilities from the analysis, and multiplying maximum development capacity, by capacity utilization and development chance, will result in a reduction of actual total intensification dwellings by approx. **250-400%** from the CfGS13 Report Numbers.

12.7 Mr Balderstone's statement of evidence clearly shows that the CfGS13 is a *'plan-enabled development capacity' assessment, or a measurement of what is possible, the study does not account for factors other than what the plan enables, including economic or market factors ('financial feasibility'), physical characteristics of the site other than those modelled ('physically possible'), or 'other factors' such as the current owners' intentions, community opposition or other random variables.*

12.8 Mr Fairgray's Statement of Evidence is a desktop assessment, heavily reliant on the CfGS13 data, which has taken no account of a site by site fine grained analysis, the market's view of the upzoning location and what a real developer would actually face when considering developing a site. The capacity numbers provided by Mr Fairgray can not be relied upon.

12.9 SD4 believes the PAUP has not up-zoned sufficiently in many market attractive areas of Auckland and is highly unlikely to achieve its 60-70% intensification target.

12.10 The PAUP will only allow 150,000 to 180,000 intensified residential development capacity, which is a shortfall of circa 100,000 to 130,000 dwellings of the target of 280,000 intensified dwellings, anticipated within the Auckland Plan.

13.0 How Could the 60-70% Intensification Targets Realistically be met?

13.1 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:

13.2 Tidy-up Errors / Omissions in Unitary Plan

13.2.1 With a fine tooth-comb, look for all areas of missed opportunity, have a mind-set of looking for intensification opportunity

13.2.2 Properly classify Heritage buildings; Allow re-development if not proper Heritage

13.3 Up-Zone Auckland's City Fringe further.

13.3.1 Especially the areas around the new City Rail Loop Stations

13.3.2 Review all areas within 3-5km of CBD, turn to Mixed Use, greater height

13.4 Increase Heights in Centres.

13.4.1 Why stop Metro at 18 levels? Why not allow 30 levels as Takapuna did?

13.4.2 Review town centre development economics: Increase height to 8-12 levels.

13.4.3 Look for Ridge line development opportunities: (Remuera Rd already has 15 levels).

13.5 Land near Transport Nodes or Corridors intensified much more.

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

13.6 High visual amenity land changed from Single House to Med Density

13.6.1 Change zoning of high amenity single house zoned sites, close to transport.

13.6.2 Intensification with strong urban design will raise land values for incumbents

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

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

Appendix 1 Patrick Fontein Submission to the PAUP, 28th February 2014

Making Auckland the most Liveable City,

through high quality urban intensification

Submission to Auckland Council on the Auckland Unitary Plan Document

By Patrick Fontein, 28th February 2014

Background and Introduction

Some background on myself will be relevant for readers of this report:

- I graduated from Auckland University with a BE(Civil) in 1987 and have a MBA majoring in Corporate Finance from the London Open Business School, 1992-1994.
- I was the Founder and sole Director of the Kensington Group of companies in 1995 and between then until 2008 completed 20 commercial and multi-unit residential development projects, ranging in size from $5-40M each, mainly in Greater Auckland.
- Kensington's Harbourside Business Park was awarded NZ's top property development Award, the Rider Hunt Property Council Supreme Award in 2005.
- I was the founding developer and master-planner of Kensington Park in Orewa, which in 2008 won 3 international property awards.
- I was awarded a Fellowship from the NZ Property Institute in 2005 and in 2006 was awarded the NZ Property Institute "Industry Award" for leadership, innovation and excellence in the NZ property industry.
- I served as Auckland President of the Property Council of New Zealand from 2002 to 2004.
- I have served on Auckland City's (and now Auckland's) Urban Design Panel from 2004 to 2012.
- I have been the Property Council of NZ's Urban Design Champion since 2005.
- I served as the Inaugural Board Chairman of the NZ Green Building Council from 2006-2008.
- I have been providing property consultancy for Studio D4 since 2009, including property and urban design consultancy work for Auckland City Council and Auckland Council.
- I have, through SD4, 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 be accomodated?
- I have, through SD4, provided substantial property consultancy assistance to 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 this Sept '13 Unitary Plan was notified.
- I have, through SD4, 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*"
- 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.

