



THE UNIVERSITY OF
SYDNEY

**The Henry
Halloran Trust**



Housing Supply Outcomes From Codification in Sydney

Keiran Thomas

Urban Planning Consultant

Practitioner in Residence program
Final Report 2016

ISBN: 978-0-9925289-4-2

ACKNOWLEDGEMENTS

This material was produced with funding from The Henry Halloran Trust at The University of Sydney, and was carried out during a period of residence at the Urban Housing Lab@Sydney. The Author(s) gratefully acknowledges the important role of the Trust in promoting scholarship, innovation and research in town planning, urban development and land management.

I thank Professor Nicole Gurrán and Dr Michael Bounds for their patience and advice, and Mr Steven Palmer for his phenomenal help with finding and analysing spatial datasets and creating the maps in this report. Thanks to my wonderful wife Emma for taking on my share of family duties as well as her own so that I could write this.

DISCLAIMER

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ACRONYMS

- ABS Australian Bureau of Statistics
- CDC Complying Development Certificate
- DA Development Application
- DCP Development Control Plan
- LEP Local Environmental Plan
- LGA Local Government Area
- NSW New South Wales
- R1 General Residential Zone (NSW)
- R2 Low Density Residential Zone (NSW)
- R3 Medium Density Residential Zone (NSW)
- R4 High Density Residential Zone (NSW)
- R5 Large Lot Residential Zone (NSW)

EXECUTIVE SUMMARY

The NSW Government is using codification to encourage housing supply in Sydney. The codification is designed to override local housing design, volume and location controls, where these are perceived to obstruct higher residential density. The codification replaces local design rules with statewide standards, and merit assessment by council with approval by accredited third parties.

Codification began in earnest in 2008 with the introduction of *State Environmental Planning Policy (Exempt & Complying Development) 2008* which related to single dwellings only. The following year, *State Environmental Planning Policy (Affordable Rental Housing) 2009* introduced a code for secondary dwellings. In late 2015, the NSW Government proposed expanding codification to low rise medium density development of up to ten dwellings. At the time of writing this policy proposal is still under consideration.

The vast majority of debate on housing codification in Sydney has been concerned with design outcomes and local amenity. But what does codification mean for the volume and location of housing in Sydney? How many extra dwellings could be realised through the codes and where could they be located? Are the current and proposed policy settings likely to help the NSW Government meet its housing targets? Do those settings reflect the residential densities intended by land use zoning?

This project begins with a review of the literature on discretionary planning, urban consolidation and housing supply and demand in Sydney. The objectives of the current housing codes are derived from the many government reviews and policy initiatives in this area since 2000. The project then explores the outcomes from codification for secondary dwellings in Sydney since the introduction of the codes, especially the surge in secondary dwellings and private certification. Finally, the housing volume and location outcomes possible under current and proposed rules for minimum lot size, zoning and environmental exclusions are modelled across Sydney, if no additional zoning, permissibility or exemption criteria were imposed via a new codification policy.

The modelling results indicate about 85 per cent of all residential lots in Sydney would be eligible for codified development of additional dwellings under these hypothetical scenarios. This high rate of eligibility, and the historic growth in codified housing approvals, suggests codified development could contribute a large share to the housing targets of the NSW Government. However, the results suggest less promising outcomes for several key planning considerations.

Firstly, the outer ring suburbs of Sydney contain a disproportionately large share of the lots that would be eligible for higher dwelling densities. In inner city suburbs, where density is arguably more appropriate, less than half of the residential lots would be eligible. While Sydney does have dispersed city centres, this would still be a worrying result for urban consolidation and infrastructure demand.

Secondly, there would be a potential disconnection between the densities intended by local land use plans and the dwelling densities possible under codification. Lot size becomes a much more important determinant of density. The R2 Low Density Residential zone would be disproportionately eligible for codified dwellings and, while adding secondary dwellings in this zone may not be a major concern, uptake *en masse* could lead to infrastructure burdens and poorly controlled interfaces between low and medium density.

Finally, the outer ring suburbs and R2 zoned lots in general would both be overwhelmingly eligible for the highest densities possible through codified development – up to ten dwellings per lot. In fact, outer ring suburbs would be more eligible for 10 dwellings per lot than middle and inner rings. Similarly, R2 zoned lots would be more eligible than R3 Medium Density Residential lots. In light of the policy objectives, R3 zoned lots in the middle ring suburbs should be the most eligible for this kind of density.

The project concludes by showing how the lot inventory created for this project can be used to adjust policy settings and outcomes. Small changes to criteria, such as increasing the minimum lot size for eligibility by 100m², can significantly change the density outcomes for a given zone or suburban ring. These changes can redress the imbalances in volume across Sydney as a whole, but only location- or zone-based criteria can redress the potential disconnect with the density objectives of the local land use plan.

There are limitations to the modelling results, which reflect both the complexity of the policy criteria and the lack of spatial data in NSW. For example, lot width – a key criterion for eligibility – is not easily derived and could not be accounted for. Similarly, we do not know how many lots have already been put to a higher density use, although strata data serve as a partial indicator of existing residential development patterns. In addition, the market is a huge factor in development decisions, and just because higher densities are *permissible* in outer rings and low density zones does not mean they will be realised.

Nevertheless, since an important rationale for urban planning is to guide the market in delivering spatially optimal (not only commercially viable) forms of development, the results provide a useful tool for aligning housing code criteria in Sydney with the objectives for housing supply and location. Furthermore, by understanding the potential extra housing volumes that could be generated by codification, the design outcomes and impacts on local amenity can be debated in a more informed way. This project does this by spatially modelling lot size, zoning and other location-based parameters for every lot in the Sydney Metropolitan Region. At present, spatial modelling of the kind demonstrated in this project is not routinely carried out or made transparent to help stakeholders understand the potential benefits and risks of different regulatory options..

1 INTRODUCTION

1.1 Introduction

1.1.1 Purpose of this Research Project

Sydney, as the largest city in Australia and capital of NSW, will face ongoing demands for new and more diverse housing supply. However, achieving this diversity within the current urban footprint is a critical urban policy challenge. Many Sydneysiders seek more medium and high density housing options which are currently unavailable in their chosen location (Kelly, 2011b). This challenge is not unique to Sydney or to Australia, and planning authorities throughout the world have embarked upon different policy experiments to facilitate new housing overall and to remove impediments to secondary dwellings and infill development in particular (see, for example, UK Government, 2015).

This project examines one such attempt in NSW, following the introduction of reforms to codify the approval (ie. remove the need for discretionary permission) of secondary dwellings (a self-contained dwelling sharing a property title with the primary dwelling) in Sydney in 2009. This has encouraged huge growth in the development of this housing type.

The NSW Government now proposes to codify multi-unit housing up to two storeys and ten dwellings in size (NSW Department of Planning and Environment, 2015b). This is a significant change from the single and secondary dwelling codification to date and warrants analysis while the policy proposal is still under consideration by government.

The purpose of this research project is to explore what the codification of secondary dwellings in Sydney means for dwelling volumes and location. This exploration informs the second purpose, which is to understand how the *proposed* codification of multi-unit dwellings in Sydney may also affect dwelling volumes and location.

History suggests Sydney has attempted to address housing shortages with codification before, and there were questionable spatial and political outcomes (Searle, 2007: 5). For instance, policies introduced in the late 1980s led to dual occupancies with little design merit flourishing across Sydney in the early 1990s (Vipond, 1995: 4). It is important to understand the implications of the current and proposed codes if we are to get a better outcome this time.

1.2 Literature Review

1.2.1 Discretion and development control

Different development control systems allow for varying degrees of discretion. Booth (1996 and 2003) argues that the discretionary British planning system emphasizes flexibility in order to achieve desirable design outcomes. By contrast, the French and US systems are non-discretionary and emphasize certainty of decisions (Booth, 1996: 14 and 2003:7).

Talen (2012) accounts for the creation of the American system and explores the zoning and codes regulating American development control. While she acknowledges the certainty provided by codes, Talen (2012: 6) argues American codemakers have, 'lost the clear connection between rule and objective'.

Table 1 outlines the pros and cons of both approaches. In reality, most planning systems use elements of both approaches (Steele & Ruming, 2012: 155).

Table 1: Pros and cons of regulatory and discretionary planning systems

	Pros	Cons
Regulatory systems	Certain decision-making Faster planning applications Consistent decision-making circumstances Objective decision-making representation Avoidance of conflict in decision-making	Inflexible decision-making Slower plan-making Unresponsive to individual Unresponsive to community Little potential for negotiation
Discretionary systems	Flexible decision-making Speedier plan-making Responsive to individual circumstances Responsive to community Potential for negotiation	Uncertain decision-making Slower planning applications Inconsistent decision-making Arbitrary decision-making and potential for corruption Potential for conflict in decision-making

Source: Steele & Ruming, 2012: 157.

The NSW planning system has historically drawn heavily from the British model and emphasises discretion within a regulated zoning structure. However, over the past decade there has been a progressive move towards a hybrid system which, 'attempts to codify simpler forms of development (like garages or single storey houses) to enable their assessment against predetermined standards' (Gurran, 2007: 73). Non-discretionary provisions often sit uneasily within such systems and there is tension between certainty and flexibility in NSW (Gurran, 2007; Steele & Ruming: 2012: 155).

Bramley and Watkins (2016) depict a historic cycle in Britain of housing codification (to encourage housing) and greater discretion (when housing supply was a lesser political issue). Smith (1997) and Searle (2007) document this cycle in Sydney from 1968 to present in very useful detail. A series of State policies were introduced and repealed over these decades as housing supply issues rose and fell. The tension between State and local government on the location of housing supply is an ever-present theme and is explored further in Section 1.2.2.

More recently, several prominent reviews identified growing delay to housing assessment and the need to streamline the approval process (see, for example, DIPNR, 2003; Productivity Commission, 2004; and Development Assessment Forum, 2005). These reviews emphasized the need for clarity, consistency, certainty and speed of approval processes (Gurran and Phibbs, 2013: 397). There is a clear progression from these reviews to the commencement of the NSW complying development provisions for housing in 2008.

1.2.2 Urban consolidation theory and politics

Urban containment and growth management emerged as key planning doctrines in the United Kingdom and United States in the 1970s to 1990s (Woo and Guldman, 2014: 309). This approach to settlement planning is designed to increase housing density to prevent the loss of rural lands and to maximise the efficiency of

infrastructure. Australia began to embrace growth management (called ‘urban consolidation’ in Australia) in the late 1990s (Gurran & Ruming, 2015: 5).

An understanding of urban consolidation theory is important to this project because the codification of secondary dwellings on existing lots is a method of encouraging consolidation. However, the definition of urban consolidation put forward by Forster (2006) refers to high density development around activity centres and transport corridors. Knowles (1995), Smith (1997) and Productivity Commission (2004) support the focus on centres as the best place for consolidation.

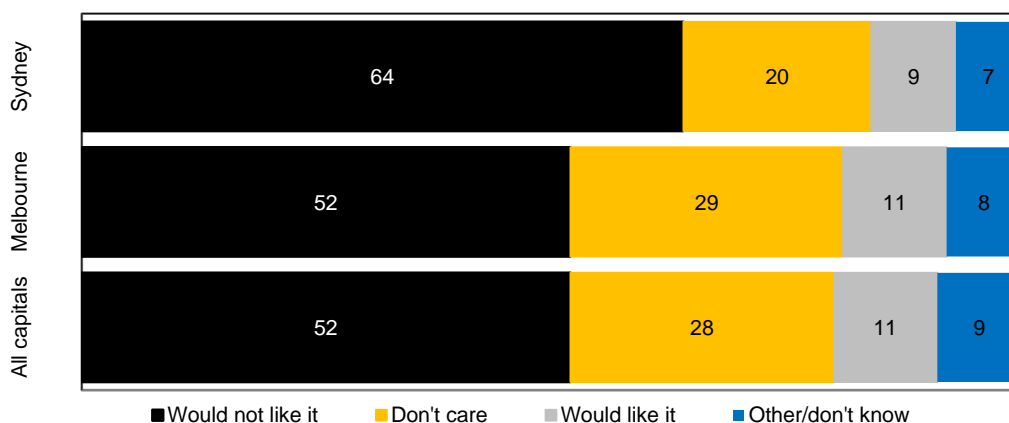
This type of urban consolidation has been the guiding principle for metropolitan planning in Sydney since at least the mid-1990s (Knowles, 1995; Smith, 1997; Forster, 2006; Searle, 2007; and Pinnegar, Randolph and Freestone, 2010). Troy (2013) argues that urban consolidation has been pursued largely unquestioningly by Sydney planners, without any real articulation of its benefits. Importantly this focus on key centres means strategic neglect for suburbia, ‘a new urban terra nullius over which planners appear to have relinquished responsibility and interest’ (Pinnegar, Randolph and Freestone, 2010: 280).

So, the secondary dwellings policy sits uncomfortably within this definition of urban consolidation. The kind of urban consolidation pursued historically in Sydney favours high density development around activity centres and transport corridors – whereas secondary dwellings are a low-to-medium density development in suburbia. This is consolidation by stealth at a small scale, compared to the headline urban renewal projects in Sydney.

The policy’s existence in NSW may be explained by the ongoing tension between State and local governments over the location of housing supply in Sydney, which is thoroughly documented by Simpson (1989), Smith (1997) and Searle (2007). There is evidence that Sydneysiders are more averse to increased population in their neighbourhoods than other urban Australians (Figure 1).

Furthermore, local councils often take a position opposed to higher tiers of government when it comes to the location and volume of new housing (Ruming, 2010: 3). Rather than drawing specific battlegrounds, by enabling secondary dwellings in almost all residential zones of the state since 2008 the NSW Government has laid a policy blanket over all of Sydney, allowing incremental consolidation on a lot-by-lot basis.

Figure 1: Community attitudes to increased population in their neighbourhood



Source: Productivity Commission, 2011.

1.2.3 Housing supply and demand

The NSW Government regularly forecasts housing demand for Sydney with strategic planning timeframes of fifteen to twenty years (see, for example, Knowles, 1995; Smith, 1997; DIPNR, 2003; DoP, 2006; DPE, 2016). These demand forecasts are based on demographic trends and there is largely consensus between forecasts. Kelly (2011a) looked beyond the number of dwellings to the demand for different housing types and found a mismatch with supply (see Section 1.4.2), but there is a need for more research in this field.

There is little consensus, however, around the issue of housing supply. The literature indicates this is a vexed issue, with debate about whether demand is being met (NHSC, 2009; HIA, 2013) and what factors, including streamlined dwelling approvals, have a role in supply (Productivity Commission, 2004; Urban Taskforce, 2014; Property Council of Australia, 2012).

Five key constraints on the free supply of housing in Sydney are frequently identified (Ruming, 2010: 66; Steele & Ruming, 2012: 164):

- Planning controls – prohibitions, design rules, lengthy approval times (Ball, 2010)
- Taxes and infrastructure costs (Gurran, 2007: 79)
- Finance rules and costs (Kelly, 2011a: 29)
- Land costs (Kelly, 2011a: 29)
- Construction costs – labour and materials (Kelly, 2011a: 29)

Gurran and Phibbs (2016:55-56) question the claim that planning controls restrict supply, citing (recent) empirical evidence that suggests the NSW planning system adjusts well to increases in housing demand. Certainly, dwelling approval volumes consistently run much higher than dwelling completions, suggesting post-approval factors are important (NSW Department of Planning and Environment, 2016). There is some evidence housing suppliers are unwilling to maintain outputs too high for their profit margin (Gurran & Phibbs, 2016: 56). Regardless, the link between planning controls and housing supply is problematic (Bramley, 2013; Ihlanfeldt, 2009; Gurran & Phibbs, 2016).

What is clear is that approvals for secondary and multiple dwellings have historically been much slower than planning legislation intends. Before the introduction of codification, secondary dwelling approvals took almost 180 days – three times the average for all development applications and 140 days longer than the statutory period (LDPM, 2007).

McLaughlin (2012) makes a point particularly relevant to this project, that the elasticity of supply for medium density housing is much greater than for single dwellings. The logistics and controversy surrounding medium density development, which is almost always infill within established suburbs, create much longer approval times. Ruming (2010: 65) suggests that informal associations (which take time to be established) between developers and councils are critical in facilitating infill medium density development.

Gurran (2007: 66) argues developers need, 'a degree of certainty about what types of development will and will not be permitted on a particular site because major investment decisions...are made on assumptions about the permissibility of various potential land activities'. Codification goes one step beyond this by guaranteeing both the activity and the *building design* are permissible.

Finally, there is some relevant literature on the motives of individual homeowners in redeveloping their lots for secondary dwellings. Pinnegar, Randolph and Freestone (2010) and Wiesel, Freestone and Randolph (2013) explore the pervasive psyche in Sydney of maximum capitalization as a property right. Their research indicates that owners will seek to develop to the full extent permitted, and that the question of renovation versus redevelopment comes down to cost rather than need. This suggests that redevelopment for additional dwellings could be taken up enthusiastically in Sydney, especially if codification were to remove some approval costs.

1.2.4 Terminology

Complying development

Codified development is known in NSW as complying development. The term refers to development that meets predetermined standards and therefore does not require a full application process. Since the impacts from such development are known, low-risk and straightforward, full merit assessment is considered unnecessary. If you comply with the rules in the NSW State Environmental Planning Policies you get your approval.

Other Australian jurisdictions refer to this as code-based, fast-tracked or streamlined development (WA Government, 2012; Queensland Government, 2015). A fairly similar system in Queensland is known as RiskSMART, in Victoria as VicSmart, and in Western Australia as 'deemed-to-comply'.

