# District Plan Review - Residential Chapter 14

# Section 32- Appendix 5

Design Controls Review of Built Form,
Character and Amenity Provisions for the
Existing Flat Land Residential Zones



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1.	Summary of Issues and Recommendations	3
1.1	RESIDENTIAL SUBURBAN (FORMER L1- L2)	3
1.1.		
1.1.	2 HIGH RESOURCE CONSENT GENERATION	
1.2	RESIDENTIAL MEDIUM DENSITY (OPERATIVE L3)	4
1.2.	1 HIGH QUALITY RESIDENTIAL ENVIRONMENTS	4
2.	Review Approach and Method	5
2.1	METHODOLOGY	
2.2	APPROACH	5
3.	Status Quo, Trends and Discussion	6
3.1	RESIDENTIAL SUBURBAN ZONES (OPERATIVE L1 & L2)	
3.1.		
3.1.	2 HIGH QUALITY RESIDENTIAL ENVIRONMENTS – NATURE OF OPEN SPACE	7
3.1.		
3.1.		
3.1.		
3.2		
3.2.		
3.2.		
3.2.		
3.2.		
3.2.	5 HIGH QUALITY RESIDENTIAL ENVIRONMENTS - ON-SITE AMENITY	24
4.	Further Opportunities for Simplification / Consolidation	27
	RESIDENTIAL SUBURBAN ZONES (OPERATIVE L1-L2)	
	1 SEPARATION DISTANCES	
	2 Continuous building length	
4.2	MEDIUM DENSITY ZONE	31
5.	Recommended Rule Changes Summary	32
5.1	RESIDENTIAL SUBURBAN (OPERATIVE L1 AND L2)	32
5.2	RESIDENTIAL MEDIUM DENSITY (OPERATIVE L3 )	33
6.	Appendices	33

# 1. Summary of Issues and Recommendations

# 1.1 Residential Suburban (Former L1- L2)

# 1.1.1 High Quality Residential Environments

housing types, sizes and densities to meet the diverse needs of the community"			
Issue Recommendation			
1.	No meaningful variety in housing size or type	Remove site coverage bonus for single	
	in L2. As a transitional zone between L1 and	storey houses. Encourage two-storey	
	L3, L2 would be expected to provide for small	housing with smaller footprints or smaller	
	single detached housing on smaller sites.	single storey houses.	

Range of types and sizes 14.1.1 Housing Supply:" ... an increased supply and wide range of

**Amenity** 14.1.5 High Quality Residential Environments: "...well designed, have a high level of amenity and enhance local character..."

Iss	ue	Recommendation
2.	City and neighbourhood amenity- Potential	Remove site coverage bonus for single
	for higher density development for adverse	storey development in suburban residential
	effects on storm water management, water	zones (operational L1 and L2).
	quality, and visual amenity as a result of the	
	accumulated impervious surfaces over time.	
3.	Low permeability and high site coverage in L2	
	and increasing single storey house size in L1.	
4.	Street amenity- Trend for increased garaging	Introduce new street scene controls for
	and hard surface location in the street scene	minimum planting required, maximum size
	with resulting reduction in tree and garden	of garage and maximum driveway width
	planting to the street in L1&2.	adjacent to required planting.

# 1.1.2 High Resource Consent Generation

Common Generator		Recommendation	
1. Garage intrusion to road boundary setback for		Prescribe exceptions to the rule in line with	
	older houses.	typical redeeming aspects of the breaches.	
2.	Minor recession plane intrusions (< 200mm)	Allow minor gutter and eave exceptions.	
3.	Outdoor living space breaches for total area or	Retain status quo for outdoor living space	
	minimum dimension.	recommendations.	

# 1.2 Residential Medium Density (Operative L3)

# 1.2.1 High Quality Residential Environments

**Density & Amenity** 14.1.5 High Quality Residential Environments: "...well designed, have a high level of amenity and enhance local character..."