I provided a very detailed submission in May 2011 to the Auckland Unleashed document. This submission has been considered by Auckland Council and used in parts of its response within the Auckland Plan. More particularly my earlier submission has been considered extensively in the background technical papers by Auckland Council, including "Towards a Preferred Urban Form".

I then provided a submission to the Auckland Plan on the 31st October 2011.

In December 2011, SD4 in conjuction 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):

- The Auckland Plan is unworkable in its present form
- Intensification to the target levels will not be achieved without significant amendments to the Plan
- Major rezoning and widespread intensification is required.
- Even with amendments, enormous political and community issues will almost certainly prohibit intensification to Council's desired targets

SD4 made 10 major recommendations to Auckland Council in December 2011, to achieve its intensification targets:

1. All residential intensification should be urban design led

2. Council needs to overhaul the planning approval process

3. Continue the town centre intensification approach

4. Major up-zoning within 400-800 metres of town centres

5. Major up-zoning to allow further quality intensification within neighbourhoods

6. Intensification zoning needs to be bold

7. Political resilience and backbone to support quality intensification, especially when facing substantial NIMBY resistance (or NIMEY)

8. A major public relations campaign to show the benefits of good quality intensification to the wider community

9. Auckland will need further Greenfield land, outside the MUL: the main emphasis should be on high quality, well designed development.

10. 75:25 not feasible: move to 60:40 or 70:40; ie 240-280,000 intensified

As of February 2014, SD4 is of the view that the upzoning has been nowhere near bold enough, the politicians have not shown much political resilience (especially in an Election Year!) and thus the intensification targets of the Unitary Plan will be impossible to achieve.

The main assumption of the Auckland Plan and the Unitary Plan is accomodating a further 400,000 households. So if we accept this 400,000 assumption, if the extra dwellings can not be incorporated through intensification (or in general terms brownfield), then any shortfall of the 400,000 will have to be accomodated in greenfield. So why is there now such a shortfall?

SD4 has consistenly stated that Auckland Council does not sufficiently understand the property fundamentals that apply to intensification development.

So in summary form what does SD4 believe are the property fundamentals that apply to intensification development, and why has there been such a mis-match in Council's dwelling capacity numbers and SD4's:

Factors influencing the re-development likelihood of a site:

1. Improvement value v. Capital value is the biggest factor, maths =(1 –IV/CV)
2. Parcel size is important: the bigger the site area, the easier to develop to scale
3. The number of existing dwellings or units on a site is also important
4. The increase of value when re-developed, relative to the current improvements

If a site is to be re-developed:

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 within each meshblock over the next 30 years

The above constraints mean only 20-50% of technically capable intensification potential will actually be developed, Council would theoretically need to up-zone for 250-300% of the actual dwelling unit numbers desired.

Unfortunately Council uses **theoretical dwelling capacity numbers** and takes no or minimal account of development market reality, and often does not up-zone enough.

So in my professional view, how does the Auckland Unitary Plan, released on the 30th September 2013, address the 60-70% intensification target? Any intensification shortfall will have to be addressed by greenfield provision.

A considered view of the Unitary Plan's ability to deliver it's intensification targets.

The December 2011 Auckland Plan, had a series of supporting appendices and reports (which SD4 assisted in creating), and the intended make-up of the 400,000 future residences was as the first column in the Chart below.

Through SD4's 3-4 year involvement in capacity analysis with Auckland Council, when the draft Unitary Plan and it's draft Planning Maps was released in March 2013, SD4's detailed calculations provided the March 2013 numbers, as the 2nd column in the Chart below.

SD4 has carried out a series of detailed analysis on the development capacity of the released Sept 2013 Auckland Unitary Plan, and in our professional capacity have provided the figures as the 3rd Column of the Chart below.