Secondary dwellings

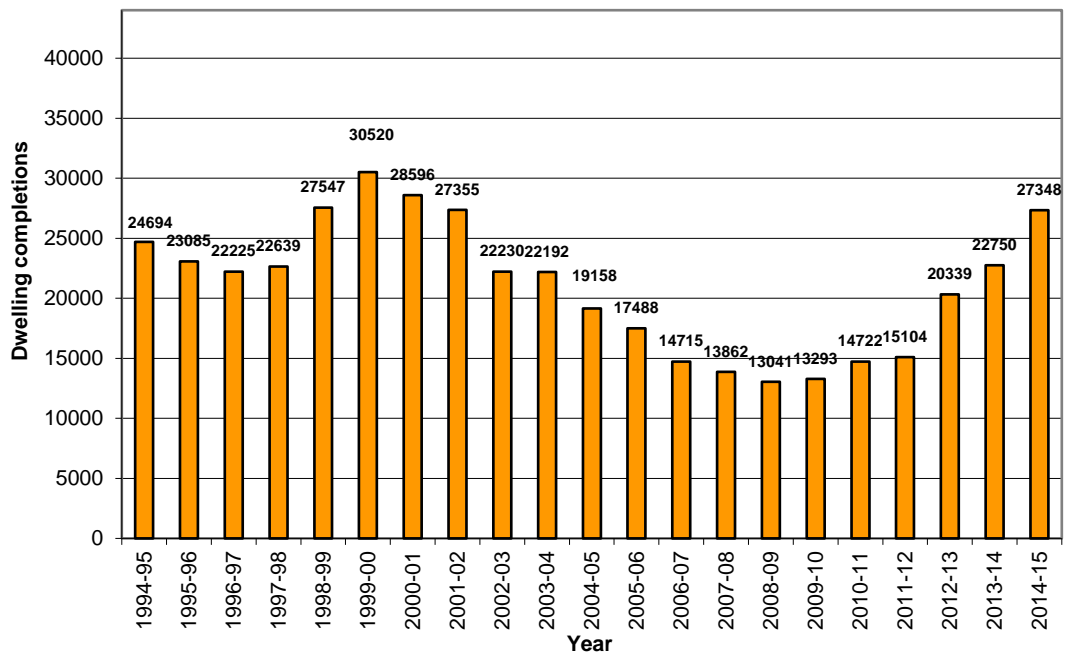
Dwelling classifications are complex and vary across jurisdictions. The lines between different development types are often blurred, especially when two or more dwellings share one lot. This project uses the term secondary dwelling to refer to a second dwelling attached or detached from an existing dwelling within one lot. In NSW, these are known colloquially as 'granny flats' and cannot be strata subdivided or sold separately to the existing dwelling. Second dwellings on separate title are referred to as dual occupancies (note that some of the data from the NSW Local Development Performance Monitors refers to 'secondary occupancy' which may include both secondary dwellings and dual occupancies). The term multiple dwellings refers to three or more dwellings on separate title.

1.3 Housing Supply in Sydney

1.3.1 Supply volumes and rates

The NSW Government maintains a monitor of dwelling completions in Sydney (Figure 2). Completion volumes appear cyclical and there is no clear link to approval volumes. 27,348 dwellings were built across Sydney last financial year – the highest volume since 2001. That is less, though, than approval volumes in the early 1970s (up to 35,687 per year), and far less than the 44,000 dwellings per year needed to meet forecast demand (see Section 1.4).

Figure 2: Historical dwelling completions in Sydney by financial year – 1994-2015

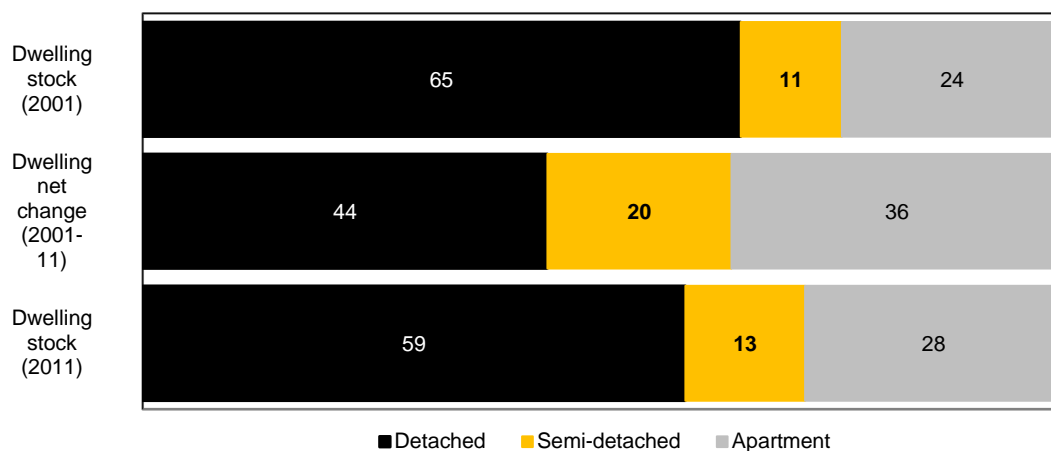


Source: NSW Department of Planning and Environment, 2015c & 2016a.

1.3.2 Dwelling type and location

Sydney’s dwelling stock is changing in interesting ways (see Figure 3). Detached houses as a proportion of all dwellings are declining, but more large houses of four or more bedrooms are being built – these large houses made up 39 percent of all detached housing in 2011 (SGS Economics & Planning 2013b). The overall drop in detached housing is being filled by semi-detached and apartment dwellings, which made up 56 percent of all new dwellings in Sydney between 2001 and 2011. However, as Infrastructure Australia (2015: 44) notes, ‘with over a century of housing development mainly focused on the construction of detached housing, changing the share of housing types across the whole city will take decades’.

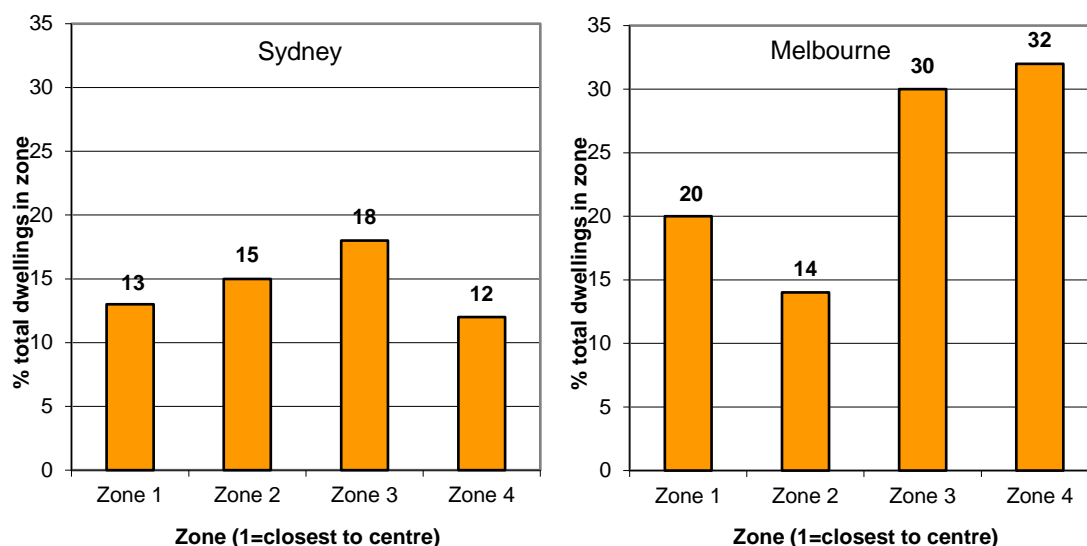
Figure 3: Proportions of dwelling stock and net change by type, Sydney, 2001-2011



Source: Infrastructure Australia 2015, 44.

In terms of the location of new housing supply, Sydney seems to share new housing quite evenly throughout the metropolitan area – certainly more evenly than Melbourne (see Figure 4). This may be a result of the historic strategic balance between infill and new land release areas in Sydney’s metropolitan planning strategies since the late 1990s.

Figure 4: Percentage increase in dwellings (2001-2011) compared to stock (2006) – Sydney and Melbourne



Source: Kelly, 2011a: 30.

1.4 Housing Demand in Sydney

1.4.1 Demand volumes and rates

There is widespread consensus about the forecast demand for housing in Sydney. This is probably due to reliance on Australian Bureau of Statistics (ABS) population projections to underpin the forecasts. The NSW Department of Planning and Environment (2014: 64; and 2015b: 1) maintains that Sydney will need 664,000 new homes by 2031, or 44,000 new dwellings per year.

1.4.2 Dwelling type and location

Density declines with distance from the CBD much more gradually in Sydney than in other Australian cities (Infrastructure Australia, 2015: 47). However, historic emphasis on detached housing in middle to outer ring areas means that detached housing is increasingly oversupplied with distance from central Sydney. There appears to be pent-up demand for semi-detached housing in the order of 13% of all Sydney households – focused on the middle and outer rings (Kelly 2011a: 20) (see Table 2). This equates to approximately 200,000 households who state that they would move to semi-detached housing in middle to outer ring suburbs if enough were available.

Table 2: Mismatched demand for housing types by distance from Sydney CBD (Zone 1 closest to CBD, Zone 4 furthest)

	Detached	Semi detached	Up to 3 storeys	4 storeys and above	TOTAL
Zone 1	-3%	0%	5%	2%	4%

Zone 2	5%	-4%	1%	-3%	-1%
Zone 3	8%	-5%	-1%	-5%	-2%
Zone 4	12%	-4%	-4%	-4%	0%
TOTAL	22%	-13%	1%	-10%	

Source: Kelly, 2011a: 20.

1.5 Housing approval process in Sydney

There are two ways to get a new house approved in Sydney – a complying development certificate (described below) or a development consent. The development consent pathway requires the lodgement of a development application and construction certificate to the local council. The application is assessed against local and State planning policies, which set location and design rules.

The process may involve requests for further information, design changes, senior council officer reviews, external design advisory panels, integrated approval from government agencies, or determination by the Joint Regional Planning Panel. However most detached, semi-detached, dual occupancy and multi-unit developments tend to be determined by mid-level officers under delegation. Nevertheless, approval times average approximately 70 days (see Figure 11).

1.5.1 Complying development certificate

At present, the complying development (or codified) pathway is only available for single dwellings up to two storeys, as well as affordable housing initiatives such as secondary dwellings. It is also restricted to low-risk locations without natural hazards or heritage concerns. The NSW Department of Planning and Environment (2015b) proposes to extend complying development provisions to low rise medium density housing in similar locations.

The complying development certificate pathway removes discretion from the assessment of the housing proposal. Only quantitative controls apply (such as building height, setback, floor space ratio), and if all such controls are met, the development must be approved. If any control is not met, a CDC cannot be issued and the development can only be assessed via a full development application.

Complying development certificates are issued much quicker than development consents. The statutory requirement is within 10 days, however the real-world average is now increasing above 20 (see Figure 11). In addition, a separate construction certificate is not required. Complying development certificates can be issued by either the local council or a private certifier with NSW accreditation.

1.6 Research Questions

With this context in mind, this study examines the following research questions.

1.6.1 What is the purpose of housing codification in Sydney?

There is a fundamental need to understand why the NSW Government has provided a non-discretionary fast track for secondary dwellings outside the normal approval process. Why is it necessary – are there perceived shortcomings in the normal process, a special need for faster approvals, or perhaps both? Understanding this purpose will let us measure the success or otherwise of the policy.

To inform this analysis, it is also important to consider the ways in which discretion in development assessment evolved in the NSW planning system over a 40-year period as the State has grappled with supply and affordability cycles. Finally, the specific reasons behind contemporary complying development rules for secondary dwellings, as stated by the NSW Government, are scrutinized.

1.6.2 What has housing codification achieved in Sydney to date?

Having established the purpose of the complying development policy for secondary dwellings, the second question examines whether this purpose has been achieved. Has the policy had an effect on the provision of secondary dwellings in Sydney? How many secondary dwellings have been approved as complying development, and how does this compare to the normal approval process? Which local council areas are these secondary dwellings being approved in? Most importantly, are these results consistent with the purpose of the policy?

The results show trends in volume and location that are useful in assessing the success of the policy. However, this study goes further by modelling the potential of the policy under optimal uptake. How many extra dwellings could be approved in Sydney if every owner of an eligible lot took up the opportunity to build a secondary dwelling? The modelling identifies all eligible lots in the Sydney Metropolitan Region and again compares this result to the objectives of the policy.

1.6.3 What could codification of low rise medium density housing achieve in Sydney?

The NSW Government is currently turning attention to Sydney's so-called 'missing middle' – the lack of low-rise medium density development (terraces, villas, manor homes) across the metropolitan area. To encourage this type of development, complying development provisions have been drafted for up to 10 two-storey dwellings on a single lot (NSW Department of Planning and Environment, 2015b). The discussion paper for this policy was exhibited from November 2015 to March 2016.

However, the discourse on the draft provisions focusses almost entirely on design rules. The concern is to conservatively control for visual amenity, overshadowing and privacy. There are proposed lot size and zoning controls, but no assessment of what this might mean for the number of eligible lots.

Building on the modelling of the current provisions, this project tests the proposed minimum lot size, zoning and environmental exclusion rules for medium density development to understand just how many additional dwellings could be created and where they could be located, if no other zoning, permissibility or exemption criteria were imposed. Again, the hypothetical results are compared to the NSW Government's stated objectives for housing supply in Sydney.

1.6.4 What lessons are there for policy makers?

Quantifying the performance of the planning policies is inherently difficult (Gurran, Phibbs, Gilbert, Bramley & Austin, 2012: 8). The present study seeks to do this by developing a methodology for modelling the outcomes of codified additional dwellings in Sydney. What variables should policy makers consider in setting the code rules, and how will these affect the supply and location of additional dwellings? What further research could be undertaken to improve our understanding of housing supply and codification in Sydney? What other information would help us more closely link policy purpose with outcome?

1.6.5 Limitations

This project is not about dwelling design. Virtually all debate on complying development rules for dwellings is about the design outcomes – visual amenity, privacy, solar access (Roseth, 1971; Vipond, 1995; DPE, 2015b). There is a pervasive concern that one-size-fits-all rules will generate one-size-fits-all housing with no local character or tailoring to circumstance. Design outcomes are certainly the NSW Government's primary concern. In setting complying development rules for dwellings, DPE (2015b: 10) states that:

The primary consideration should be the built form outcome and the control and management of the relationship of new buildings with existing dwellings. Suggested controls should be focused towards managing the height and size of buildings to a scale that can integrate into existing areas and minimise potential amenity impacts

There is no discussion in the above, or virtually anywhere else, about the other point to codifying housing – increased housing supply for Sydney. This project aims to balance the discourse on design with a better understanding of the supply benefits.

This project is also not about housing affordability. Affordability is a fraught issue, especially in Sydney which is experiencing huge growth in dwelling prices. This project does not argue that any changes in dwelling supply through codification will have a direct effect on affordability, particularly the affordability pressures experienced by low and moderate income earners. However, it recognises that increasing supply is one of the strategies associated with ensuring that increased housing demand does not lead to price inflation.

The final limitation on this report is that of data – the modelling of spatial outcomes from complying development rules is limited by a lack of Sydney-wide spatial data for several key land use constraints (see Section 2.5.2).

1.7 Research Methods

Table 3 summarises the research questions, data sources and limitations for this project. The methodology for the modelling of potential spatial outcomes from the current and proposed housing codes are explained in much greater detail in Section 2.5.1.

Table 3: Summary of research questions, data sources and limitations.

Research Questions	Data sources	Limitations
<p>What is the purpose of housing codification in Sydney?</p> <ul style="list-style-type: none"> - Origins of housing codification – US and Europe. - Debate on discretion and control in housing development. - The purpose of housing codification. - Manifestation of housing codification in Sydney. 	See literature review (Section 1.2)	Varying levels of codification and different terminology across jurisdictions.
<p>What has housing codification achieved in Sydney to date?</p> <ul style="list-style-type: none"> - Volume and location of codified approvals versus standard development approvals - Modelling of current code 	Local Development Performance Monitor (NSW Department of Planning and Environment) 2007-2015.	Local Development Performance Monitor results incomplete/ change year-to-year and affected by local government boundary

settings for secondary dwellings (zone and lot size) <ul style="list-style-type: none"> - Analysis of potential future volume and location of codified secondary dwellings (zone and suburban ring). 	Spatial datasets and Geographic Information Systems.	changes. 2015/16 results unavailable at time of writing. Limited availability of spatial data reflecting code criteria. Results do not account for market forces etc.
What could codification of low rise medium density housing achieve in Sydney? <ul style="list-style-type: none"> - Modelling of proposed code settings (zone and lot size) - Analysis of hypothetical future volume and location of codified medium density dwellings (zone and suburban ring). 	Spatial datasets and Geographic Information Systems.	Limited availability of spatial data reflecting code criteria. Results do not account for market forces etc
What lessons are there for policy makers? <ul style="list-style-type: none"> - Balancing codification and discretion. - Accounting for dwelling volumes and locations. 	Analysis of lot 'inventory'.	As above.

Source: The author.

The four research questions are designed to follow a learning cycle of policy, results, and lessons for policy. This is the type of feedback loop good policy development relies upon (Althaus, Bridgman and Davis, 2015: 14).

The NSW Government's Local Development Performance Monitor provides a broad measure of complying development over time and space. The benefits of using this database (allowing comparison between LGAs and within LGAs over time) far outweighed its limitations (lack of approval-specific details) for the purpose of this project.

In contrast, the exhaustive process of GIS modelling was the most appropriate method of obtaining accurate data on the lots eligible for complying development across Sydney, and produced a unique and versatile dataset.