	Issue Recommendation		
1.	City and neighbourhood amenity-	Introduce site coverage and minimum	
	Potential for higher density	planted area ratio.	
	development for adverse effects on	Retain existing landscaping rules and make	
	storm water management, water quality	it clear that the landscaping refers to tree	
	and visual amenity as a result of the	and garden plantings.	
	accumulated impervious surfaces over		
	time.		
2.	Street amenity- High level of		
	impermeability and domination of hard		
	surfaces on the street.		
3.	City and neighbourhood form-	Option 1: Reduce RFAR on single sites and	
	Permitted RFAR at 0.8, especially on	incentivise site amalgamation by allowing	
	narrow sites, is forming a target and	increased RFAR for amalgamated sites.	
	forcing amenity related standards to be	Option 2: Alternatively remove RFAR provision	
	compromised in favour of theoretical	and reinforce control of density via height,	
	density.	recession plane and amenity/ urban design	
		standards for a more optimum outcome.	
4.	On-site amenity- Routine breach of	Allow permitted exception for smaller outdoor	
	outdoor living space provisions for small	living space for single bedroom units.	
	units.		
5.	On-site amenity / Neighbours' amenity-	Keep status quo for privacy provisions (due to	
	Low level of privacy as a result of the	insufficient time for producing alternatives)	
	dominant development pattern of long	and explore improvements to provisions as	
	narrow buildings perpendicular to the	part of continued review.	
	road creating permanent overlooking of		
	adjacent sites.		
		<u> </u>	

# 2. Review Approach and Method

# 2.1 Methodology

The report is developed through studies listed below and workshops with the two principal urban design advisors, landscape planner, processing planners and strategic planners of Christchurch City Council.

Desktop studies and analysis:

- Visualisation of density and site coverage possible within operative provisions.
- Site coverage analysis on typical (Operative) L3 sites by typical developments.
- High RFAR and consequential breaches of amenity standards.
- Analysis via aerial photography for street scene trends.
- Review of Plan Change 53 (L3-L4 Plan Change) Urban Design Technical Report for relevant references.
- Comparison of privacy distance provisions between Hamilton and Christchurch.
- Targeted analysis of resource consent data from last three years (post February 2011 earthquake) looking at known three high resource consent generators in L1&2: outdoor living space, recession planes and garages in road boundary set back.

# 2.2 Approach

**Status Quo** – Trends and issues with respect to the district plan objectives listed below and high resource consent generation.

- 14.1.1 Housing supply
- 14.1.5 High Quality Residential Environments (city and neighbourhood, street, site and neighbours)

Review of Existing controls - Rules and Qualitative assessment matters.

Controls were evaluated according to their density, variety and amenity affects.

- Issues, redundancies, gaps.
- Controls that have been effective in achieving desired outcomes.

#### Consolidation and simplification opportunities

*Cross checking of controls* across living zones for appropriateness to the anticipated zone outcomes and consistency across the city.

# 3. Status Quo, Trends and Discussion

# 3.1 Residential Suburban Zones (Operative L1 & L2)

## **Context**

**Living 1 and Living 2** provide for the dominant housing typology of single detached housing in Christchurch. It is the largest living zone by the area it occupies in the city.



Residential Suburban (Living 1&2 in Operative Plan). Image is indicative only. See planning maps for finalised borders.

L1 zone remains to be popular among Christchurch residents<sup>1</sup>. In a recent survey, the top five main reasons for wanting to stay in the suburbs were:

- 1- Greater amount of private space (24%)
- 2- Greater area for private land, gardens, trees and outdoor living and play (23%)
- 3- Peace and quiet (19%)
- 4- Suitability for family (9%)
- 5- Greater privacy (9%)

<sup>&</sup>lt;sup>1</sup> Christchurch Central City Living Research — Full Report Conducted by IPSOS and Christchurch City Council, 2013

## 3.1.1 Housing Supply - Variety in size and type

**OBJ 1 Housing Supply** 

**Living 1** provisions support single detached predominantly single storey housing. **Living 2** would be expected to provide the smaller site smaller house, predominantly two storey, possibly semi detached option. In practice, the L2 outcome includes similar size and type houses to those on L1 only built on smaller sites. This results in a high impermeability ratio without a meaningful choice for house types in return. Net effect in L2 zones therefore is reduced amenity with less openness and a cumulatively reduced contribution to the garden city amenity.

