Dear Ms Millar,

This is my second submission. I live in Park Rd St Leonards (the East side of Park Rd). I'm writing to submit my view of the proposed LEP for the St Leonards South Residential Precinct. I am directly effected by the proposed LEP as my home is included in the proposed LEP.

As stated in my previous submission I support the St Leonards South Masterplan December 2014 also referred to as the 'Annand' plan. I was part of the workshops and consultation conducted by Lane Cove Council. However I don't agree with the resultant proposed LEP.

This submission seeks to show the variation and inconsistency from St Leonards South Masterplan, presented at the July 2015 council meeting, to the proposed LEP, presented to Gateway in May 2016. It is believed these changes creates a LEP which is difficult to implement and develop. As such it will have an outcome that creates greater cost, takes longer to implement and results in a less optimal, lower quality built and recreational environment.

Major changes from the Extraordinary Meeting of Council July 2015 to Gateway submission May 2016 are;

1. <u>The reduction of a base Floor Space Ratio (FSR) from 2.75:1 to 2:1</u>.
   - 1.1. The Lane Cove Council (LCC) was advised[1] "This advice asserts that land zoned with an FSR of 2:1 or under was unlikely to incentivise redevelopment. Rather it was not until FSRs exceeded 2:75:1 that development was likely to occur relatively soon"[2]. It is acknowledged in the LCC Planning Proposal 25 to Gateway there is the statement "All properties have the opportunity to raise this to 2.75:1..." but the base remains at 2:1 in the proposed LEP. Thus the independent advice to council has been overridden between July 2015 council meeting resolution and the May 2016 submission to Gateway. It is not certain why the LCC made this reduction in FSR. This is especially puzzling as the report to council for the July 2015 council meeting makes no mention of a base FSR of 2:1 and it does not appear in the recommendation to council in July 2015. This reduces the incentives for delivery of development and is likely to reduce the quality of development as it will impose a higher cost to benefit ratio for any developer, forcing them to reduce design, material and construction costs.
   - 1.2. The staff overview extract about Financial Viability is in Appendix A.

2. <u>Change from six density location areas to twenty-four areas in the proposed LEP</u>[3].
   - 2.1. In the St Leonards South Masterplan there are a total of six areas[4] covering the proposed LEP. In the submission to Gateway this grew to 24 areas (including the small park between Park and Berry Roads). The level of detail and complexity appears to be derived from Section 10 "Site Specific Explorations" of the St Leonards South Masterplan P.89 yet at the very beginning of this section this statement makes clear "**<u>These are examples only. There are many other possible combinations of site amalgamations</u>**", Despite this caveat the resulting areas closely follow what is set out on page 89. Did council officers try other combinations?
   - 2.2. This prescription appears in Amendment 4 to detail the minimum site area; building heights; FSR; and desired outcomes[5]. The resultant level of detail reduces design flexibility, making it difficult to optimise architectural design. There is a large amount of duplication in the table, for example, clauses 'consistency with part A of the St Leonards South Landscape Master Plan' and 'Consolidate into a single lot' are listed in every area. Why do it this way? There are numerous adjacent areas which share the same or very similar requirements. This level of detail, complexity and duplication does not aid good design. An alternate solution would be to reduce the number areas by merging them like areas into a larger area. Building heights and FSR can be transitioned from one part of the area to another (see Appendix B) thus providing flexibility in design.
   - 2.3. This prescription and complexity is mostly on the Canberra Ave to Berry Rd West part of the LEP. Canberra Ave to Holdsworth Ave block has eleven areas, the Holdsworth Ave to Berry Rd block has nine areas but the Berry Rd to Park Rd block has only four (including small park). All three blocks are similar in area so why are areas in the two Eastern blocks more than twice the number in than the Western block?