1.8 Report Structure

Part 1 of this report provided some context for this research through a review of discretionary planning, urban consolidation, housing supply and demand in Sydney, and the key research questions. Part 2 examines housing codification in Sydney, focusing on the objectives of *State Environmental Planning Policy (Exempt & Complying Development) 2008* and *State Environmental Planning Policy (Affordable Rental Housing) 2009* and the outcomes from these codes over the last eight years. It focuses specifically on codification of secondary dwellings, and models the potential dwelling volumes and locations that could result from this code in Sydney. It compares the modelling results with the objectives of the code.

Part 3 applies the same analysis to the NSW Government's proposed codification of low rise medium density development of up to ten dwellings per lot. The modelling results are analysed in terms of potential dwelling densities across Sydney, by both land use zone and suburban ring. Part 4 concludes with some potential lessons for policy makers, including the use of a lot inventory to test and model policy settings, and the need for further research to address the limitations to this modelling.

2 THE CODIFICATION OF SECONDARY DWELLINGS IN SYDNEY

Chapter 2 documents the recent policy and practice of housing codification in Sydney, particularly in the context of the growth in secondary housing and private certification of development across Sydney. The objectives of codification policy in Sydney are derived and compared to spatial outcomes modelled at the end of Chapter 2.

2.1 History of Housing Codification in Sydney

This section of the report outlines a recent history of controls for housing development in Sydney, observing a pendulum between discretionary and codified approaches to regulation. The changes in the cycle have been catalyzed by jumps in Sydney's population, housing affordability and the resultant tension between the NSW Government and Sydney's local councils over how many new houses are needed and where. The NSW Government has tended to resolve the impasse through State planning policies which overrode local rules.

In 1968, the Sydney Region Outline Plan set out housing requirements across the metropolitan area. It and associated policies are credited for the 'six-pack' red brick apartment buildings that rose all over middle ring suburbs in the 1970s (Roseth, 1971: 99).

The passage of the new comprehensive planning legislation, the *Environmental Planning and Assessment Act 1979*, combined with reduced housing pressure in the 1980s meant that local councils retained the majority of planning control over their area and exercised discretion in approving new housing. The NSW Government did not intervene and, as McFarland (2011: 484) points out, only 15 amendments were made to the NSW planning legislation between 1980 and 1998.

One exception to this devolutionary approach to local plan making and development assessment occurred in 1989 and is very relevant to this project. Between 1987 and 1989, Sydney house prices doubled (Searle, 2007: 6). The NSW Government responded to the affordability crisis by permitting dual occupancy, town house and villa development permissible in all residential zones across Sydney. The key planning policies were:

- Sydney Region Environmental Plan 12 – Dual Occupancy (repealed 1997)
- State Environmental Planning Policy 25 – Residential Allotment Sizes (repealed 1997)
- State Environmental Planning Policy 28 – Town Houses and Villa Houses (repealed 1995)

The planning outcomes from this codification were questionable (Vipond, 1995: 4). Searle (2007: 5) noted that, 'outer suburban densities rose inexorably, with the result that too much medium density development was located on the urban fringe away from good public transport and access to employment'. In middle to outer ring suburbs, dual occupancies replaced townhouses and villas as the conventional form of medium density housing (Vipond, 1995: 4).

All of these planning policies were repealed between 1995 and 1997 as the NSW Government's focus shifted to infill, urban containment and key growth centres, in line with international strategic planning trends (Gurran & Phibbs, 2016, 55-56).

Nevertheless, concern regarding population growth and housing supply volumes remained and prompted calls for regulatory reform (Ruming & Goodman, 2016: 76).

In 2000, the current stage in the cycle began, during which, 'a series of incremental changes to the *NSW Environmental Planning and Assessment Act 1979* adjusted the balance between central and local control over plan-making and development assessment' (Gurran & Phibbs, 2016, 55-56).

The move towards non-discretionary housing rules was prompted by a series of high-profile reviews of local approval processes. The NSW Independent Pricing and Regulatory Tribunal (1997: 94) reviewed local approvals in 1997, 'with the aim of improving consistency in decision-making, efficiency, and planning outcomes'. The Productivity Commission's (2004) Inquiry into the Costs of Homeownership also touched on the need to reform the housing approval process.

In 2005, the Development Assessment Forum (2005) developed a leading practice model for development assessment across Australia, which was, 'central to the promotion of a form of urban governance which centres on standardized planning provisions and code assessment, reduced appeal rights, the delegation of approval authority away from elected councillors to council staff and, increasingly, independent assessment panels' (Ruming & Goodman, 2016: 75).

In 2007, the (since abolished) National Housing Supply Council was established, and produced annual monitors of the housing supply situation until 2013. In 2008 the Commonwealth also commenced a Senate Select Inquiry on Housing Affordability in Australia and the National Rental Affordability Scheme (Gurran & Phibbs, 2016: 56).

It was at this time that NSW introduced its current codified housing rules, although Gurran and Phibbs (2016: 56) show that interest in reforming approvals to boost housing supply and affordability has only continued since. In 2013, the NSW Department of Planning (2013) proposed codifying 80% of all development, before the Bill stalled in Parliament (Ruming & Goodman, 2016: 82).

2.2 Current Housing Codification and Uptake in Sydney

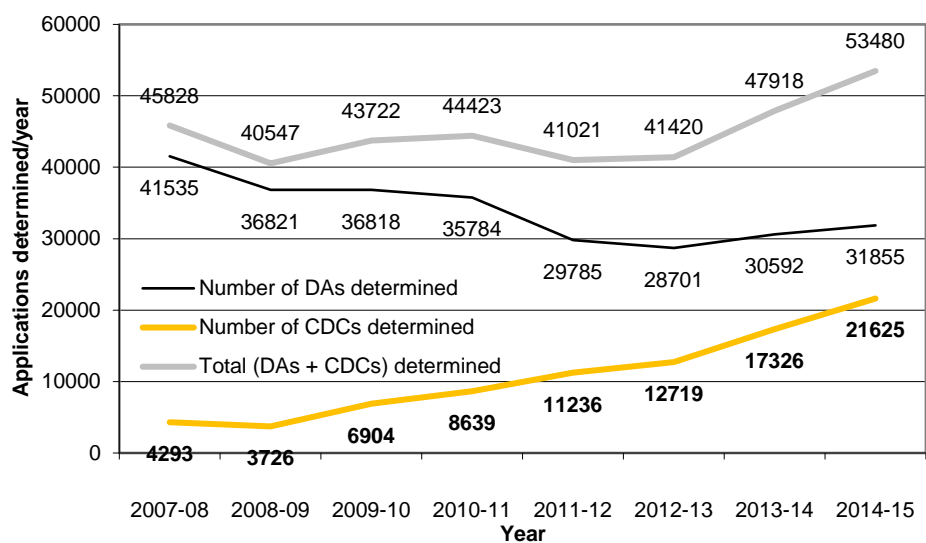
The current Sydney-wide (and NSW-wide) housing codes originated in the 2007 reforms, and consist of:

- *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*. This SEPP commenced 27 February 2009 with general exempt development and codified single dwelling rules. Codified rules for internal alterations, commercial and industrial development were added 7 September 2009.
- *State Environmental Planning Policy (Affordable Rental Housing) 2009*. This SEPP commenced 31 July 2009 with codified rules and incentives for affordable rental housing, including secondary dwellings (detailed in Appendix 1). This SEPP relies on the general land-based exclusions listed in the Exempt and Complying Development SEPP.

It should be noted that many local councils included their own codified rules in their planning controls prior to this date. Complying development certificates have been issued for very minor development since 1997 but the 2008 reforms represented the first significant codification of housing across Sydney.

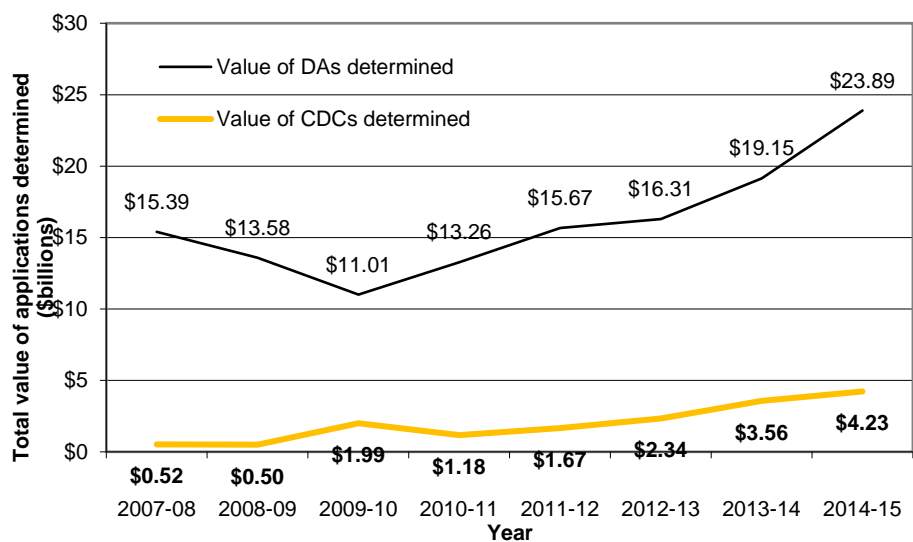
The uptake of all types of codified development by applicants has been significant such that 40 percent of all developments across Sydney now use the code pathway instead of a development application (see Figure 5). This accounts for over \$4 billion in development, or 15.1 per cent of the total value of all development approvals (Figure 6). This share in value appears to have plateaued, which reflects the confining of codification to smaller-scale development of an average \$200,000 (Figure 7). In contrast, the average value of development applications is \$750,000 and rising.

Figure 5: Number of development applications and complying development certificates determined per year in Sydney LGAs, 2007-2015



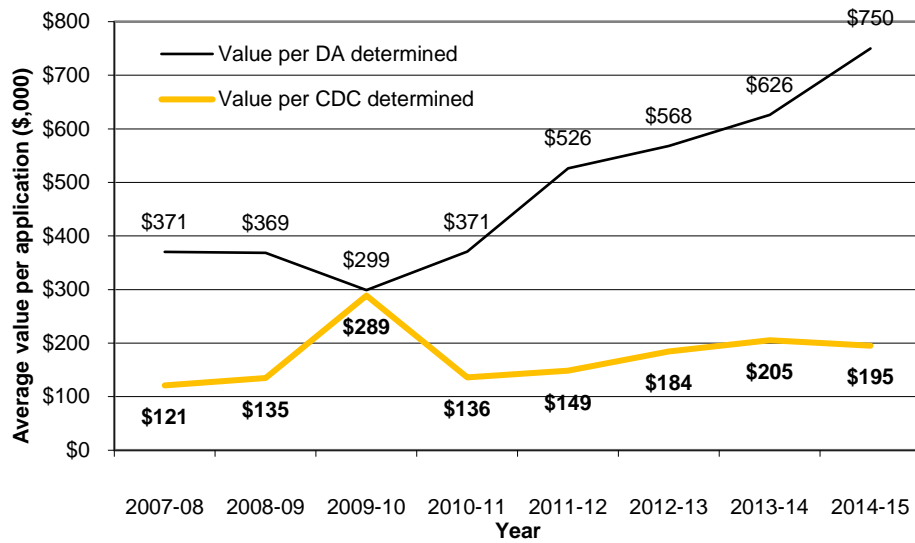
Source: The author, compiled from NSW Government *Local Development Performance Monitors* 2007-2015.

Figure 6: Total value of development applications and complying development certificates determined per year in Sydney LGAs, 2007-2015



Source: The author, compiled from NSW Government *Local Development Performance Monitors* 2007-2015.

Figure 7: Average value per development application and complying development certificate determined in Sydney LGAs, 2007-2015



Source: the author, compiled from NSW Government *Local Development Performance Monitors 2007-2015*.

2.3 Policy Objectives for Housing Codification in Sydney

As codification began to shift development assessment away from local councils towards private certifiers, Australian planning academics began signalling the gradual abolition of planning in a neo-liberal society (Gleeson & Low, 2000; Stilwell, 2000). A pre-occupation with deregulation and privatisation was moving planning functions away from equity towards competition, and possibly away from the objects of NSW planning legislation (Ruming, 2010: 2; McFarland, 2011: 403).

Goodman and Ruming (2016: 72) note that for governments across all neo-liberal societies, 'complexity – which results in uncertainty, delay and resource pressures – is the antithesis of a modern planning system'. For its part, the NSW Department of Planning (2009: 1) states that the current rules have been designed:

to speed up and simplify the process for approving standard types of housing, reducing unnecessary complexity in the planning system and allowing minor residential development without the need for a development application.

The aims stated in both *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* and *State Environmental Planning Policy (Affordable Rental Housing) 2009* refer to consistency, facilitation, delivery and streamlining. In the NSW Government's view, these aims are impeded by inconsistencies at the *local* level (Gurran & Phibbs, 2016: 64; Ruming, 2010: 2). Overcoming local impediments is another obvious, if unstated, aim of the policy.

The NSW Government also sees these aims impeded by the uncertainty implicit in a discretionary planning system (Sartor, 2007). By replacing this uncertainty with codified rules and guaranteed right of approval, certainty for investors was thought to be maximised. At the same time, the flexible approval option was maintained for proposals which don't meet the codified standards.

In summary, it seems the two key objectives of housing codification in Sydney are:

- Increased consistency and reduced local obstruction regarding the location and volume of new housing
- A greater volume of approvals for new housing, approved at a faster rate.

2.4 Policy Objectives versus Outcomes in Sydney

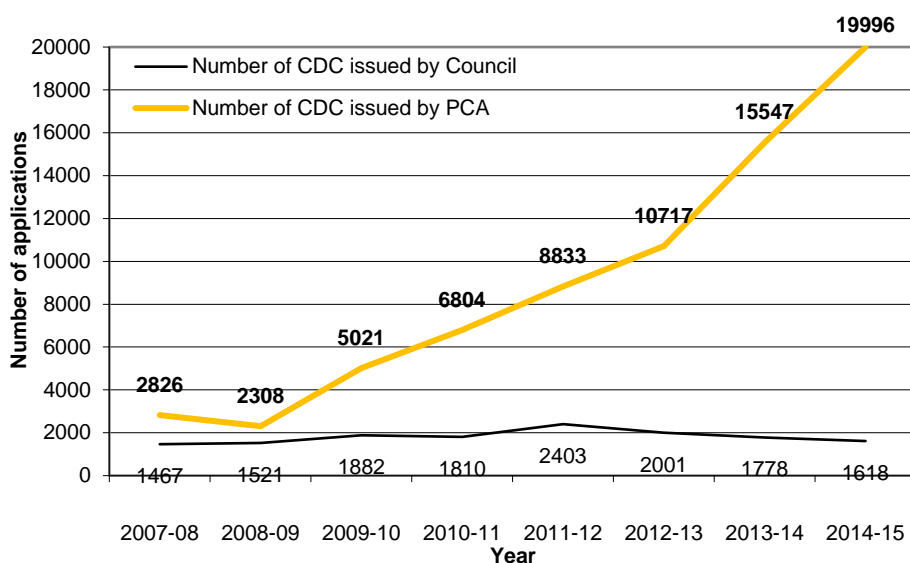
2.4.1 Increased consistency and reduced local obstruction

It is difficult to measure the qualitative aspects of consistency but perhaps one measure is the uptake of the complying development certificates across Sydney. Figure 8 shows that more and more complying development certificates are being issued each year, suggesting more and more projects across Sydney are subject to consistent rules and issued with consistent conditions of approval. This uptake also points to a declining role for local councils and communities (fewer merit assessments, fewer opportunities for public comment).

The rise of private certification is the clearest indication that the role of local councils and communities in development assessment is decreasing. Since the start of the current housing codes in 2008, applicants have increasingly sought their certificates from private certifiers rather than a local council. Councils now issue just 7.5 per cent of all certificates by volume and 3.5 percent by dollar value (Figure 8 and Figure 9). People seeking approval for higher value complying development – new dwellings and secondary dwellings – tend to choose a private certifier over council (Figure 10). The value result may be skewed by councils' inability to refuse the role of certifier for low value applications such as change of use.

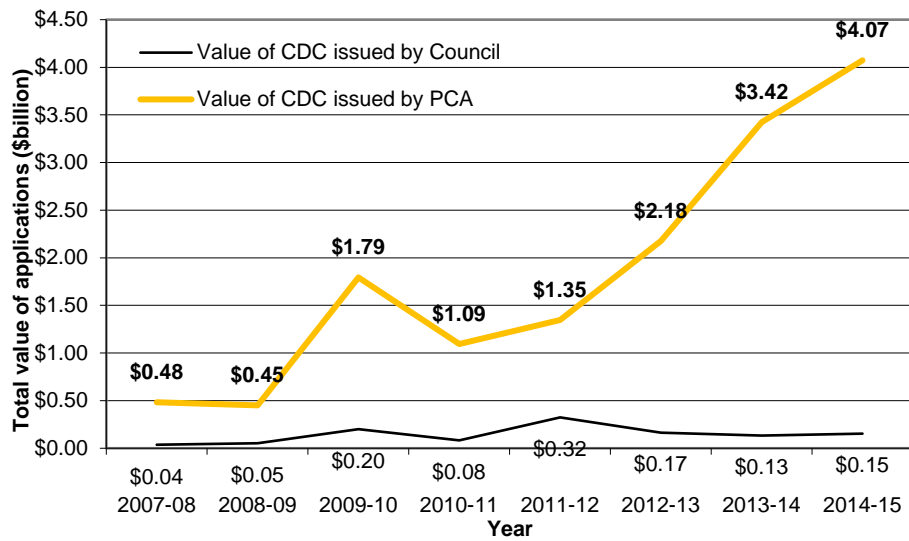
Combined with a handing-back of approval for major residential developments by the NSW Government, it seems council DA planners' future focus may be on major residential development and dwellings in difficult locations (i.e. that don't meet the housing code criteria).