Facilitation of smaller house development and encouragement of two storey housing would help provide the missing variety in house types as well as helping preserve the essence of residential suburban character.

#### 3.1.2 High Quality Residential Environments – Nature of open space

Policy 8: Neighbourhood Character, Amenity and Safety & Policy 9 Character of low and medium density areas

The low density and the resulting openness together with significant landscaping (trees and gardens) is a major determinant of the suburban character in Christchurch. The operational site size and site coverage provisions support an open space dominated suburban residential character, however do not include standards to control what the openness is to include. Does open space that is made up of hard surfaces lead to the same outcome as open space that is planted with trees and gardens?

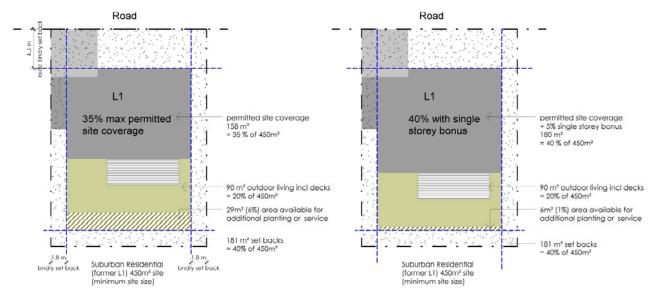
Historically the actual density in L1 areas has been significantly lower than allowed for within the operative district plan. Together with low site coverage, a high portion of the remaining space has been planted. Large numbers of L1 housing also include a deeper road boundary set back than is regulated for. The common distance of the house to the street boundary is often between 7 to 9m (district plan standard is 4.5m). Deep set backs are often treated as front gardens and include planting. The planted 'front yard', especially if it includes trees, has a great impact on the amenity value of the openness of the neighbourhoods as experienced from the street.

Contemporary trend with newer houses is to locate garages and associated hard surfacing to the street side. This trend is resulting in loss of tree and garden planting in front yards and a greatly reduced interaction between the dwellings and the street. Cumulatively, this will amount to a change in the character of suburban streets towards a street scene dominated by garages and driveways and are less safe<sup>2</sup>.

The operational plan, includes a site coverage bonus of 5% for single storey houses in both L1 and L2. The impact of a larger single storey building is small on neighbours, however the cumulative impact can be significant for the neighbourhood. Larger houses often have larger garages and associated hard surfaces which on a small site near the minimum size, end up located on the street side. Cumulatively, larger single storey houses on small sites bring the risk of garage and hard surface

<sup>&</sup>lt;sup>2</sup> Crime Prevention Through Environmental Design (CPTED) principles- Seven Qualities of Safer Places http://www.justice.govt.nz

dominated streets in low density neighbourhoods that are also less safe due to reduced interaction of the houses with the street<sup>3</sup>.



#### Interpretation

- 1- When all other rules are met for a single detached house and some of the side boundary is utilised for accommodating a garage, an L1 site has 6% of the site available for additional planting or service.
- 2-The site coverage bonus for single storey dwellings in L1 permits the whole site to be built on apart from the set backs and outdoor living space. On a 450m² site, this equates to 180m² including garage. It is a probable size for a single storey house⁴ for houses aged 10 years and older.



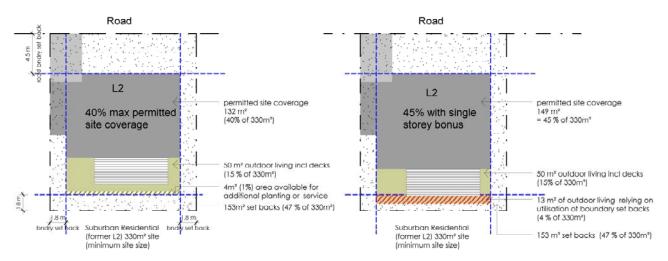


Cumulative high site coverage outcome in L1 (large single storey houses on small parcels)<sup>5</sup>.