	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	

The wider property industry has had throughout 2012 and 2013 to review SD4's capacity analysis reports, and these Reports have been peer reviewed in an official capacity by other property professionals, on behalf of PCNZ.

In summary the property industry has found SD4's analysis to be robust, and by late 2013, Council's own RIMU team and Council senior staff have publically accepted the details in the above Chart.

So the property industry (as represented by PCNZ) and Council's own staff agree the intensification targets of the Unitary Plan can not be achieved.

So why do we believe that the Auckland Unitary Plan is now so far short of it's 60-70% intensification targets, ie why are we now 130,000 intensification dwellings short?

Why is the Unitary Plan's so far short of it's intensification targets.

I will outline my thoughts below in summary form:

1. City Centre-City Fringe: AP 43,000, SD4 Sept 2013 35,000 = -8,000

- *Very ambitious early target, not sufficient up-zoning in city fringe*

2. Metropolitan Centres: AP 48,000, SD4 Sept 2013 20,000 = -28,000

- *Ambituous No. Many Metro planning height reduced, down to 18 storey*
- *June-Sept; many Metro Centres height and dev potential reduced further*

3. Town and Local Centres: AP 95,000, SD4 Sept 2013 25,000 = -70,000

- *Fundamemental lack of Council development economics understanding*
- *Areas of up-zoning all in the wrong areas, where apartments not viable*
- *Height required in market attractive areas; minimal provided, then cut*

4. THAB/Attached Housing: AP 63,000, SD4 Sept 2013 55,000 = -8,000

- *Will be a major area of intensification, substantial change anticipated*
- *Mar '13 UP missed lot of opportunities, Sept '13 changes reduced further*

5. Suburban Infill: AP 19,000, SD4 Sept 2013 15,000 = -4,000

- *Mixed Housing zone promised substantial low rise terrace opportunities*
- *Density restrictions in MH suburban will have huge impact on numbers and restrict opportunities for developers to provide affordable housing*

So if the Auckland Plan was to attempt to achieve a greater level of intensification, what would SD4 advocate should happen:

The basis of these comments are how (in our professional opinion) could Auckland become the most Liveable and attractive City in the World through high quality urban intensification? SD4's work takes a strong property market perspective to intensification, carefully considers where occupier and purchaser demand for property is likely to come from, and combines this to provide town centres and neighbourhoods that I believe would be enhanced by high quality urban intensification. The focus is on providing intensification opportunities that are economically viable. The main Council intervention required is a suitable planning and regulatory system, not lots of cash!

How to achieve a far greater level of high quality intensification within Auckland.

1. **Tidy-up Errors / Omissions in Unitary Plan *(Minor issue for 2013-2016)***

    - *With a fine tooth-comb, Council Planners 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.**

    - *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: (Rem 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 sites, close to transport.*
- *Intensification with strong urban design will raise land values for incumbants*

Intensification of a further 200-300,000 extra residences within the current MUL within the next 30-50 years is possible, **but this requires far greater intensification upzoning**. Without the political resilience to upzone substantially; the sought after intensification will I believe fall substantially short. Any shortfall in intensification / brownfield will have to come from Greenfield.

Auckland Council has all of the SD4 reports provided for Auckland Council and the MBIE Report. We are happy to provide further copies of these Reports, although as part of this Submission (especially with the 5MB size limit), will restrain from attaching these at this time.

I am happy to assist Auckland Council further in whatever manner to provide further detail and analysis to support the above recommendations, especially in providing further detail on how greater high quality urban intensification could be achieved.

Patrick Fontein, 28th December 2014.