Figure 8: Number of complying development certificates issued by councils and private certifying authorities in Sydney LGAs, 2007-2015



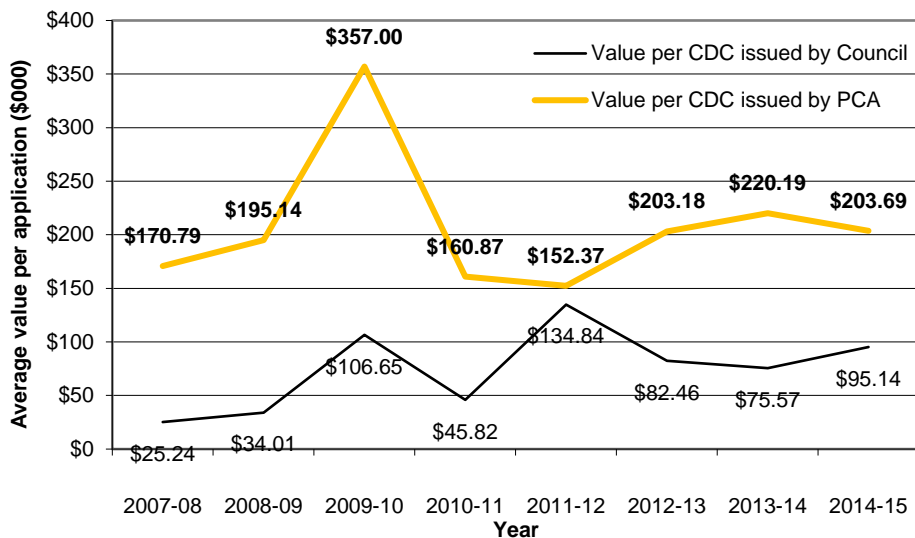
Source: The author, compiled from NSW Government *Local Development Performance Monitors* 2007-2015.

Figure 9: Total value of complying development certificates issued by councils and private certifying authorities in Sydney LGAs, 2007-2015



Source: The author, compiled from NSW Government *Local Development Performance Monitors* 2007-2015.

Figure 10: Average value per complying development certificate determined by councils and private certifying authorities in Sydney LGAs, 2007-2015



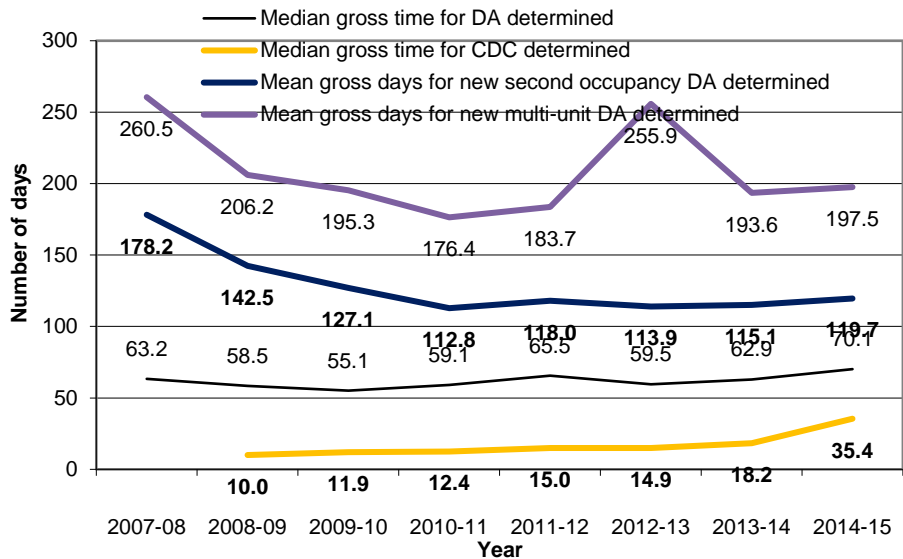
Source: The author, compiled from NSW Government *Local Development Performance Monitors* 2007-2015.

2.4.2 A greater volume of approvals for new housing, at a faster rate

Ruming (2011: 54) noted that local council staff were pessimistic about the ability of codification to improve assessment times when they were introduced. The empirical evidence is limited. While complying development certificates (22 days) are clearly being issued faster than development applications (70 days), there is no data breaking certificate approval times into development type. While highly likely, we cannot say for certain whether new houses or secondary dwellings are approved faster via the housing codes than via a development application.

Nor is it clear whether the introduction of housing codes has helped councils' performance in assessing other development applications. The median gross time for determining a development application in Sydney has stayed between 55 and 70 days since the housing codes started (Figure 11). This is despite slight increases in the staff-to-development application ratio across Sydney. One apparent shift is that councils are approving secondary dwelling development applications slightly faster.

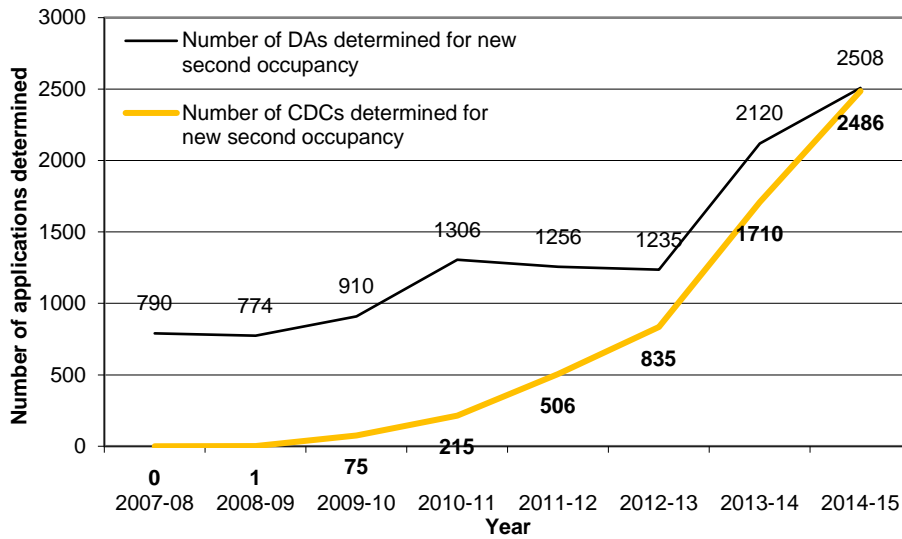
Figure 11: Number of days taken to determine certain types of application in Sydney LGAs, 2007-2015



Source: The author, compiled from NSW Government *Local Development Performance Monitors* 2007-2015.

The results are much clearer when we look specifically at complying development certificates determined for secondary dwellings (noting actual completion data is not available). A 'granny flat boom' has struck Sydney, with 22,040 secondary dwellings approved since 2007. In 2014/15 alone, almost 5,000 secondary dwellings were approved – almost half of which via the housing codes (Figure 12). Based on the historic trend, it seems likely that the codes will have become the preferred approval pathway for secondary dwellings across Sydney when the 2015/16 dataset is available later this year.

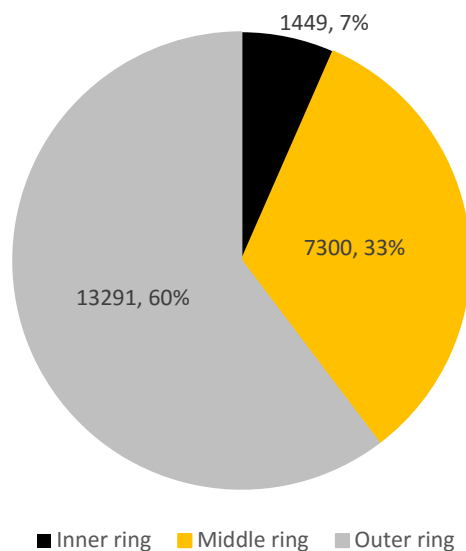
Figure 12: Number of development applications and complying development certificates determined for new secondary occupancies in Sydney LGAs, 2007-2015



Source: The author, compiled from NSW Government *Local Development Performance Monitors 2007-2015*.

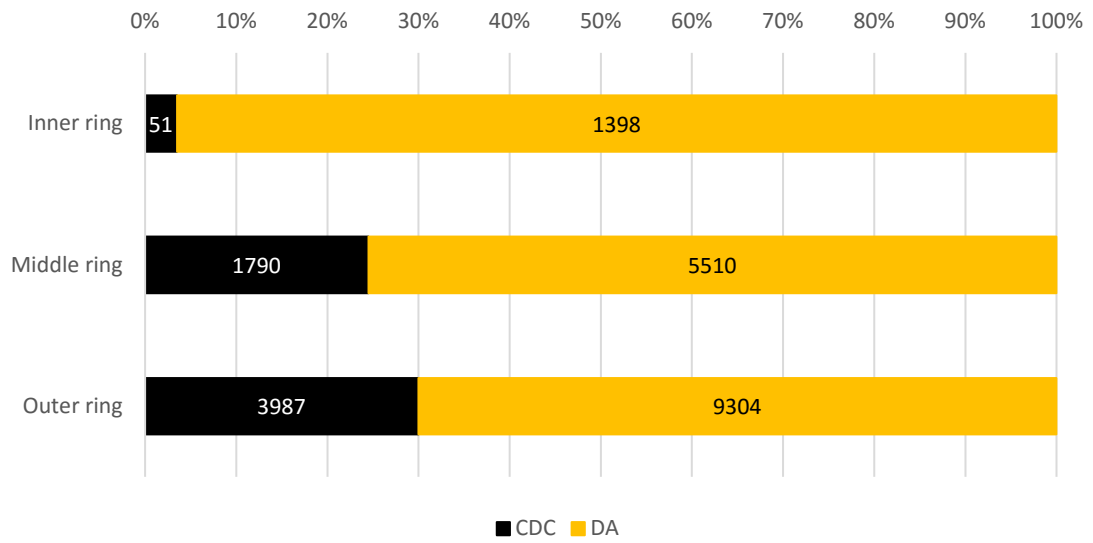
The middle and outer suburban rings have accommodated 93 percent of secondary dwelling approvals (both DA and CDC) since 2007 (Figure 13 and Figure 15). A much higher proportion of secondary dwellings in the middle and outer rings (24.5% and 29.9% respectively) have been approved through the housing codes over this time than in the inner suburban ring (3.5%) (Figure 14).

Figure 13: Number of development applications and complying development certificates determined for new secondary occupancies in Sydney LGAs, 2007-2015, by suburban ring



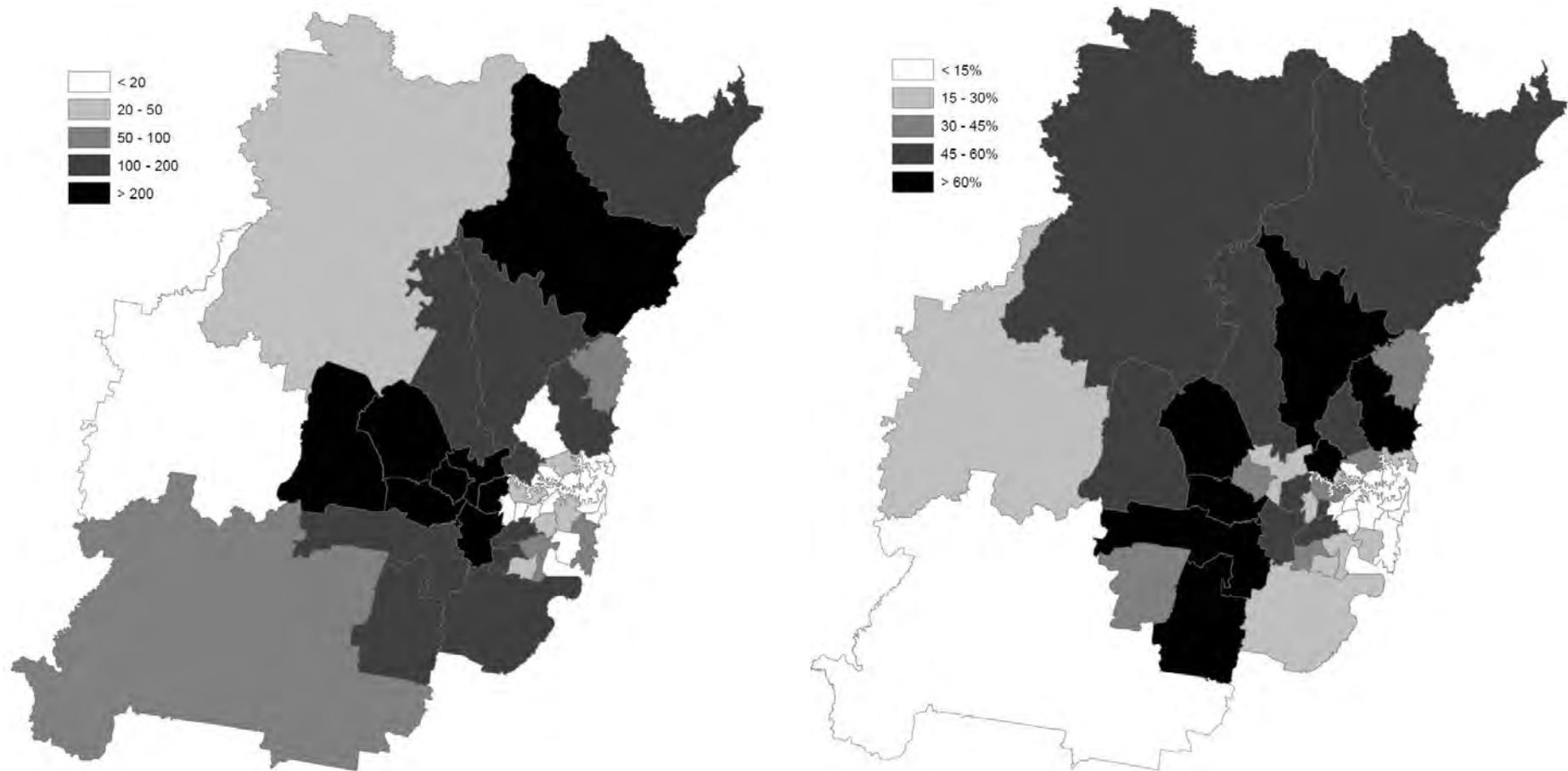
Source: The author, compiled from NSW Government *Local Development Performance Monitors 2007-2015*.

Figure 14: Determinations for new secondary occupancies in Sydney LGAs, 2007-2015, by approval type and suburban ring



Source: The author, compiled from NSW Government *Local Development Performance Monitors* 2007-2015.

Figure 15: Volume of secondary occupancy approvals (left) and percentage approved by CDC (right) in Sydney Metropolitan Region by local government area – 2014/15



Source: The author, compiled from NSW Government *Local Development Performance Monitors 2007-2015*.

2.5 Modelling the Potential Spatial Outcomes of Codification of Secondary Dwellings in Sydney

2.5.1 Modelling methodology

Modelling the full potential of the codified secondary dwellings meant identifying all lots in Sydney that are eligible to build a secondary dwelling via the complying development approval system. By identifying the number of eligible lots we can make a reasonable estimation of the potential number of secondary dwellings that could be built across Sydney, and where they could be built.

The first step was to compile a list of the criteria for eligibility (Appendix 1). The criteria are listed in *State Environmental Planning Policy (Affordable Rental Housing) 2009* but also rely on the general location criteria in *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

The list is long and detailed. The criteria serve the same purpose as a Local Environmental Plan¹ (location rules) and a Development Control Plan² (design rules) except that they apply consistently across all of NSW rather than to individual local government areas. If the list has any streamlining effect, it is on those working on multiple sites (developers, council planners) rather than individual properties. Individual properties were subject to a similar number of rules (albeit site-specific) prior to the commencement of the statewide provisions in 2008.

The criteria are based on both the location of the lot and the design of the dwelling. Only location criteria (listed in bold in Appendix 1) have been incorporated into the modelling because design criteria (for example, setbacks from property boundaries) can usually be met through smart design, whereas location-based criteria are essentially immutable. You cannot change, say, the zoning of a lot without a major separate application process.

The next step was to obtain a GIS shape file dataset(s) for the Sydney Metropolitan Region that accounted for these criteria. The author began by confirming the NSW Department of Planning and Environment did not already hold a GIS shape file dataset identifying all lots eligible. The NSW Electronic Housing Code, which identifies lots eligible under the General Housing Code, relies on textual data from local government property systems rather than spatial datasets. In any event, this data does not equate to eligibility for secondary dwellings under the ARH SEPP.

So the task became to compile individual shape file datasets to account for each criterion. The following datasets were obtained from the NSW Department of Planning and Environment's Open Data portal³:

- Land Zoning (LZN)
- Heritage Conservation (HER)
- State Heritage Register (Centroids)
- State Heritage Register (Curtilages)
- Acid sulphate soils – Planning maps

¹ Local Environmental Plans are the primary land zoning instrument in NSW at the local government level.

² Development Control Plans are design codes used by each local government to assess development applications (standards are often varied based on merit).

³ <https://www.planningportal.nsw.gov.au/planning-tools/open-data>

These were supplemented by obtaining or deriving the following layers directly from NSW Government agencies:

- Environmentally sensitive areas⁴
- Critical habitat
- Wilderness areas
- Biobanking agreements and property vegetation plans
- ANEF contours
- Special Areas (Water NSW Act)

Lot sizes were obtained from the NSW Land and Property Information cadastral lot dataset. However, minor lot boundary discrepancies between the cadastral lot dataset and the Land Zoning (LZN) dataset complicated the identification of all eligible lots. It meant that, when the dataset was extracted to a list of all lots, the extraction process recognised thousands of additional ‘lots’ of small size that are not really lots at all.