<sup>&</sup>lt;sup>3</sup> Crime Prevention Through Environmental Design (CPTED ) - Seven Qualities of Safer Places <a href="http://www.justice.govt.nz">http://www.justice.govt.nz</a>

<sup>&</sup>lt;sup>4</sup> Quote from Stonewood Homes at Housing Sustainability Forum post Earthquake on 19 Sep 2011: "Average house size has grown from approx. 170m<sup>2</sup> to 250m<sup>2</sup> in the preceding 8-9 years". (ES -Site sizes have not grown proportionally).

<sup>&</sup>lt;sup>5</sup> Garegg Street, Harewood Road



#### Interpretation

- 1-When all other rules are met for a single detached house and some of the side boundary is utilised for garage location, an L2 site has 1% additional site available for additional planting or service.
- 2-The site coverage bonus for single storey dwelling in L2 permits the whole site to be built on apart from set backs. A portion of the outdoor living space has to occupy part of boundary set backs to make up the total outdoor living space required.



Cumulative high site coverage outcome (large houses on small parcels and increasingly more hard surfaces at street scene.<sup>6</sup>). See middle left and bottom right corner for examples of smaller houses on a small sites with proportional planting.

<sup>&</sup>lt;sup>6</sup> Elizabeth Street

## **Recommendation** – Variety in size and type

	Existing controls	Recommendation	Reason
Site density	Minimum site size	Retain status quo but allow down to 400m² for L1 subject to assessment of site design.	-Respond to permeability and planting reduction as a result of larger houses and garage with vehicle
	Maximum site coverage	Keep status-quo. Consider reduction to 35 % in L2 as permitted site size is smaller.	surfaces occupying a larger percentage of the total development.
	Single storey bonus	Remove from both L1 and L2.	- Encourage 2-storey housing in L2.

## 3.1.3 High Quality Residential Environments - Street scene

**OBJ 5 High Quality Residential Environments** 

Policy 8: Neighbourhood Character, Amenity and Safety

Historically suburban residential housing garages were located at the back of the parcels with the main house having primacy over any accessory buildings when viewed from the street. The contemporary trend is both for new and older suburban houses to locate or relocate the garaging to the street side of the house.

TRADITIONAL L1 front yards



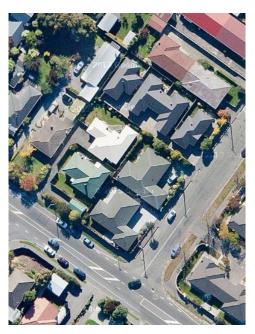
#### CONTEMPORARY TREND L1 garages to street



# TRADITIONAL L2 relatively smaller houses



# CONTEMPORARY TREND L2 larger houses



# **Streetscene Standards Comparison Table Wellington & Auckland**

Auckland Unitary Plan – Single house zone		
<ul> <li>Yards rule: 5m min front yard.</li> <li>Landscape rule: 50% of the front yard landscaped.</li> <li>Fence rule: 1.6m max height of fence within.</li> <li>Garage rule: Garage door no larger than 40% of the width of the front façade and not project forward of</li> </ul>		

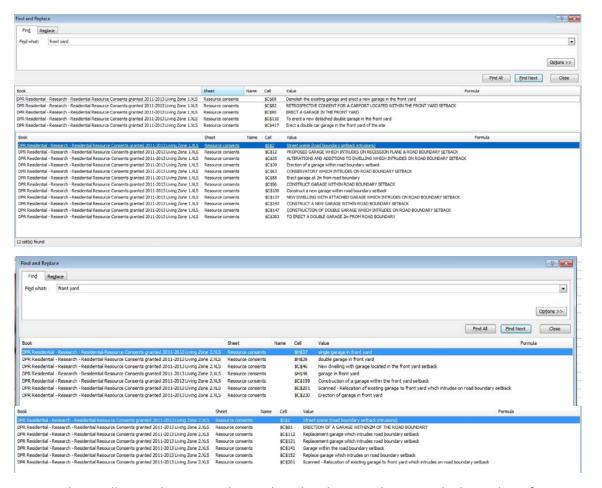
# **Recommendation** Residential Amenity - Streetscene