Appendix 2 Auckland Plan, Total Auckland Development Potential, 22 Dec11

Appendix 3 SD4 Review of AC's CfGS12, 23rd April 2013

Review of Auckland Council's "Capacity for Growth Study 2012"

By Patrick Fontein, 23rd April 2013

1.0 Executive Summary

The Auckland Council (AC) Capacity for Growth Study 2012 (CfGS12), released in early April 2013, claims there are an extra 188-272,000 residential dwellings able to be accommodated within Auckland's existing urban areas, utilizing the existing District Plans, as at May 2012. The Property Council of NZ has requested SD4 to carry out a brief initial review of the CfGS12 and especially its claimed Results.

SD4 has substantial background in reviewing development potential for AC. SD4 considers the methodology and assumptions applied by the CfGS12 and finds that whilst much of the background work is technically robust, there are 3 major flaws in the CfGS12:

1. The CfGS12 totally over-states the actual development sites by including schools, churches, retirement villages on residentially zoned land and some parks in its sites considered as development sites. It also does not take sufficient account of sloping sites, cliff-top sites, sites in valleys and those prone to flooding.

The CfGS12 assumes all potential development sites will be developed to 100% of its maximum potential, whereas the CfGS12 should have allowed for:

2. "***the likely capacity utilization***" of property owners who choose to redevelop (as a %). i.e. a site allows an extra 10 units, but the developer choses to build only 3.
3. Consideration of a site's ***"development chance"*** over the next 30 years (again as a %). E.g. of the thousands of sites within each neighbourhood, how many will realistically be redeveloped in the next 30 years?

In this initial review, SD4 has considered the CfGS12 Report for Orakei and Otara – Papatoetoe in detail, and then considered whether the findings for these Board areas are likely to be consistent for all the other Board areas. SD4 report that there are major flaws in the analysis for these 2 Board areas and that the flaws are consistently carried over onto the other areas.

The CfGS12 has assumed that all residentially zoned sites (incl schools on residentially zoned land, churches, retirement villages etc) will all be built on at the maximum density allowed. SD4 concludes that the likely accommodation for growth numbers in the "Results" section of the CfGS12 are likely to be over-stated by upto 400%.

SD4 concludes by recommending that AC needs to urgently engage an FGA Analysis on all of the areas covered by the CfGS12 to cover the development potential of all of Auckland's urban areas, taking account of the new Unitary Plan proposed Zones. The development potential capacity numbers can then be more accurately quantified. The base work of the CfGS12 team is consistent to enable the FGA to be "added on". The FGA will have a dramatic effect on the stated intensification "Results", providing realistic data for leaders to make important informed decisions for Auckland's growth during the next 10-30 years.

2.0 SD4 Background on Development Growth projections.

SD4 has provided consultancy services for Auckland Council (AC) on the Auckland Plan during 2011 and for various parts of AC on property development growth projections during 2012.

After the Property Council of NZ (PCNZ), raised concerns on AC's methodology of calculating intensification capacity in early-mid 2011, AC commissioned SD4 to complete a "Total Auckland Development Potential" Report, which was published on 22nd December 2011.

The SD4 Report used a "Fine Grained Analysis" (FGA) on 14 of Auckland's 109 urban neighbourhoods. These 14 were an agreed cross-section of neighbourhoods that mirrored all of Auckland geographically, demographically and by housing type. The results of the 14 areas were then extrapolated to cover the 109 neighbourhoods that make up urban Auckland.

At AC's request, the SD4 Report was peer reviewed by Martin Udale of Essentia Consulting. Essentia found the SD4 FGA Report, its methodology, assumptions and conclusions robust. The SD4 Report was endorsed by PCNZ. On the basis of AC adopting the intensification actions recommended in the SD4 Report, PCNZ finally supported the AC in its intensification projections of 60:40, which was then adjusted by AC to 70:40.

The SD4 Report has been in the public arena for approx. 16 months. The property industry feedback is that the FGA process is robust and has been the most appropriate method of predicting future development growth within various neighbourhoods across Auckland, for the next 10-30 years.