To address this issue, all lots under 200m² were excluded from the lot inventory. This would exclude the erroneous ‘lots’ and also reflect the minimum lot size for single dwellings as complying development. It should be noted, however, that this unfortunately also excludes hundreds of real residential lots in inner Sydney suburbs.

Table 4 summarises the location criteria with the criteria for which datasets were able to be obtained in bold. The criteria which could not be accounted for either rely on local datasets maintained by each local government authority, or are simply not available in any dataset the author is aware of.

Table 4: List of all NSW Government location-based complying development rules applied to secondary dwellings (as at June 2016, mapping data that were obtained for this project are in bold)

Section (Clause)	Summary	Reason
<i>State Environmental Planning Policy (Affordable Rental Housing) 2009</i>		
22(2)/23(2g)/ Sch.1 2(1a)	Only two dwellings per lot	Unavailable
23(1c)/23(2c)	Zone R1, R2, R3, R4 or equivalent	
23(1d)	Minimum lot size 450m²*	
23(2bi)/1.17A(1e) of E&C SEPP	Not within environmentally sensitive area	

⁴ ‘environmentally sensitive areas’ means any of the following: (a) the coastal waters of the State, (b) a coastal lake, (c) land to which State Environmental Planning Policy No 14—Coastal Wetlands or State Environmental Planning Policy No 26—Littoral Rainforests applies, (d) land reserved as an aquatic reserve under the Fisheries Management Act 1994 or as a marine park under the Marine Parks Act 1997, (e) land within a wetland of international significance declared under the Ramsar Convention on Wetlands or within a World heritage area declared under the World Heritage Convention, (f) land within 100m of land to which paragraph (c), (d) or (e) applies, (g) land identified in this or any other environmental planning instrument as being of high Aboriginal cultural significance or high biodiversity significance, (h) land reserved under the National Parks and Wildlife Act 1974 or land to which Part 11 of that Act applies, (i) land reserved or dedicated under the Crown Lands Act 1989 for the preservation of flora, fauna, geological formations or for other environmental protection purposes, (j) land identified as being critical habitat under the Threatened Species

23(2bii)/1.18(1c3) of E&C SEPP	Not on land containing draft heritage item	LGA-specific
Sch.1 2(1b)	Minimum width of boundary with primary road*	Unavailable
Sch.1 2(2)	Lawful access to a public road*	Unavailable
<i>State Environmental Planning Policy (Exempt and Complying Development Codes) 2008</i>		
1.17A(1b)	Not on land that is critical habitat	
1.17A(1c)	Not on land that is wilderness area	
1.17A(1d)	Not on land that is or contains item listed on EPI or State Heritage Register or interim heritage order (unless exempted by cl.1.17A(2-4))	
1.18(1b)	Permissible with consent under EPI	LGA-specific
1.19(1a)	Not within heritage conservation area or draft heritage conservation area	LGA-specific
1.19(1b)	Not on land reserved for a public purpose	LGA-specific
1.19(1c)	Not on Acid Sulfate Soils Class 1 or 2	
1.19(1d)	Not on land under biobanking agreement or property vegetation plan	
1.19(1e)	Not within buffer area, river front area, ecologically sensitive area, environmentally sensitive land or protected area under an EPI	LGA-specific
1.19(1f)	Not on land affected by coastline hazard, coastal hazard or coastal erosion hazard under EPI or DCP	LGA-specific
1.19(1g)	Not on land in a foreshore area	LGA-specific
1.19(1h)	Not on land that is in the 25 ANEF contour or higher	
1.19(1i)	Not on land declared to be a special area under the Water NSW Act	
1.19(1)	Not on unsewered land within drinking water catchments	Unavailable
3.36B(2b)	Not on land in bushfire attack level 40 or flame zone	Unavailable
3.36B(2c)	Has direct access to public road if bushfire prone land	Unavailable
3.36B(2d)	Has reticulated water supply and hydrant within 60 metres if bushfire prone land	Unavailable
3.36B(2f)	Has mains electricity if bushfire prone land	Unavailable

Source: NSW Legislation Website. *Does not apply to a secondary dwelling located entirely within an existing dwelling house. *Only applies to a secondary dwelling located entirely within an existing dwelling house.

2.5.2 Data limitations

The many criteria listed in Table 4 for which datasets could not be obtained suggest the modelling has significant limitations. Fortunately, most of the unaccounted-for criteria relate to land issues at the urban fringe in Sydney, such as lack of public roads or utilities, foreshore/coastal land, and bushfire prone land. Heritage items and conservation areas are dispersed throughout Sydney in individual lots and small

precincts, often in non-residential zoned land (and therefore ineligible for codified secondary dwellings due to zoning). In addition, the requirement for permissibility with consent under an environmental planning instrument is overridden by a separate provision making secondary approvals permissible wherever a single dwelling is permissible.

However, two very important criteria missing from the modelling are the requirement for only two dwellings per lot, and the minimum width of boundaries with primary roads. The author is not aware of any dataset identifying the number of existing dwellings per lot in Sydney. One indication, however, of the presence of more than one dwelling is whether a strata plan applies to the lot. This information is contained within the Land and Property Information lot dataset and indicates that the following percentages of lots in each residential zone are under strata title in Sydney:

- R1 General Residential: 9.2%
- R2 Low Density Residential: 1.8%
- R3 Medium Density Residential: 10.9%
- R4 High Density Residential: 31.4%

In terms of minimum widths of boundaries with primary roads, the author is aware of methods to derive street boundary widths (converting polygons to polylines, cleaning duplicates, and spatial joining to the clean polylines) but this exercise is simply beyond the scope of the project. Unfortunately, this is a significant limitation on the modelling results as there are many lots in the Sydney Metropolitan Region (anecdotally up to about 20%) that don't meet the following minimum widths in the code:

- 450-900m²: 12 metres
- >900-1500m²: 15 metres
- >1500m²: 18 metres

The modelling results would have a much greater level of confidence if further research was undertaken into addressing these two dataset deficiencies.

It is also important to consider the limitations to the interpretation of the modelling results. There is no simple conversion of eligible lots to the number of additional dwellings that could be built. The design criteria (see Table 4) restrict secondary dwellings to 60m², suggesting a maximum of two bedrooms. It is highly likely that many of the eligible lots either already have additional dwellings or could be put to a higher and better use (i.e. more dwellings) via a full development application.

2.5.3 Modelling results and discussion

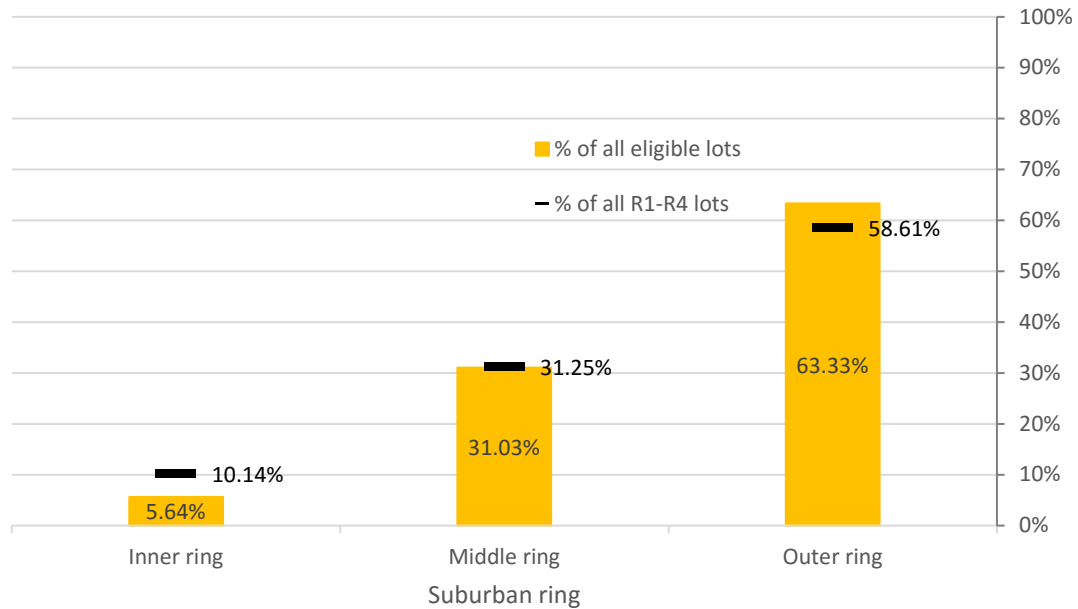
Nevertheless, it is possible to discuss the modelling results in terms of:

- the volume of eligible lots (and percentage of all residential lots) and how this relates to the NSW Government housing targets
- the location of these lots in terms of land use zone and suburban ring, and
- the policy objectives derived in Section 2.3.

Notwithstanding the limitations noted above, the modelling indicates that 835,418 lots in the Sydney Metropolitan Area would hypothetically be eligible to build a secondary dwelling as complying development. This represents 82.98% of all R1-R4 lots in Sydney.

Figure 16 shows the outer ring suburbs contain 63.33% of the lots eligible for secondary dwellings as complying development – almost 5% more than its share of all R1-R4 lots.

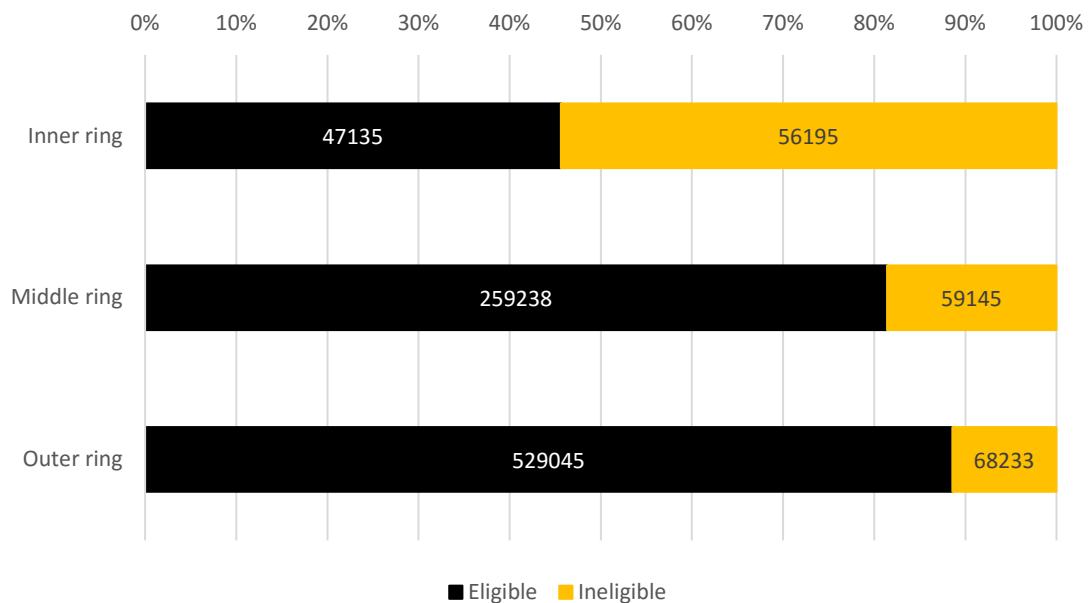
Figure 16: Eligible R1-R4 lots in the Sydney Metropolitan Area by suburban ring



Source: The author, compiled from Geographic Information System data.

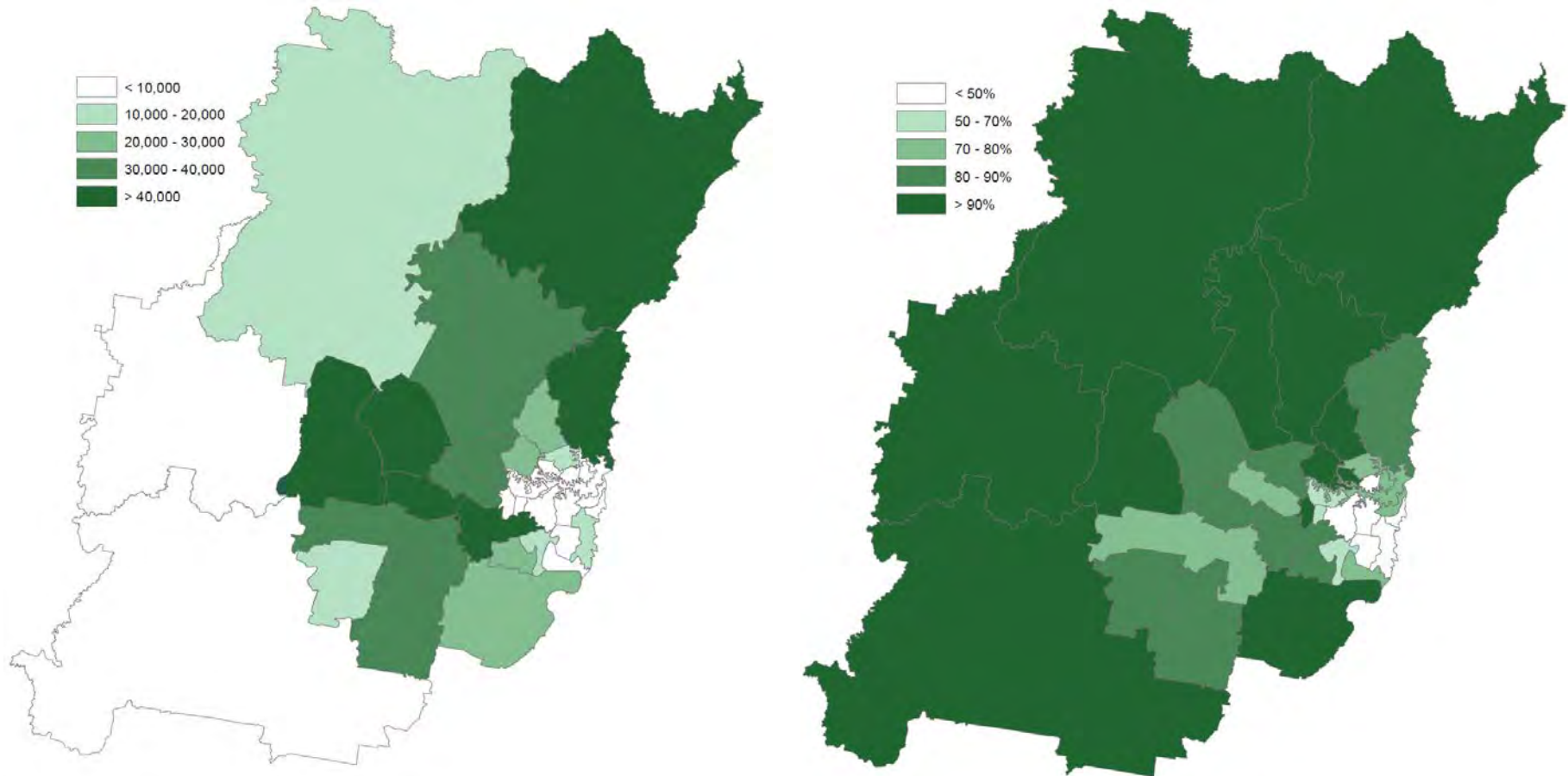
Figure 17 confirms that the outer ring is disproportionately eligible (88% of all outer ring lots). By contrast, less than half of the R1-R4 lots in the inner ring suburbs are eligible for secondary dwellings as complying development. Figure 18 shows this on an LGA-by-LGA basis.

Figure 17: Eligibility of all R1-R4 lots in the Sydney Metropolitan Area for secondary dwellings as complying development, by suburban ring.



Source: The author, compiled from Geographic Information System data.

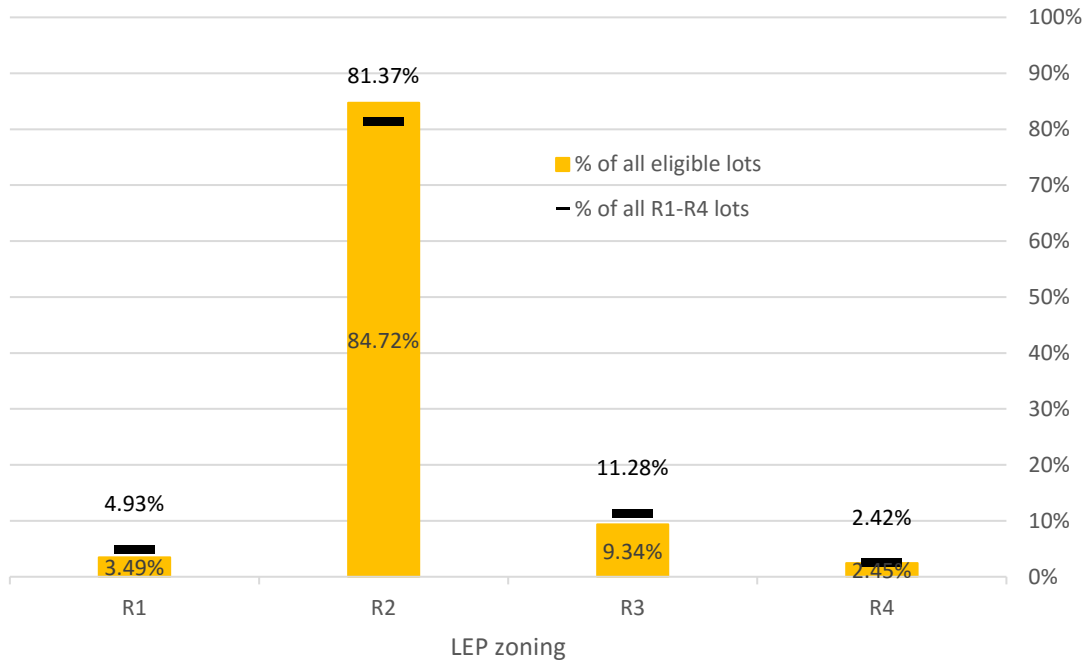
Figure 18: Sydney Metropolitan Area local government areas showing volume (left) and percentage (right) of lots eligible for a secondary dwelling as complying development.