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1 In the executive summary of the 'St Leonards South Precinct Independent Review of Viability of Planning Controls Proposed by the Draft St Leonards South Masterplan' prepared for LCC in February 2015

2 P. 7 of the "Independent Review of Development Viability in St Leonards South Precinct" by HillPDA February 2015

3 Proposed Special Provisions Map and Amendment 5 "Amending LEP Clauses"

4 Section 4.3 P 38 "Preferred Location and Density of Residential Growth"

5 P. 4-6 Amendment 4 "Draft Lane Cove Local Environmental Plan 2009 5 Amendments (9 June 2016)"

2.4. The pathway from Berry to Canberra traverses nine gradients in a straight line making for a step path. This pathway is bounded by areas 5, 6, 7, 8, 14, 15, 16 & 17. It appears as if the site slope and gradients are not considered. It appears the site has been planned as if it is flat, but the site has a steep slope from North to South and West to East. Pathways should work with the topography not against it. Pedestrian and bicycle access to water/reserve should be examined[6]

2.5. Is this level of detail and complexity an attempt to control the risk of over-development? Is this the best way to control the development process? Is the cure worse than the disease? Complexity tends to reduce process efficiency. With this level of detail and complexity the development process is likely to be difficult to administer and may slow, tax or overwhelm the council's development application process. It is best if the complexity is reduced where possible.

3. Building orientation and massing.

3.1. The building orientation and massing outlined in the documents in the proposed LEP is influenced by the pattern of the 1890 subdivision, which has a dominant North-South road system. The resultant orientation in the LEP has two fundamental flaws. One is with the building **orientation**. All buildings within the proposed LEP run North-South, that is, the resultant rectangle has a dominant North-South orientation[7]. This is poor passive solar architecture. In Sydney the buildings longest face should face North[8]. This is needed for winter solar access to the building's thermal mass. The Western face needs to be short as practical so as to reduce the Western hot afternoon sun in summer. The orientation of the buildings in the proposed LEP is the reverse of these principles and will result in increased energy costs and higher emissions for heating and cooling.

3.2. The largest cost for high rise buildings is the services core. The long rectangles will require two service cores. Efficient high rise residential design can have as many as seven apartments clustered around the service core. This is not possible with 'long' building orientation in this LEP.

3.3. It is widely accepted that architectural design begins with **massing**[9]. This is particularly true for sloping sites which is the case for this site. The southern slope of the site emphasises the need for a massing study as solar access is more difficult on a south slope than a north slope. A massing study can determine the best combination of building mass throughout the site for the best solar access.

a) Another factor is the desirable views to the harbour and beyond, this makes the site more attractive to potential buyers. A massing study is required to exploit and maximise this aspect.

b) Other important build factors to be considered when modelling orientation and massing are location of basement car parks and their entry/exit. These greatly influence the best building shape, especially given the site's topography. An example of how important the entry/exit can be is the Marshall Ave development which has a car park entry/exit on a new roundabout at the corner of Marshall and Holdsworth Ave to improve traffic flow.

3.4. It appears the initial modelling was done solely for shadowing purposes. This is understandable at the early stages of council evaluation. The shadow modelling programs used a basic and easily drawn model, ie, rectangles running North-South. It is felt use of this early model influenced the council planners into using a less than optimal model.

a) Other models may provide better shadowing than the predominant North-South blocks depicted in the current proposed LEP. The Marshall Ave development is a case in point. With the final development model shadowing being less than the original twelve story block in the initial rezoning plan.

4. The shadowing diagrams in the "St Leonards South Supplementary Report May 2016" pages 6-7. Shadow diagrams are missing the commercial building on the corner of Pacific Highway and Berry lane (82-86 Pacific Highway). As well the proposed small park in Park/Berry Rd appears to be larger in shadowing diagrams than it actually is by a significant amount. The Park Rd frontage of the small park appears to be larger than the frontage of area directly North (area 21 in Special Provisions map)

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6 The end of Berry Rd has enough height to form one end of a foot/bike bridge across River Rd to Eastview St (this is a small open space that can be used. This provides direct access to Smoothey Park via existing paved paths

7 P. 3 St Leonards South Supplementary Report May 2016. 20 m width on North side with approximately 45 m length on Western side at shortest to 60 m at longest.

8 "in mixed or heating climates, it is beneficial to have the longer walls of a house facing north to minimise exposure to the sun in summer and maximise it in winter" - http://www.yourhome.gov.au/passive-design/orientation

9 https://en.wikipedia.org/wiki/Massing

whereas the reverse is true (approximately 73 metres for Area 21 and 48 metres for small park). This would misrepresent the actual shadowing.