	Existing control	Recommendation	Reason
Street	No street scene controls other than road boundary set back.	Introduce street scene controls for landscape, garages and driveways and fences to the street. Model the new standards on new neighbourhood provisions. See Appendix 1 for further discussion.	<ul> <li>1- Location of garages and driveways to the street with houses less connected to the public realm is a threat for street amenity and safety.</li> <li>2- Without street scene controls, residential suburban zone has significantly lower street scene anticipation than new neighbourhoods.</li> </ul>

#### 3.1.4 High Resource Consent Generation Residential Suburban

#### A. Garage intrusion to road boundary set back

Since 2009, 27 resource consent applications<sup>7</sup> have been received and granted for garages intruding into the road boundary set back where this was the only reason for requiring resource consent. The total number of resource consents is 808, making the combined RC generation for L1 and L2 zones 3.3%.



Despite the smaller numbers since the earthquake, there is a long term high number of resource consents and common practice to grant most of these consents subject to consistent criteria:

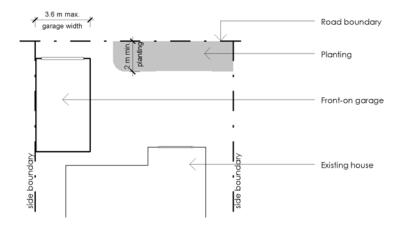
- Landscape strip to road boundary.
- Cladding and roof matching that of house.
- Visual bulk not dominating the street or the neighbours.

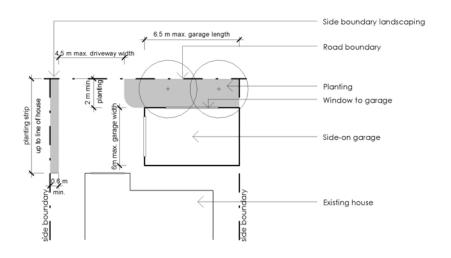
Typical aspects of these applications and the way they have historically been assessed indicated two possible exceptions to the rule to be prescribed therefore not requiring resource consent.

<sup>&</sup>lt;sup>7</sup> Breakdown: 12 out of 233 in L2 (5.2%) and 15 out of 575 in L1 (2.8 %).

# **Recommendation** Garage intrusion to road boundary

	Existing control	Recommendation	Reason
Street	Road boundary set	Introduce two exceptions	1-The criteria applied in assessment of
scene	back.	for garage intrusion to	these RC's is established enough to be
		road boundary set back.	clearly prescribed.
			2-The exceptions will result in a
			reduction in consenting process for applications where the outcome is predictable.





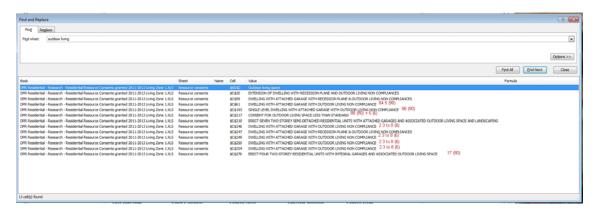
#### B. Outdoor Living Space total area and minimum dimension

Since 2009, 9 resource consent applications<sup>8</sup> have been received and granted for outdoor living space related rule breaches where this was the only reason for requiring resource consent. The total number of resource consents is 808, making the combined RC generation for L1 and L2 zones 1.1%.

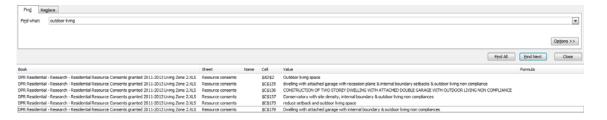
There are no simple typical aspects to these breaches. The breach of minimum dimension or total area is dependent on the specific house and site layout. The breaches are either for very small shortcomings or for a significant reduction such that slight adjustment to the outdoor living space requirements would not necessarily reduce resource consent generation.

Minimum outdoor living space area and dimension requirements are likely to be tested for small breaches wherever they are set.