3.0 Overview of SD4's Fine Grained Analysis carried out in 2011

The FGA Analysis starts with AC's GIS data, from where it uses a series of property aspects to review development potential of each single property parcel in a neighbourhood. SD4's property assimilated mathematical formulae are then "re-run" through the AC GIS. SD4 then physically visited every neighbourhood reviewing the data and sense checking. This ensured schools, churches, parks and other residential zoned properties not likely to be re-developed were excluded from the analysis. Using a combination of the AC GIS, Google Maps and Google Streetview across 3 computer screens, SD4 then assessed the development potential of every property parcel, reported by meshblock, considering:

1. ***"the maximum number of extra dwellings able to be developed"*** in each meshblock.
2. This was then multiplied by a professional judgement on "***the likely capacity utilization***" of property owners who chose to redevelop (as a %).
3. This was then multiplied by "***the development chance"*** of properties within each meshblock over the next 30 years (again as a %).

The SD4 FGA methodology physically evaluates every property parcel and the Dec 2011 SD4 Report concluded by: ***"the above constraints mean only 20-50% of technically capable intensification potential will actually be developed, Council would therefore need to upzone for 250-300% of the actual dwelling unit numbers desired".***

Considering SD4's background in assisting AC with Auckland's development potential, the Property Council of NZ has requested that Studio D4 (SD4) review the "Capacity for Growth Study 2012" (CfGS12), released by AC in early April 2013.

4.0 SD4 Review of AC's "Capacity for Growth Study 2012".

The CfGS12 is a major piece of work by AC's Research, Investigations and Monitoring Unit (RIMU), started in early 2012 and completed in 2013. The Methodology and Assumptions, incl Appendices cover some 193 pages and the Results and Appendices cover a further 123 pages. Most of the methodology, assumptions and background analysis is sound, especially the depth and comprehensive nature of including all the various structure plan assumptions and growth projections.

The CfGS12 Report can be found on the Web at:
http://www.aucklandcouncil.govt.nz/EN/PLANSPOLICIESPROJECTS/REPORTS/TECHNICALPUBLICATIONS/Pages/home.aspx#capacity

The Report has a very odd contradiction between the Disclaimer on the very first page, and then follow on pages:

The Disclaimer on the very first page (i) of the Methodology and Assumptions states: ***"The study is a measure of current plan enabled capacity, not a prediction of future growth".***

However from there on, the CfGS12 purports to highlight growth capacity, eg the very first paragraph of the Introduction, page 3, ***"The Capacity for Growth Study assesses the ability of residential and business land within Auckland to accommodate growth".***

So the Disclaimer states it is not a predictor of growth, yet the entire CfGS12 from there on purports to assess the ability of residential and business land within Auckland to accommodate growth. From here SD4 will assume that the CfGS12 attempts to assess Auckland's growth capacity.

5.0 So how well does the CfGS12 assess Auckland's growth capacity?

Table 2 on page 10 of the CfGS12 Methodology and Assumptions, states that residential redevelopment numbers are based on ***"sites being redeveloped to yield the maximum number of dwellings permitted"***.

Considering the maximum number of dwellings able to be developed on a site is a good start, however there will be a number of property owners who don't want to redevelop their property, or others that when they do, not build the 8 terrace houses permitted by the District Plan, instead only building 3 better quality town houses. Where does the CfGS12 take account of this? Answer: **the CfGS12 takes no account of property owners choosing not to develop their sites, or when they do under-utilising the site's development potential!!**

Now lets look at the manner in which all the results are generated in the very detailed "Report" section, named TR2013/010.

The Dec 2011 SD4 FGA Report stated that ***"without major re-zoning only 45-60,000 extra dwellings are able to be provided in intensified form in the next 30 years".***

If we look at the CfGS12 Results Appendix A, page 67, Table 11, there is a result of 188,164 capacity for Infill dwellings, and 272,150 if Redevelopment was utilised.