4.1. Advice from a town planner stated the proposed building orientation has the potential for adverse overlooking between any two adjacent building towers and also adverse overshadowing. These potential impacts will need to be critically assessed. The current shadow diagrams are inadequate for proper assessment of the likely shadow impact. As an alternative a single building tower will ensure that the landscaped corridors around the curtilage of the building tower will receive sun at various parts of the day and thus ensure a reasonable amenity for future uses of landscaping.

5. Green spines – As with the small park between Park and Berry Rds Council there is no study or report relating to why green spines are the only open space option when LCC proceeded to Gateway. The "St Leonards South Landscape Master Plan Report" is dated September 2017 fifteen months after submission to Gateway and is only landscaping the open space decisions already made by council, it is not a validation of them. The green spines are not a good open space solution. Initially in the submissions to Gateway the green spines were to be "of common open space running north to south between apartment buildings"[10] and "Green spines of common open space with reciprocal rights of way across north-south recreational areas, approximately 24 x 200 metres in area, between all apartment blocks..[11]" By the time of the November 2017 public exhibition the green spines are private, fenced and have locked gates[12]. A strong indication the council did not fully understand the green spines between apartment buildings is not good landscape design. It is believed the Landscape Architecture advice after Gateway submission was that the green spines with reciprocal rights of way is not secure. Even when fenced with locked gates they are still insecure as the fence can be scaled and 'tailgating' of an apartment owner opening the gate. The arrangement of apartments and the green spine does hinder the placement of the parking basements..

Conclusion;
Complexity, prescription and poor design decisions in the proposed LEP will lead to increased development costs and time frames. Greater development cost will add pressure to increase building height.

The dominant pattern of the 1890 subdivision is believed to have influenced the building orientation and location of green spines. Initial shadow modelling used a simple building orientation to highlight shadows, this in turn influenced council planners to a building orientation and massing that does not make best use of site and topography. The site is 6.5 hectares in size. It would be worthwhile to ignore the 1890 subdivision pattern when considering how the area can be developed in an optimal way.

A solution would be to reduce complexity and prescription of the special provisions area and amendment 4 by easily consolidating in order to simply the development process and allow architects to work with larger amalgamated areas and with greater design flexibility. An example of a simpler special provisions area is tabled in Appendix B.

Another possible solution to building orientation and poor open space planning is to form a multidisciplinary team with skills in Architecture, Landscape Architecture and Urban Planning that can make an independent assessment of the site. Such a team can work to a design brief that considers passive solar architecture principles, building massing, building orientation, views, car parking/deep soil zones and topography in order to examine various alternate models cohesively and holistically to arrive at the best solution.

10 Gateway submission "Signed planning team report" P. 3 clause 3 which states it is part of the open space network

11 Extract from 19th May 2016 letter, "Letter to Department requesting Gateway Determination - Planning Proposal 25 - St Leonards South - dated 19.pdf

12 P. 15 "St Leonards South Exhibition Panels - 16th November 2017_1207860.pdf"

Appendix A – Extract from St Leonards South Master Plan Finalisation to Extraordinary meeting of Council July 2015

Principle 2 – Financial Viability

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Staff Overview: The economic studies commissioned by Council are a foundation which highlights that the fundamental economic premise is sound.

- *Economic studies by the two independent consultants, David Mann and Hill PDA, had comparable findings that the draft Master Plan density, specifically the base FSR of 2.75:1, is viable with possibly up to 30% yield. It was noted by the economists that they cannot guarantee the entire area would redevelop in the short-term since, in some cases, land-owners may place a greater premium on their land owing to a variety of reasons such as lifestyle, lot sizes and location. Council is satisfied with the studies, noting also that the Hill PDA review study was undertaken at the request of the public to Council.*
- *The base 2.75:1 is to be equal for all properties. Open space is to be land dedicated by developments in return for additional height and FSR on certain properties. That is, open space would be paid for by new developments, through land dedication or Section 94, not by existing residents.*
- *Financial mechanisms relate to two purposes: (i) for ensuring that developments occur and (ii) for delivery of public benefits (open space, community facilities, etc).This would be the subject of a detailed development contribution plan (Section 94, voluntary planning agreements and works-in-kind) for any option. Council already has one tested approach - see Option 2.*
- *Section 94 contributions are required for general uses such as drainage, traffic measures and community facilities (e.g. to date: library and aquatic centre), to be used by incoming residents across the LGA as a whole. VPAs are appropriate for site-specific facilities for use principally in a precinct.*
- *The economic report and previous work undertaken by Hill PDA was based on evaluations of current sales data from the St Leonards area, as well a combination of other factors discussed in the report. These figures were used to calculate the amount of contributions for previous Voluntary Planning agreements in the St Leonards Area.*
- *As discussed at the community meeting on 21 April 2015, the Woods Bagot model could create more uncertainty as there is a higher risk to community if not all of the plan is completed, resulting in larger piecemeal development. This could result in development occurring over decades in unpredictable areas. There is currently no legal mechanism to ensure lower densities, open space and community centres are delivered if the high density areas are developed first.*