#### L1



#### L2



# Recommendation Outdoor Living Space total area and minimum dimension

	Existing control	Recommendation	Reason
Outdoor living space	Minimum total area and minimum dimension	Keep status quo.	No pattern identified in this report to reduce unnecessary consenting requirements.

 $<sup>^{8}</sup>$  Breakdown: 1 out of 233 in L2 (0.4 %) and 8 out of 575 in L1 (1.4 %).

#### C. Recession Plane breaches for less than 200 mm

200 mm exemption for minor intrusions such as gutters is supported as these do not form the bulk of buildings and the resulting reduction in sun light access is minor.

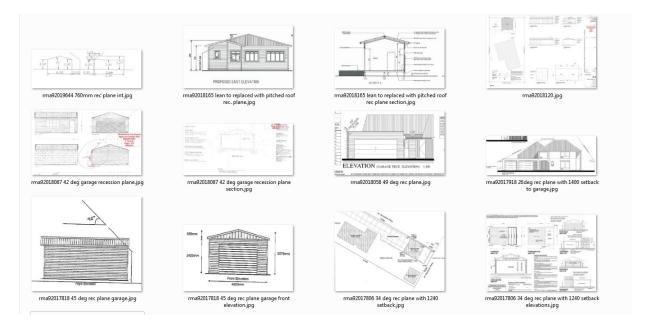
#### **Other Option Considered**

Lifting the recession plane angle starting height from 2.3m to 2.5 m

There is not enough evidence to support a blanket lifting of the recession plane to 2.5. A sample set of 186<sup>9</sup> L1 RC applications were examined and 11 recession plane intrusions were found.

All 11 intrusions were for more than 200 mm and a significant portion was also related to proposal of a long (around 12m) accessory building. A recession plane angle change starting at 2.5m would not have avoided the need for resource consent.

Accessory buildings of less than or equal to 10.1m are permitted to occupy the side boundary setbacks. With the recession plane breaches caused by these buildings, no pattern of consistent set back was found. i.e. The location of building varied between 500 mm and 1.2m.



## Recommendation Recession plane height change

	Existing control	Recommendation	Reason
Separation from neighbours (Recession plane)	Orientation dependent angle starting from 2.3 m on the boundary.	Keep status quo.	No pattern identified in this report to reduce unnecessary consenting requirements.

<sup>&</sup>lt;sup>9</sup> Total number of application in L1 since 2011 is 575.

15

## 3.1.5 Minor dwelling unit provision comparison

The scope of this report does not include a discussion on the provision of an additional minor residential unit in residential suburban zones. Refer to main body of the s32 assessment for the discussion.

A comparison table only is provided here as part of the comparison study of standards from other district plans.

# **Minor Dwelling Provision Comparison Table**

Waitakere (operative plan to be absorbed to	Min 600m² net unit area for the main and the
	minor unit is permitted .
Auckland Unitary Plan) "minor household unit"	<ul> <li>If minor unit is between the dwelling and the road, then discretionary activity in L2.</li> <li>If minor unit is located in front of the main unit, then max. 5m height.</li> <li>Minor and main may share the same OLS that is 25m² x number of bedrooms, min 3m dim, directly accessible from the unit.</li> <li>One on site park for a minor unit.</li> <li>Comply with other privacy and set back rules.</li> <li>Summarised on 13.12.13 from http://www.aucklandcouncil.govt.nz/EN/planspol iciesprojects/plansstrategies/DistrictRegionalPlan s/waitakerecitysdistrictplan/text/Pages/the-rules.aspx</li> </ul>
Northshore (operative plan to be absorbed to	• Max 60m².
Auckland Unitary Plan) "minor residential unit"	<ul> <li>Max one per site.</li> <li>Min 40m² OLS or 10m² balcony min 4m.</li> <li>Comply with other privacy and set back rules.</li> </ul>
	Summarised on 13.12.13 from
	http://www.aucklandcity.govt.nz/council/docum
	ents/districtplannorthshore/text/section16- residential.pdf
Reviewed Christchurch City - "minor residential unit"	<ul> <li>Where the site complies with minimum size in the zone.</li> <li>Max one per site.</li> <li>Max 65m² floor area for the minor unit.</li> <li>Max 5.5m high.</li> <li>Minor unit to share the same access as the main dwelling.</li> <li>Outdoor living space requirement of min 90m² with min 6m on site or min 30m² serving the minor unit with min 4m dim.</li> <li>Located behind the main unit.</li> </ul>