Source: The author, compiled from Geographic Information System data.

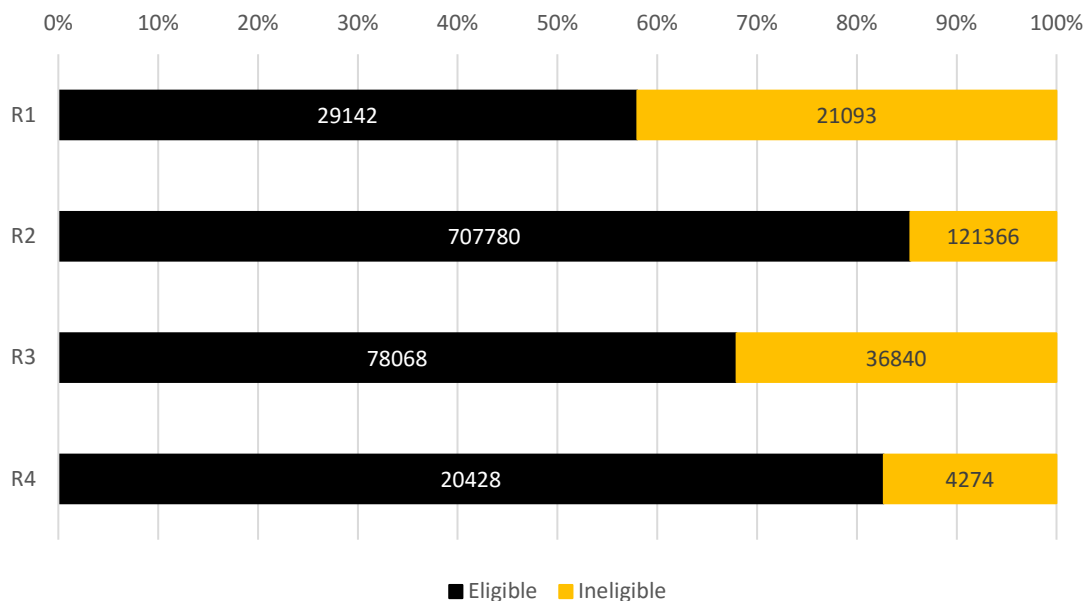
The R2 zone has the overwhelmingly majority of eligible lots by zone (84.72% - Figure 19). Again, this is not unexpected since R2 zoned land dominates the Sydney residential land zoning mix. However only 81.37% of residential zoned land in Sydney is R2, and Figure 20 confirms that R2 zoned land is disproportionately represented in the lots eligible for secondary dwellings as complying development.

Figure 19: Share of eligible lots by LEP zoning in the Sydney Metropolitan Region.



Source: The author, compiled from Geographic Information System data.

Figure 20: Eligibility of all R1-R4 lots in the Sydney Metropolitan Region by LEP zoning



Source: The author, compiled from Geographic Information System data.

R2 is the low density residential zone in Sydney and it is appropriate that it dominates the lots eligible for secondary dwellings. It is worth questioning, however, whether the R3 Medium Density Residential and R4 High Density Residential zones should also be so eligible for secondary dwellings. If the intent for these zones is to encourage medium and high density then making so many lots eligible for only a secondary dwelling may frustrate the urban consolidation process. For example, the Department of Planning and Environment (2015b) believes R4 zoned land is not even appropriate for *medium* density as complying development (see Section 3.1).

In most cases it could be assumed that market forces would encourage higher densities than secondary dwellings in these zones, but affluent suburbs may resist consolidation. Encouraging investment in secondary dwellings in these zones could strengthen that resistance.

These results above suggest a disconnection between the secondary dwelling policy and the density intended by the LEP zoning. The disconnection is apparent in maps of the lots that are eligible for secondary dwellings across Sydney (Appendix 2). There is no discernible spatial pattern to the potential extra density. While it would only represent a modest increase in density overall (with most existing lots able to comfortably accommodate a second dwelling), if secondary dwellings appeared *en masse* in any one location it could impose a burden on existing infrastructure.

3 PROPOSED CODIFICATION OF MEDIUM DENSITY DWELLINGS IN SYDNEY

Chapter 3 extends the modelling methodology developed in Chapter 2 for secondary dwellings to some of the criteria in the recent proposal by the NSW Government to codify up to 10 dwellings per lot. The modelling results are analysed to gauge whether certain locations or zones would be over-represented and the hypothetical consequences for residential densities in Sydney.

3.1 NSW Government Proposal and Objectives

3.1.1 Proposal

In November 2015, the NSW Government released a draft policy codifying low rise medium density housing (DPE, 2015b). The policy defines low rise as up to 8.5 metres in height and medium density as 3-10 dwellings per lot. The code would allow increased density with increased lot size as follows:

1. 2 dwellings per lot (minimum 400m²)
2. 3-4 dwellings per lot (minimum 500m²)
3. 3-10 dwellings per lot (minimum 600m²)

The code would only apply in residential zones R1 (General Residential), R2 (Low Density Residential) and R3 (Medium Density Residential) and all of the land-based exclusions applied by the current housing code (such as critical habitat, environmentally sensitive areas, etc) would remain.

The proposal was exhibited for public comment from 27 November 2015 until 1 March 2016⁵. At the time of writing, 181 public comments had been published on the Department's website.

3.1.2 Objectives

The existing *State Environmental Planning Policy (Exempt & Complying Development) 2008* includes the following aim:

- (d) enabling the progressive extension of the types of development in this Policy

There have been calls for some time for the codification of medium density housing due to both increased demand for this type of housing and the long approval delays associated with it (Table 6) (Kelly, 2011b: 25; 4). In 2013, the NSW Government review of planning legislation envisaged up to eighty percent of development being codified (NSW Department of Planning, 2013: 24). The current proposal represents reform that would otherwise have been implemented through the new planning Act which has stalled in the NSW parliament (Ruming and Goodman, 2016: 84).

Table 5: Percentage of applications decided in the statutory time

	Single residential	Multi-unit residential
New South Wales	65	44
Victoria	64	47

Source: Kelly, 2011b.

⁵ A revised draft policy was exhibited for public comment on 12 October 2016 until 12 December 2016. This revised draft policy is significantly different to the November 2015 version and is not the subject of this modelling exercise.

On releasing a proposal for the expansion of complying development rules to low rise medium density housing, the Minister for Planning stated (DPE, 2015a: 1):

Sydney will need an extra 664,000 homes over the next 20 years. To plan for this growth we must provide quality, sustainable and affordable housing stock for those who need it, where they need it... What has been absent for a long time in NSW is a consistent approach to housing like terraces and dual occupancies.

This aligns with the NSW Department of Planning and Environment's (2014) *A Plan for Growing Sydney* Directions 2.1 and 2.3 to accelerate housing supply and improve housing choice across Sydney. The NSW Government's objectives in this case are similar to those for codified secondary dwellings, only on a more significant scale.

3.2 Modelling the Potential Spatial Outcomes of Codification of Medium Density Dwellings in Sydney

3.2.1 Modelling methodology

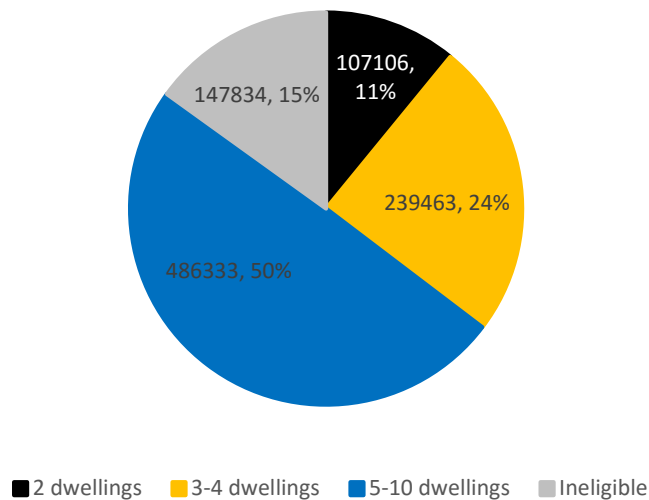
The same methodology described in section 2.5.1 of this report applied to modelling low rise medium density scenario, except that minimum lot size restrictions were altered, and R4 zoned land was removed entirely. The minimum lot size, zoning and environmental exclusions stated in the draft policy were modelled as if no additional zoning, permissibility or exemption criteria were imposed.

3.2.2 Modelling results and discussion

Under this hypothetical scenario, 832,902 lots in the Sydney Metropolitan Region would be eligible for some sort of medium density as complying development. This represents 84.93% of all R1-R3 lots in Sydney. Figure 21 shows the breakdown in terms of maximum potential dwelling yield (based on the proposed minimum lot sizes).

The most notable result is that half of all lots in the Sydney Metropolitan Region would be eligible for the highest yield – 5 to 10 dwellings. This figure is skewed by large lots zoned R1-R3 awaiting further subdivision, especially in outer ring suburbs. But it is possible that their eventual subdivision could lead to even more lots eligible for 5-10 dwellings since minimum lot sizes of 600m² would probably still be quite prevalent. Nevertheless, this result suggests the draft policy settings have the potential to significantly alter Sydney's dwelling stock in favour of the higher end of medium density.

Figure 21: Eligibility of all R1-R3 lots in the Sydney Metropolitan Area for the medium density proposal, by maximum potential dwelling yield

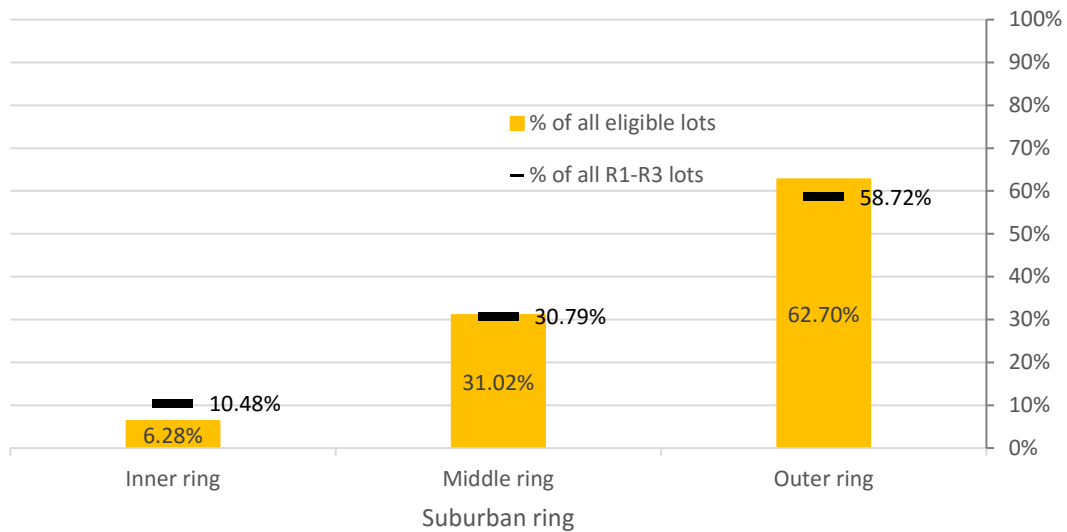


Source: The author, compiled from Geographic Information System data.

If we look at a more meaningful breakdown by suburban ring⁶, the results are also worth noting. Figure 22 shows that 62.7% of all the lots that would be eligible for some sort of codified medium density development are located in the outer suburban ring. On the face of it this may not be a worrying result because the outer, largest suburban ring contains the most lots anyway. It makes sense for the volume of lots to grow from inner to outer rings. However, the outer suburban ring would be disproportionately eligible for medium density as complying development (Figure 22 and Figure 23).

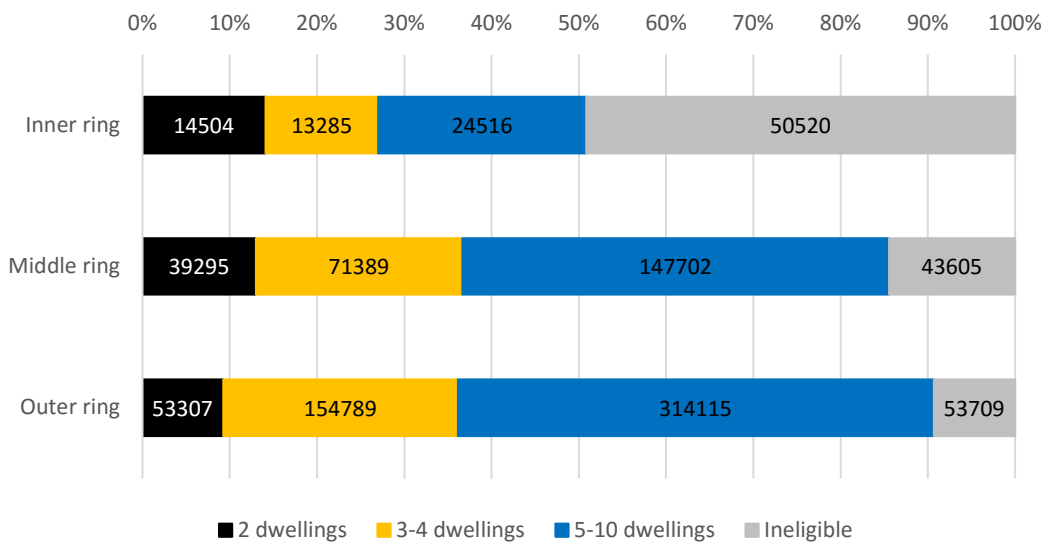
⁶ LGAs have been classified into rings based on the Australian Bureau of Statistics classification updated to reflect amalgamations as at August 2016: Inner Ring (Botany Bay, Inner West, Lane Cove, Mosman, North Sydney, Randwick, Sydney, Waverley and Woollahra); Middle Ring (Burwood, Canada Bay, Canterbury-Bankstown, Cumberland, Georges River, Hunters Hill, Ku-ring0gai, Parramatta, Rockdale, Ryde, Strathfield and Willoughby); Outer Ring (Blacktown, Blue Mountains, Camden, Campbelltown, Central Coast, Fairfield, Hawkesbury, Hornsby, Liverpool, Northern Beaches, Penrith, Sutherland, The Hills, Unincorporated, Wollondilly).

Figure 22: Eligible R1-R3 lots in the Sydney Metropolitan Area by suburban ring



Source: The author, compiled from Geographic Information System data.

Figure 23: Eligibility of all R1-R3 lots in the Sydney Metropolitan Area for the medium density proposal, by suburban ring and maximum potential dwelling yield.



Source: The author, compiled from Geographic Information System data.

More than 90 per cent of lots in the outer suburban ring would be eligible, compared to 85.56 per cent of the middle ring and 50.87 per cent of the inner ring.

The urban consolidation pursued in NSW to date, which focuses on proximity to centres, would suggest the order should be reversed – inner and middle ring lots should be the focus of medium density development, rather than the outer ring.

The disparity extends to maximum potential dwelling yield too. 54.54 per cent of lots in the outer ring would be eligible for the highest form of medium density – 5-10 dwellings. In contrast, only 48.91 per cent of middle ring lots and 23.84 per cent of inner ring lots could achieve this density. Figures 24, 25 and 26 shows this on an LGA-by-LGA basis. Again, conventional urban consolidation theory would dictate that

inner and middle ring suburbs should be much more eligible for 5-10 dwelling developments than outer ring suburbs, which are more suitable for 2-4 dwellings per lot.

It is worth noting that the minimum lot width restriction we have been unable to account for in the modelling would most likely exacerbate this issue, rather than correct it, since a higher percentage of inner and middle ring lots would fail to meet the minimum widths.

Another useful measure of the proposed policy is to compare the results by zoning, especially between the eligibility of R2 Low Density Residential lots and R3 Medium Density Residential lots. The NSW *Standard Instrument – Principal Local Environmental Plan* emphasizes that the R2 and R3 zone objectives are for low density and medium density residential environments respectively. If the proposed policy is to reflect these objectives, a higher proportion of R3 lots should be eligible for codified medium density than R2 lots.