> ***So why is there such a difference between the SD4 Dec 2011 Report of 45-60,000 extra dwellings under current zoning and the CfGS12, released in April 2013 of 188-272,000 extra dwellings under current zoning? A 400% difference??***

SD4 has had 10-15 hours of reviewing the CfGS12's 316 pages, so have used the following methodology to come up with an initial preliminary review given the rapid response required:

1. Consider in detail 2 of the 21 Local Board areas that have been assessed in the CfGS12. Orakei was chosen as SD4 has extremely detailed property knowledge of this entire area. The Otara – Papatoetoe Local Board was also selected as the CfGS12 was predicting an increase from it's current 20,481 dwellings, by an extra 22,077 dwellings. How would increasing a neighbourhood's dwellings by110% be achieved?
2. SD4 considered the conclusions of the Orakei and Otara – Papatoetoe Local Board reviews, and then considered all the other Local Board areas in outline to see whether the same conclusions applied.

5.1 SD4 Review of the Orakei Local Board CfGS12 capacity numbers:

As part of the 188,164 infill capacity, or 272,150 redevelopment capacity, Orakei would be assumed to have either 8,258 infill or 13,145 of redevelopment extra dwellings (see Table 11 referenced above). So where would these extra dwellings be accommodated?

Appendix C, Map Series 2, Map L shows the Map for Orakei
http://www.aucklandcouncil.govt.nz/EN/planspoliciesprojects/reports/technicalpublications/Documents/tr2013010series2mapl.pdf

The following are some of the key findings of SD4's review of the above Map:

The 10 largest "Residential Vacant" and "Residential Vacant Potential & Infill" development sites in the Orakei Local Board area are (according to the CfGS12):

- Dilworth School on Market Rd
- Kings Prep School on Remuera Rd
- The Caughey Preston Rest Home on Upland, Ventnor and Lucerne Rd's
- St John's College on St Johns Rd
- Liston Park on St Michaels Ave
- St Kents Prep School on Shore Rd
- The Oceania Retirement Village at 148 Meadowbank Rd
- The Mary MacKillop Centre (Rest Home) at 56 Selwyn Ave, Mission Bay
- The School of Philosophy at 268 West Tamaki Rd
- Graeme Hart's house and land at 743 Riddell Rd, covering 2.0058 Hect.

SD4 then closely reviewed the CfGS12 methodology, which then assumed that all of these sites showing as having development potential, would be developed 100% to their maximized development potential.

Further to the above, SD4 also observed the following:

- Most churches were highlighted as being either "Residential Vacant" and "Residential Vacant Potential & Infill".
- Most of the expensive homes on large sections were shown as "Residential Vacant Potential & Infill". SD4's direct experience of the very high end luxury housing market is that few of these properties tend to be sub-divided very often. Eg:
    - 139 Arney Rd, large house on 1.258 Hect, had major recent upgrade
    - Numerous large houses on large sections on Riddell Rd, Glendowie
- Sections with major slopes, steep valleys and flood plains were all marked as "Residential Vacant" or "Residential Vacant Potential & Infill". See numerous sections down steep driveways between Victoria Ave and Portland Rd, Arney Rd and Portland Rd, all extremely

difficult to subdivide, yet shown as pink and red, i.e. CfGS12 shows good development potential.

Not withstanding all the above, the 3 largest intensification options in Orakei, were all missed out on the CfGS12 Map:

- Orakei Point, where a further 600-800 dwellings have been in planning stages for a number of years in consultation with AC, almost totally missed on the CfGS12 Map
- 5.8 Hect of the Ellerslie Racecourse is for sale as a residential redevelopment site, allowing 350+ units, tenders closing on 30th April, totally missed by the CfGS12 Map.
- A 3.08 Hect site at 223 Kohimarama Rd has been sold by Selwyn College and re-zoned for intensive residential by Auckland City Council on 23 Sept 2010, allowing some 150-200 dwellings, totally missed by the CfGS12 Map.

5.2 SD4 Review of the Otara - Papatoetoe Local Board CfGS12 capacity numbers:

Otara – Papatoetoe would be assumed to have either 15,706 infill or 22,082 of redevelopment extra dwellings (see Table 11 referenced above). During the last 20 years this area has had very little infill or redevelopment activity, so what would change in this area to see the dwelling numbers increase by approx. 110%? Yes, that's correct, from almost no re-development to more than doubling the total dwellings!!