# 3.2 Residential Medium Density Zone (Operative L3)

## **Context**

**Living 3** provides for multi unit developments predominantly in the area immediately around the central city and surrounding neighbourhood centres. The dominant housing typology is 2-3 storey blocks where multiple attached units are developed perpendicular to the street.



Residential Medium Density (Living 3 in Operative Plan)- note the map is indicative only for new medium density areas around key activity centres. See planning maps for finalised borders.

## **Density, Amenity and Character**

#### 3.2.1 Housing Supply - Availability and density

**OBJ 1 Housing Supply** 

Multi-unit developments often include 3 or more dwellings on sites down to 13m x 50m<sup>10</sup> (3 households on 780m<sup>2</sup> including road portion achieves 38 hh/ha) meeting Regional Policy Statement (RPS) & Land Use Recovery Plan (LURP) intensification minimum density requirement of 30 hh/ ha<sup>11</sup>.

 $<sup>^{10}</sup>$  13m x 50m=650 m<sup>2</sup> = approx. 1/15 of a hectare. 780m<sup>2</sup> (including the road portion) is approximately 1/13 of a hectare)

 $<sup>^{11}</sup>$  16.6m x 50 m + 10 m width portion of typical 20m road is 1000 m<sup>2</sup> (1/10 ha) is a simple 1/10th unit for ease of calculation.

Net density (Canterbury RPS): Number of households/ha including local roads and roading corridors, pedestrian and cycle ways, neighbourhood reserves.

Developments often do not reach the max RFAR of 0.8 on single narrow sites due to on-site parking, set-back and recession plane restrictions. Where 0.8 RFAR is achieved on narrow sites, this forces/compromises amenity related provisions. See table below and Appendix: Study of Recent L3 Development with respect to RFAR and associated non-compliances.

RFAR is often used as a feasibility tool to gauge the development potential of sites. However, when compliance with all amenity and sunlight access rules are achieved, the operative RFAR is an unrealistic target for majority of development especially those on single narrow sites. (See appendix and table below.)

Density provisions are often perceived as more fundamental provisions of the District Plan. When permitted RFAR does not match the achievable RFAR, this creates a risk for amenity related standards to be compromised. This is not the intention of the District Plan which relies on packages of standards to deliver the objectives of the plan.

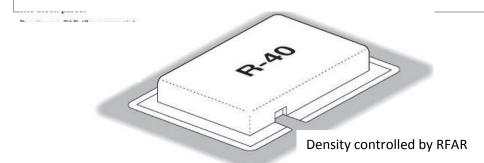
In addition, RFAR as a density standard does not fully match the objectives of the plan which calculates density in terms of households per hectare rather than floor area per hectare. For example a site fulfilling its RFAR but producing a single household will not deliver the RPS minimum density requirements.

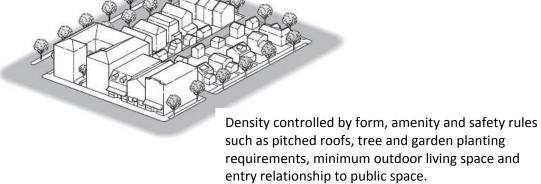
	Site Coverage Bldg +Garage	Site size	RFAR	Non-compliances / Merit
			0.6-0.7	
Nursery Road			0.61	3 No. 2 storey units separated at first floor level.
Fitzgerald 274		400 <b>11m</b> wide	0.6	Recession plane + minor reduction of OLS for one unit + minor intrusion to road boundary set back + minor reduction in la strip along access + reduced entry landscaping
Holly Road138	36%	1022	0.69	Entry landscaping achieved.
			0.75 to 0.85	
Gloucester 479	47.4 % (256 fp)	541	0.768	No landscaping associated with entry for units other than front unit.
Dickens 24	50%? (site boundary unclear)	393 20m wide back	0.815? (depends on driveway calc)	Overhang more than 800 mm +living windows less than 4m to boundary + recession plane
		section		
Poulson Street 89	40.6 % (416 fp)	1023	<b>0.818</b> 837/1023	No indoor storage + no landscaping associated with entry + no landscape strip along access way.
Bishop street 106		521 <b>wide</b> corner site	0.85	OLS min dim 4 not met + road boundary set back minor breach
Onslow 10				Double garage only to street with living above + no landscaping strip along access.