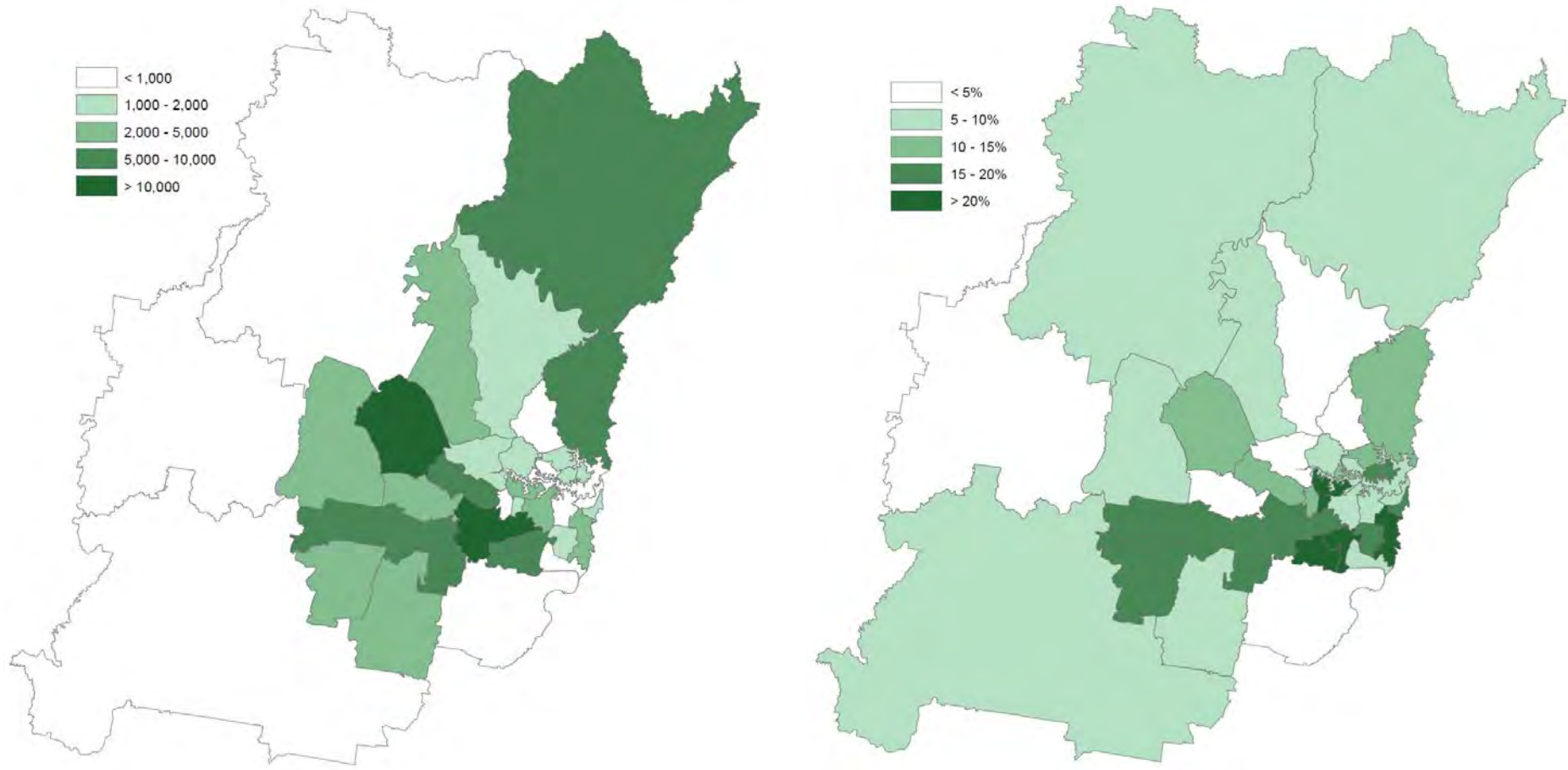
Instead, the reverse would be true (Figure 27 and Figure 28). 86.11 per cent of all lots that would be eligible are zoned R2. R3 zoned lots make up just 10.12 per cent. R2 zoned land makes up the vast majority of residential land in Sydney, but it would still be disproportionately eligible in general, and for 3-4 dwellings and 5-10 dwellings in particular.

Over half (52.34%) of all R2 zoned land in Sydney would be eligible for the highest medium density yield – 5-10 dwellings. In contrast only 38.65 per cent of R3 zoned land could achieve that density. Almost 20 per cent of R3 zoned land would only be eligible for dual occupancy.

Again these results suggest a serious disconnection between these proposed policy settings and the density intended by the LEP zoning. Lot size would become a very significant determinant of density. The disconnection becomes clearer when the eligible lots are mapped across Sydney. Appendix 3 contains maps of all Sydney Metropolitan local government areas, with eligible lots coloured by the maximum potential dwelling yield. In the traffic-light colour scheme, areas of highest potential density are coloured red.

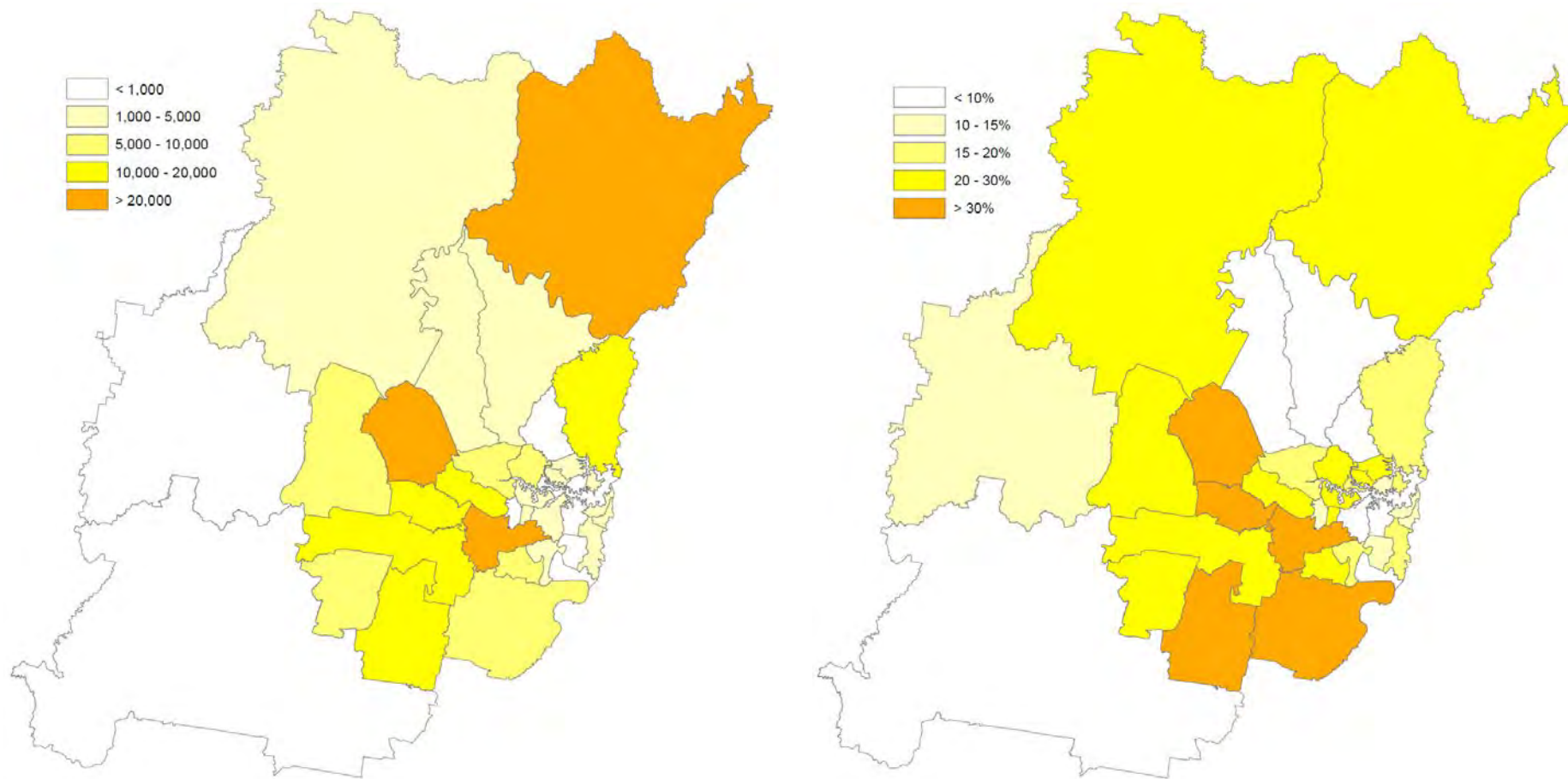
The mapping represents a huge volume of information and it is difficult to derive any patterns. But that is the point – there is no discernible pattern to the density possible under these policy settings. Instead, a blanket of potential medium density would be spread over Sydney, without adequate accounting for the centres-based approach to urban consolidation practised in NSW.

Figure 24: Sydney Metropolitan Area local government areas showing volume (left) and percentage (right) of lots hypothetically eligible for up to 2 dwellings as complying development.



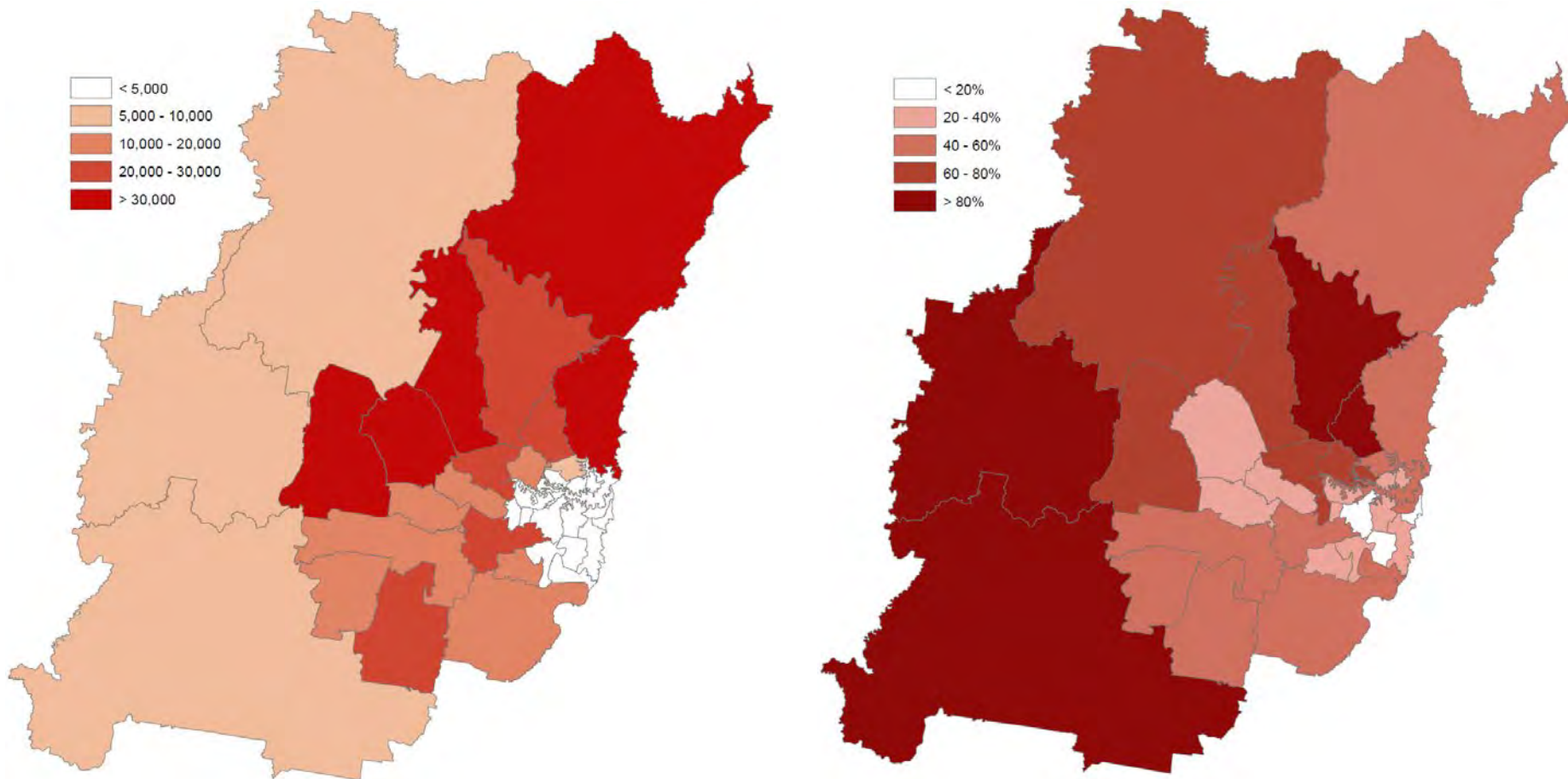
Source: The author, compiled from Geographic Information System data.

Figure 25: Sydney Metropolitan Area local government areas showing volume (left) and percentage (right) of lots hypothetically eligible for up to 4 dwellings as complying development.



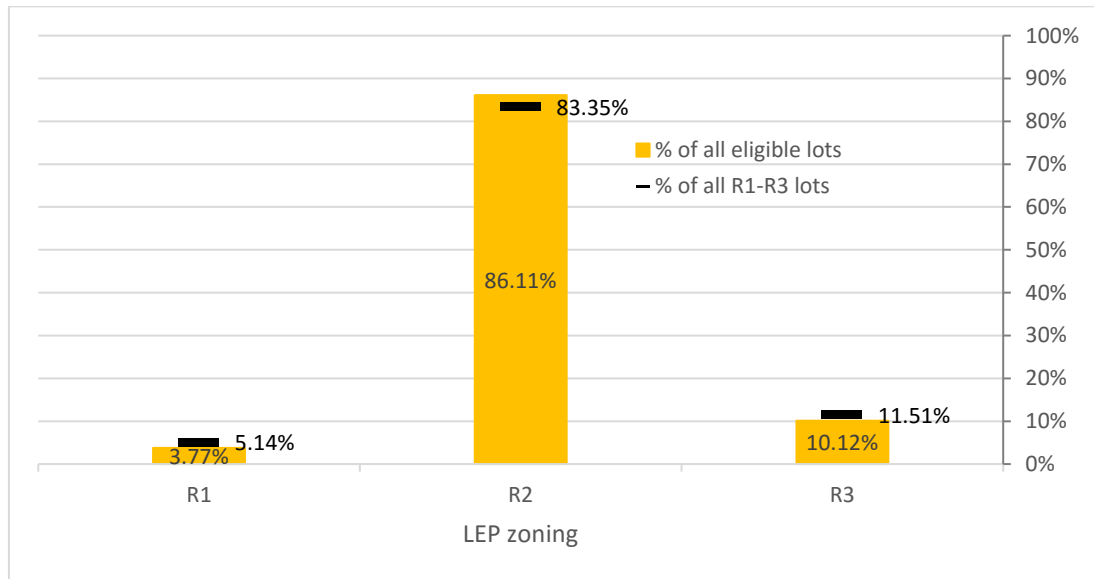
Source: The author, compiled from Geographic Information System data.

Figure 26: Sydney Metropolitan Area local government areas showing volume (left) and percentage (right) of lots hypothetically eligible for up to 10 dwellings as complying development.



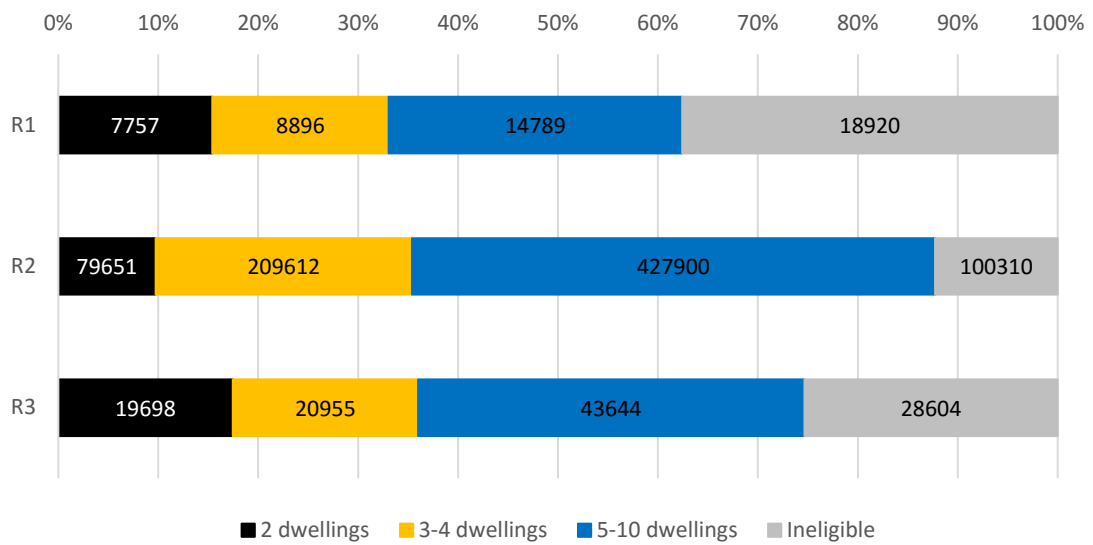
Source: The author, compiled from Geographic Information System data.

Figure 27: Eligible R1-R3 lots in the Sydney Metropolitan Area by LEP zoning



Source: The author, compiled from Geographic Information System data.

Figure 28: Eligibility of all R1-R3 lots in the Sydney Metropolitan Area for the medium density proposal, by LEP zoning and maximum potential dwelling yield.



Source: The author, compiled from Geographic Information System data.

4 CONCLUSIONS

4.1 Policy issues for consideration

The NSW Government aims to provide 664,000 additional dwellings in Sydney by 2031, or 44,000 per year. Secondary dwellings are already contributing 5,000 dwellings (and growing) to this target each year. This project has shown over 830,000 lots would be eligible for codified development of additional dwellings and if medium density development occurred on every hypothetically eligible lot, over five million additional dwellings could be built. The actual number built is likely to be much lower, but these figures do suggest there is room to alter the policy settings without compromising housing targets.

4.1.1 *Balancing codification with discretion*

Codification represents a loss of discretion for planners and it is important to consider whether that loss is offset by the gains in terms of housing supply. The trade-off is less drastic for the minor density increases caused by secondary dwellings than it is for the proposed medium density development.

The modelling has shown that many lots zoned for medium or high densities would be eligible for secondary dwellings. We should consider whether this risks losing these lots to suboptimal densities, especially in more affluent suburbs. There is a case to be made for retaining discretion over secondary dwellings in the R3 and R4 zones. The R2 zone contributes more than 85 per cent of the lots eligible for codified secondary dwellings – hypothetically 700,000 additional dwellings – so removing the R3 and R4 zones from the code would not jeopardise the government's objectives.

In terms of the proposed policy for codified medium density development, a key question is whether control over density as high as ten dwellings per lot should be lost to codification. This is largely a question of design, which is given considerable thought in the policy discussion paper (NSW Department of Planning and Environment, 2015b) and is not addressed by this research project. However, the hypothetical (and limited) modelling in this project has shown that more than half of all R2 zoned lots in Sydney would be eligible for up to ten dwellings, so the consequences for suburban density, especially in the outer suburbs, of retaining the ten-dwelling allowance could be significant.