Appendix B – Consolidated Amendment 5 table

Area identified on Special Provisions Area Map	Minimum site area	Maximum Floor Space Ratio	Maximum Height of Building (only on land identified as "Building Envelope" on Special Provisions Area Map)	Outcomes
Areas 1 - 6	1500 m2. Only 3 allowed. Preference for all of area to be consolidated	4:1 to 3.5:1 transition from NE corner to SW corner	58m to 31m. Transition from NE corner to SW corner	a.) 1300sqm of open space fronting Marshall Ave; b.) consistency with part A of the St Leonards South Landscape Master Plan; c.) component of Affordable Housing; and d.) Consolidate into a single lot if possible. e) component of Affordable Housing. f) A multi-purpose facility of 600 sqm minimum at ground floor level with easy access to Canberra Ave and Newlands Park; g) With direct connection to an outdoor play space of 450sqm;
Area 7 - 11	1500 m2. Only 1 allowed. Preference for all of area to be consolidated	3:1 to 2.75:1 transition from N corner to S edge	31m to 25m transition from N edge to S edge[13]	a.) A 15m wide, path linking Canberra Avenue and Holdsworth Avenue; b.) consistency with part A of the St Leonards South Landscape Master Plan; c.) Consolidate into a single lot. d) A 6m wide, path linking Canberra Avenue and Holdsworth Avenue;[14]
Area 12 - 15[15]	1,600 m2 Only 2 allowed. Preference for all of area to be consolidated	3.5:1 to 3.1:1 transition from SE edge to NW corner	37m – 31m. transition from SE edge, with to NW corner allowed 37m ht? There is a conflict in original table with area 12 having a 37m ht and FSR of 3.1:1 and area 14 a 31m ht with FSR 3.5:1	a.) 400sqm of open space fronting Marshall Ave; b.) consistency with part A of the St Leonards South Landscape Master Plan; c.) Consolidate into a single lot. d) component of Affordable Housing;
Area 16 - 20	1,500 m2 Only 2 allowed. Preference for all of area to be consolidated	3.8:1 to 2:75:1 transition from N edge to S edge	31m to 25 m transition from N edge to S edge. There is a conflict in original table with area 17 having a 31m ht and FSR of 3.8:1.	a.) A 15 m wide, path linking Berry Road and Holdsworth Avenue; b.) consistency with part A of the St Leonards South Landscape Master Plan; c.) Consolidate into a single lot. d) A multi-purpose facility of 600 sqm minimum at ground floor level; e) With direct connection to an outdoor play space of 450sqm; f) A 6 m wide, path linking Berry Road and Holdsworth Avenue; see footnote 2
Area 21	4,500 m2	2.75:1	31m	a.) consistency with part A of the St Leonards South Landscape Master Plan; b.) Consolidate into a single lot.
Area 22	4,200 m2	2.75:1	31m	a.) consistency with part A of the St Leonards South Landscape Master Plan; b.) Consolidate into a single lot.
Area 23	6,400 m2	2.75:1	25m	a.) consistency with part A of the St Leonards South Landscape Master Plan; b.) Consolidate into a single lot.
Small Park	3,500 m2			See submission 1 which explains how a linear park is a better soution.

13 In the Amendment 5 column there is the entry "As shown on the Height of Buildings Map" which is 25m

14 This is was not in St Leonards South Masterplan. It is not known how this was determined as the Landscape Masterplan was over twelve months after this decision. There is however a possibility a walking path from the end of Berry Rd running along the Southern contour to Newslands may be a worth while feature of any development. This will be set out in more detail in my third submission

15 Moved 15 m wide, path linking Berry Road and Holdsworth Avenue from area 15 to area 17; There is an inconsistency of this is managed compared with Areas 7 & 8