The 10 largest "Residential Vacant" and "Residential Vacant Potential & Infill" development sites in the Otara - Papatoetoe Local Board area are (according to the CfGS12 Map):

- Middlemore / Auckland Golf Club
- The Grange Golf Club
- De La Salle College
- The Samoa Church / School at 80 Wyllie Rd
- Residential Land at 15 Glenmary Pl and 111 Malaspina Pl, Papatoetoe
- The School and Child Care at 28, 38 Puhinui Rd
- St John the Evangelist School on Otara Rd
- The large church and grounds at 75 Ferguson St, Otara.
- The Church at 328 East Tamaki Rd
- The Dingwall Trust School at 8 Dingwall Pl, Papatoetoe

Further to the main residential redevelopment sites that would contain the extra 22,000 dwellings are currently schools and churches, SD4 also found large anomalies in the business / industrial CfGS12 assessments. The following sites were shown as "Business Vacant" and "Business Vacant Potential":

- The substantially built out retail Supa Centre on Cavendish Drive
- The entire DB Breweries site in Gt South Rd
- The Lion Breweries facility in Ormiston Rd, built in 2008-2010
- The Farmers facility off Ormiston Rd, built in 2008-2010
- The Rainbows End entertainment facility
- The land housing most of the Auckland Council buildings in the Manukau City Centre
- The Bus Depot at 8 Norman Spencer Drive.

5.3 SD4 Comparison of other AC Board areas with Otara - Papatoetoe and Orakei

Reviewing all of the other CfGS12 maps shown in Appendix C, these all show very similar trends as those shown for Otara – Papatoetoe and Orakei, i.e.

- Most private schools shown as development sites
- Most churches shown as development sites

- Retirement facilities and rest homes shown as development sites
- Steeply sloping sites and sites in valleys / flood plains showing substantial development potential, whereas there is often limited potential.
- Industrial land analysis of the CfGS12 is too simplistic. Many of the industrial site users require yard and storage areas as part of their operations. CfGS12's assumption that most large yards are all available for redevelopment is unrealistic.

6.0 SD4 Review of the CfGS12 Results Numbers

The following has had a dramatic impact on the total numbers shown in the Results section of the CfGS12:

1. Dramatic over-statement of actual development sites, by including private schools, churches, retirement villages, some parks.
2. Steeply sloping sites and sites in valleys / flood plains showing substantial development potential, whereas there is often limited potential.
3. Assuming "the maximum number of extra dwellings able to be developed" will be developed on every site showing development potential.
4. The CfGS12 taking no account of "the likely capacity utilization" of property owners who chose to redevelop (as a %).
5. The CfGS12 taking no account of "the development chance" of properties being developed within each meshblock over the next 30 years (again as a %).

SD4's professional judgement is that the numbers projected within the CfGS12 "Results" section will be over-stated by upto 400% when considering the likely actual dwelling increase take-up over the 30 year period. The 400% is across the Board, although there will be variations within each Board area. i.e. some areas maybe over-stated by 100-250%, whereas other areas could be over-stated by as much as 500-800%. Only a complete FGA will be able to determine the likely development potential of each area.

7.0 SD4 Review of Auckland Council's Unitary Plan 3D modeling videos

SD4 were alerted on 22nd April by Jasmax of a series of AC Unitary Plan 3D modeling videos, and asked had we seen these. Instead of the normal Council process of posting these on the Council website so that they could be clearly viewed by all, they are tucked away on "YouTube", as below:

http://www.youtube.com/playlist?list=PLNiuqKCzobSwwvxhdHPqawQy4GPEFW8R9

Unlike the Gangnam style videos that are attracting big YouTube audiences, these nicely nestled away AC Unitary Plan 3D Videos have yet to hit their straps, recording between 164-300 views only (as at 23 April, probably mostly from Jasmax and SD4 staff!). So having reviewed the 19 video simulations of a cross-section of Auckland's neighbourhoods (all 1min and 21 sec long each), SD4 provides the following comments:

- The base information provided for the 3D modeling is outstanding. It provides very accurate 3D building shapes of all the existing buildings in the area.
- The 3D views are rotated across each of the town centres, the main features are marked and it is very clear to get a good context of each centre.
- The buildings and sites of historic character are clearly signposted before the growth projections commence.