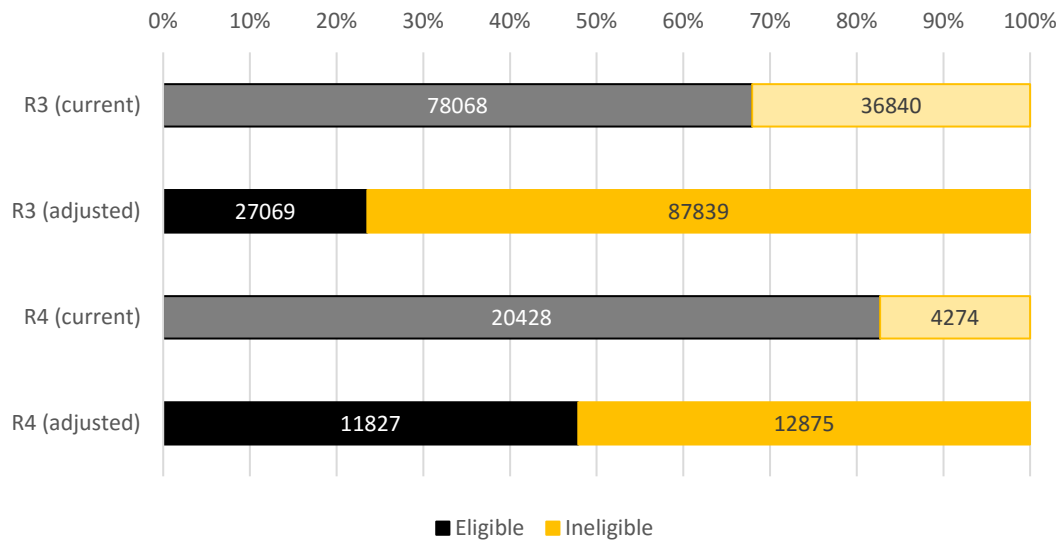
4.1.2 *Re-connecting with zoning*

The current policy for secondary dwellings does not distinguish between residential zones. The same criteria apply to lots regardless of whether they are zoned R1, R2, R3 or R4, despite the differences in density objectives for these zones. The modelling for the hypothetical medium density scenario shows that, without additional zoning, permissibility or exemption criteria, codification of medium density development could lead to lots containing ten dwellings that are located far from centres and infrastructure, interfacing with detached single dwellings. It could also lead to enclaves of such development, multiplying densities of some neighbourhoods by ten, simply because the lots are the right size (and with no oversight by council planners).

It is worth considering reconnecting the lot size criteria to zones. One example for secondary dwellings could be to limit eligibility in the R3 and R4 zones to lots 450-700m² in size. Lots above this size in the R3 zone can comfortably accommodate at least four townhouses. It would also allow small R4 lots to increase their yield modestly while awaiting lot consolidation for residential flat buildings. Figure 29 shows such a change in policy would reduce eligibility for secondary dwellings to less

than a quarter of all R3 zoned lots, and less than half of all R4 zoned lots. Secondary dwellings would therefore be focused in the R2 zone where they are most appropriate.

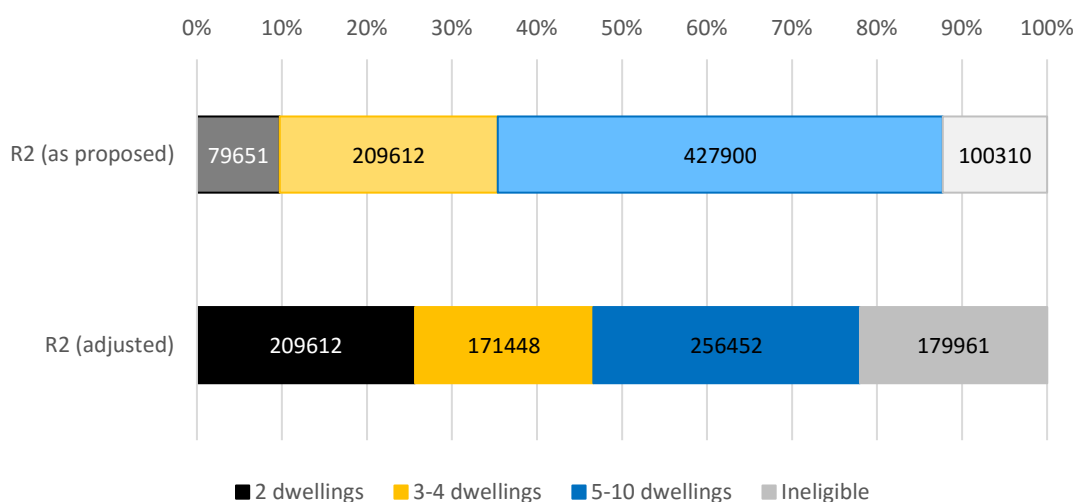
Figure 29: Changes to number of lots eligible for codified secondary dwellings by limiting lot size to 450-700m² in the R3 and R4 zones.



Source: The author, compiled from Geographic Information System data.

Conversely, the proposed policy for codified medium density development could be revised to raise the minimum lot size criteria for R2 zoned land. For example, raising the minimum lot size in the R2 zone for each dwelling yield category by 100m² (2 dwellings – 500m², 3-4 dwellings – 600m², 5-10 dwellings – 700m²) results in significant changes to the potential dwelling mix in this zone (Figure 30). A far more even spread in dwelling yields would be achieved in the R2 zone for a loss of only 79,651 (9.74%) eligible lots across Sydney.

Figure 30: Changes to maximum potential dwelling yield per lot from a 100m² increase in minimum lot size criteria in the R2 zone



Source: The author, compiled from Geographic Information System data.

A more direct approach to reconnecting the code rules with zoning would be to only allow a particular dwelling type if it is permissible in that zone under the LEP for that

area. This rule already applies to most complying development in NSW under clause 1.18(1)(b) of *State Environmental Planning Policy (Exempt and Complying Development) 2008*. Since the publication of the discussion paper for the proposed medium density code (and the modelling for this research project), the NSW Government has indicated that it would extend the application of this rule to medium density development (Gladstone, 2016; NSW DPE, 2016b: 16).

4.2 Policy modelling using spatial data

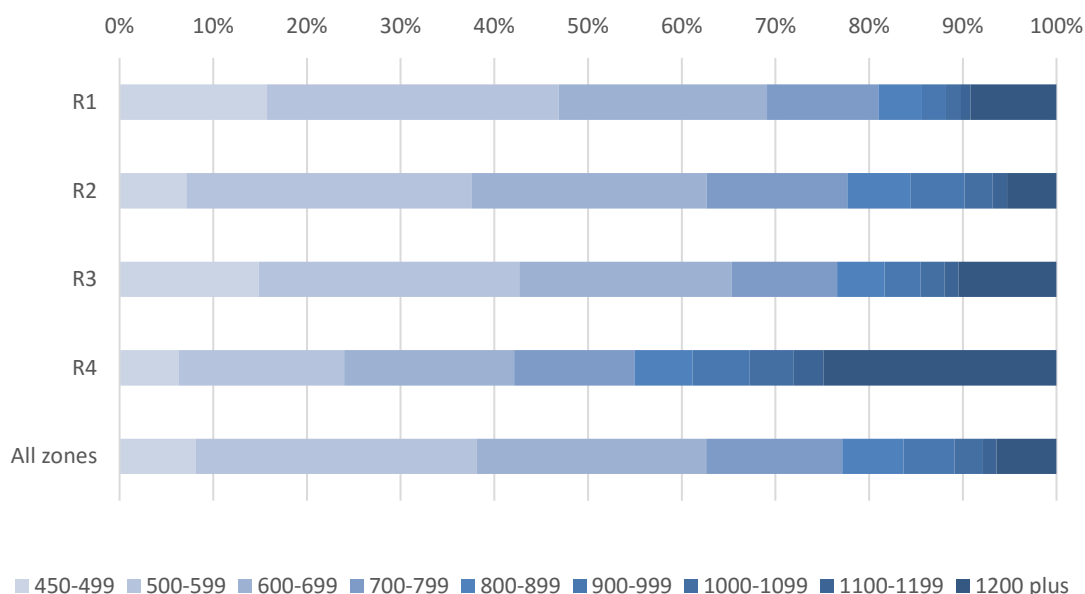
The analysis of potential changes to policy settings above is only possible because this project has developed an inventory of residential lots in Sydney using spatial data. The inventory contains key attributes for the over one million residential lots in Sydney as at July 2016, including:

- Local government area (post August 2016 amalgamations)
- Zoning (R1, R2, R3, R4)
- Lot size (m²)
- Lot and Plan numbers (including strata title if applicable)
- Eligibility for *State Environmental Planning Policy (Exempt and Complying Development) 2008* (location-based criteria only)

The limitations to the inventory were discussed in Section 2.5.2 and further refinements could significantly improve the value of its outputs (Section 4.3.2). Nevertheless, an inventory focused on these attributes alone provides diverse modelling opportunities.

For example, the inventory allows us to cross-reference zoning and lot size (Figure 31) to understand the implications of lot size settings in different zones. We can also cross-reference zoning or lot size to local government area/suburban ring to understand how densities change with distance from the centre. While it is only used for this project as an indicator of existing multi-dwelling use, the strata information could be cross-referenced to lot size, zoning or local government area to understand key strata tendencies in Sydney.

Figure 31: Sydney residential lot inventory – all R1-R4 zoned land by lot size.



Source: The author, compiled from Geographic Information System data.

At the very least, the inventory shows the ease with which planning policy settings can be modelled to understand the volume and location outcomes across Sydney. If code makers were to embrace this approach from the outset, these objective outcomes could be debated alongside more subjective questions like design and amenity. However, at present spatial modelling of the kind demonstrated in this project is not routinely carried out or made transparent to help stakeholders understand the potential benefits and risks of different regulatory options.

4.3 Further Research

4.3.1 Housing volume outcomes from discretionary versus codified approval

Housing codes tend to be more conservative than discretionary assessment in terms of the intensity of development they will allow (NSW Department of Planning and Environment, 2015b: 4). In discussing the uptake of codified development in Sydney it would be very useful to understand the difference in dwelling yields possible between the housing code and local development controls. This could include longitudinal tracing of different dwelling outcomes by location and dwelling type, under different assessment paths.

Such research would contribute to our understanding of developer decisions (the trade-off between approval delays and higher yields under discretionary assessment) and the likely future uptake of codified development, especially for medium density development.

4.3.2 Refinements to the code-related spatial data

Spatial datasets addressing any of the criteria not accounted for in this project would be very valuable in refining the identification of lots eligible for codified housing development. One exercise would be to convert the text-based listing of eligible lots held by the NSW Government to a spatial dataset, however even this list does not account for all the eligibility criteria. Lot width, in particular, is a key determinant of eligibility for codified development, but time-consuming to extract from geographic information systems. The link to permissibility under applicable LEPs, which the NSW Government (Gladstone, 2016) has since indicated it will apply to medium density, could also be added to the model.

In terms of the analysis of modelling results, it would be useful to compare the eligibility of a lot for codified development with the existing use/density of the lot. The author is not aware of any Sydney-wide spatial data which catalogues the existing use of each residential lot (vacant/single dwelling/multiple dwelling). It would also be a useful exercise to geobatch the street addresses of eligible lots and analyse their proximity to city centres and transport nodes in order to better understand the impact of city-wide codes on urban consolidation.

With a refined inventory we would be able to understand the relationship between lot eligibility for codified development and other spatial data such as geographic constraints, new housing supply or house price outcomes.

4.4 Conclusion

This research project set out to balance the debate on housing codification in Sydney with accurate data on the potential housing volume and location results. It documented the past growth and bright future of both codified housing approvals and private certification. In this context, it applied a unique spatial model to Sydney in order to understand where codified housing could be located under current and

proposed code settings. In a sense the results model a hypothetical neoliberal planning scenario where local controls are largely overridden in the name of housing supply.

The results suggest that Sydney's outer ring suburbs could be disproportionately over-exposed to a low-rise medium density code. Similarly, the R2 Low Density Residential zone could be more exposed than its medium and high density counterparts across Sydney. The overexposure is made riskier by the lack of strategic oversight from planning authorities. It demonstrates the risks of using lot size as the determinant of density, and the importance of keeping a connection between the code and the density intentions of the local land use plan.

The research might contribute to policy decisions and development in Sydney by increasing our awareness of the relationship between policy settings and the spatial results across Sydney's residential lots. The lot inventory developed through the project might inform future policy settings. More widely, the research serves as a useful case study in the search for balance between development certainty and discretionary control over spatial planning.

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APPENDICES

Appendix 1: List of all NSW Government complying development rules applied to secondary dwellings (as at July 2016, location criteria in bold)

Section (Clause)	Summary
<i>State Environmental Planning Policy (Affordable Rental Housing) 2009</i>	
22(2)/23(2g)/ Sch.1 2(1a)	Only two dwellings per lot
22(3a)	Total floor area no more than permitted for single dwelling under EPI*
22(3b)/23(2h)/ Sch.1 4(1)	Floor area of secondary dwelling no more than 60m ² unless EPI allows
23(1a)	Meets cl.1.17A and 1.18(1) and (2) of E&C SEPP (see below)
23(1b)	Not on land described in cl.1.19(1) of E&C SEPP (see below)
23(1c)/23(2c)	Zone R1, R2, R3, R4 or equivalent
23(1d)	Minimum lot size 450m²*
23(1e)/23(2e)	No new basement or alterations/additions to existing basement
23(1f)/23(2f)	No new roof terrace or alterations/additions to existing roof terrace
23(1g)	Satisfies development standards in Sch.1 (see below)*
23(2a)/1.18(1c) of E&C SEPP	Complies with the Building Code of Australia
23(2bi)/1.17A(1e) of E&C SEPP	Not within environmentally sensitive area
23(2bii)/1.18(1c3) of E&C SEPP	Not on land containing draft heritage item
23(2d)	No external alterations to principal dwelling other than new entrance*
23(2A)	Satisfies cl.3.36B and 3.36C of E&C SEPP (see below)
Sch.1 2(1b)	Minimum width of boundary with primary road*
Sch.1 2(2)	Lawful access to a public road*
Sch.1 3	Maximum site coverage*
Sch.1 4(2) and (3)	Total floor area of all development on lot*
Sch.1 5	Setbacks/floor area for balconies, decks, terraces and verandahs*
Sch.1 6	Building height*
Sch.1 7	Setbacks from roads, other than classified roads*
Sch.1 8	Setbacks from classified roads*
Sch.1 9	Setbacks from side boundaries*
Sch.1 10	Setbacks from rear boundaries*
Sch.1 11	Exceptions to setbacks*
Sch.1 12	Calculating setbacks*
Sch.1 13	Building articulation*

Sch.1 14	Building elements within the articulation zone to a primary road*
Sch.1 15	Privacy*
Sch.1 16	Landscaped area*
Sch.1 17	Principal private open space*
Sch.1 18	Earthworks, retaining walls and structural support*
Sch.1 21	Drainage*
Sch.1 22	Setbacks from a protected tree*

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

1.17A(1a)	No concurrence required other than local council or DECCW under s79B[3] of EP&A Act
1.17A(1b)	Not on land that is critical habitat
1.17A(1c)	Not on land that is wilderness area
1.17A(1d)	Not on land that is or contains item listed on EPI or State Heritage Register or interim heritage order (unless exempted by cl.1.17A(2-4))
1.18(1a)	Not exempt development
1.18(1b)	Permissible with consent under EPI
1.18(1c1)	Not require an environment protection licence under POEO Act
1.18(1c2)	Not designated development
1.18(1d)	Has approval for on-site effluent disposal/stormwater drainage if necessary
1.18(1e)	Has approval for building of any kerb, crossover or driveway if necessary
1.18(1f)	Has approval of Mine Subsidence Board if necessary
1.18(1g)	Not include skylight or roof window if within Orana REP 1 – Siding Spring area
1.18(1h)	Has approval for tree removal or pruning if necessary
1.18(2)	Built in accordance with AS2021-2000 if within 20-25 ANEF contours
1.19(1a)	Not within heritage conservation area or draft heritage conservation area
1.19(1b)	Not on land reserved for a public purpose
1.19(1c)	Not on Acid Sulfate Soils Class 1 or 2
1.19(1d)	Not on land under biobanking agreement or property vegetation plan
1.19(1e)	Not within buffer area, river front area, ecologically sensitive area, environmentally sensitive land or protected area under an EPI
1.19(1f)	Not on land affected by coastline hazard, coastal hazard or coastal erosion hazard under EPI or DCP
1.19(1g)	Not on land in a foreshore area
1.19(1h)	Not on land that is in the 25 ANEF contour or higher
1.19(1i)	Not on land declared to be a special area under the Water NSW Act

1.19(1)	Not on unsewered land within drinking water catchments
3.36B(2a)	Meets specified bushfire codes
3.36B(2b)	Not on land in bushfire attack level 40 or flame zone
3.36B(2c)	Has direct access to public road if bushfire prone land
3.36B(2d)	Has reticulated water supply and hydrant within 60 metres if bushfire prone land
3.36B(2f)	Has mains electricity if bushfire prone land
3.36B(2g-i)	Must meet specific design rules for gas supply if bushfire prone land
3.36C(2)	Flood prone lots must have specific certification to be complying development
3.36C(3)	Must meet specific design rules if in flood planning area

Source: NSW Legislation Website. *Does not apply to a secondary dwelling located entirely within an existing dwelling house. *Only applies to a secondary dwelling located entirely within an existing dwelling house.

Appendix 2: Lots eligible for codified secondary dwellings in the Sydney Metropolitan Region by local government area

Appendix 3: Lots eligible for proposed codified medium density dwellings in the Sydney Metropolitan Region by local government area



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