- The manner in which under-developed sites are prioritized for redevelopment within each centre looks promising.
- The new building massing of each of the chosen redevelopment sites appears realistic.
- This is where the good news stops. The extent of the re-development shown in three 10 year time periods in a number of the lower socio-economic centres is totally unrealistic.
- SD4 has carried out an extremely detailed FGA of the entire Papakura area for the Papakura Local Board (PLB) in Nov 2012 and has an intimate knowledge of the development drivers of this area. The PLB is supportive of residential intensification in its centre, and wants to ensure that initial developments are of a good quality, that would encourage further high rise development. Using the FGA, and a re-zoning to an 18 storey height limit, SD4 considered it unlikely that a high rise would be developed in Papakura in Years 1-10, that 1-2 high rises could be developed in years 11-20 and a few more in years 21-30. The AC 3D videos show 8 buildings of 18 storey developed in years 1-10, another 10 in years 11-20 and a total of 40+ (yes fourty+) 18 storey buildings developed in Papakura by year 30+. These numerical projections by AC are totally unrealistic.
- The 3D modeling videos also show how under-utilised a number of market attractive town centres will be. The Remuera Village is shown to have a 4 storey residential intensification overlay, with a large amount of 4 storey re-development occurring over a 30 year period. SD4 has extensive knowledge of the Remuera intensification sub-market. The existing land and building prices in the Remuera town centre are very high, with retail shops on small sites selling at yields as low as 5%. A 4 storey development will not work in the Remuera town centre. There is too much existing 2 storey building value to "knock-down" to replace this with a 4 storey building. Remuera has a high market attractiveness, and should have been up-zoned to 12-18 storeys. The same reasoning will apply to many other market attractive town centres.
- SD4 concludes that if the computer modeling team were provided with realistic projections of where intensification could realistically occur, these 3D modeling videos could be outstanding.

8.0 Conclusions and Recommendations of the CfGS12 Report

- AC's CfGS12 Report is a computer driven exercise, with practically no reality / sense checking "out in the field". i.e. a check on: "Does this make sense"?
- AC's CfGS12 Reporting has counted most private schools, churches, retirement facilities and some parks in its sites able to be redeveloped.
- Sites with major slope, cliff-top, valley and flooding constraints are shown as able to be extensively redeveloped as if they were flat.
- All sites that are "under-developed" (incl the schools, churches, parks mentioned above) are assumed by the CfGS12 analysis to be redeveloped to 100% of their maximum potential, within the 30 year period.
- Much of the CfGS12 Methodology and Background structuring is sound, it is the sense checking of excluding schools, churches etc; assessing the likely capacity utilization and development chance that has yet to be completed.
- By excluding schools, churches, parks and retirement facilities from the analysis, and multiplying maximum development capacity, by capacity utilization and development chance, will result in a reduction of actual total intensification dwellings by approx. **400%** from the CfGS12 Report Numbers.
- SD4 believes the Unitary Plan has not up-zoned sufficiently in many market attractive areas of Auckland and is highly unlikely to achieve its 60-70% intensification target.
- Auckland Council needs to urgently engage an FGA Analysis on all of the areas covered by the CfGS12 to cover the development potential of all of Auckland's urban areas, taking account of the new Unitary Plan proposed Zones. The development potential capacity numbers can then be more accurately quantified.

Appendix 4 Auckland City and Fringe FGA, 17th November 2014

Appendix 5 Auckland Industrial Vacant Land FGA, 20th November 2014