## District Plan Review 2013-14 s.32 technical report Residential Built Form, Character and Amenity

# **Recommendation -** Housing Density RFAR standard (residential floor area ratio)

	Existing control	Recommendation	Reason
Residential Floor Area Ratio (RFAR)	Max RFAR =0.8  Built floor area / Site area =<0.8	1- Reduce RFAR for single sites and keep the same or increased RFAR for amalgamated sites as an incentive.  2- Alternatively remove RFAR to eliminate the unrealistic target and rely on well administered amenity related provisions.	<ul> <li>1- Typical single site in L3 is a narrow site with limited ability to satisfy amenity related rules if operative RFAR is to be achieved.</li> <li>2-Site width is the greatest restriction in compliance with amenity rules therefore amalgamated sites will not be restricted to the same degree.</li> <li>3- The reviewed package of standards are focused on built form outcomes rather than mathematical calculations and will better realise the density objective of the plan in terms of household numbers rather than total floor area.</li> </ul>





## 3.2.2 Housing Supply - Variety in size and type

**OBJ 1 Housing Supply** 

One of the trends in recent development proposals in L3 is the use of single storey detached/semi-detached house typology on narrow parcels. These ordinarily detached or semi –detached types are joined into attached building forms. This forces the typology to inappropriate size and interrelationships both with each other and with neighbouring developments.

Typical example of an inappropriate relationship is bedrooms being located directly adjacent to vehicle access at eye-level which unduly compromises privacy.

## **Recommendation** Housing Variety in Size and Type

	Existing control	Recommendation	Reason
Site coverage	None	Introduce maximum site coverage (less than what is typically achieved) to encourage double storey development with reduced overall footprint.	Release area for required outdoor living space, service space and planting provisions as well as ensuring adequate privacy is achieved through the use of upper level spaces.

See appendix on site coverage analysis of post 2011 development for average site coverage.

The Urban Design Review of Recent Developments<sup>12</sup> analysis carried at PC53 time found that the site coverage in the Living 3 zone was45% or below for 92.5% of the sites studied with the remaining 7.5% being between 45% and 55%.

#### 3.2.3 High Quality Residential Environments – Opportunities for planting

OBJ 5 High Quality Residential Environments
Policy 8: Neighbourhood Character, Amenity and Safety
Policy 9 Character of low and medium density areas

- a. Intensified development of narrow sites result in a high hard surface to planting ratio.

  As a consequence, street scene is dominated by access ways and car parking provisions with frequent vehicle crossings.
- b. Narrow sites fail to accommodate sufficient soft landscaping (planting) whilst providing for on-site minimum car parking numbers, access way dimensions and turning circles.

20

<sup>&</sup>lt;sup>12</sup> including GIS data on the site coverage for a sample of sites expressed within L3 zone

#### 3.2.4 High Quality Residential Environments - Permeability

**OBJ 5 High Quality Residential Environments** 

Policy 10: Best Practice for health, building sustainability, energy and water efficiency.

Medium density development has the potential for adverse effects on stormwater management, water quality, and visual amenity as a result of the accumulation of impervious surfaces over time. With regard to stormwater management, the requirement for a minimum % of pervious /planted surfaces reduces the volume of stormwater runoff by allowing rainwater to sink into the ground rather than having to rely solely on management by an engineered or other stormwater management mechanism. It also reduces the contaminants by filtering these out through planted areas before the stormwater runoff combines with surface water i.e. rivers. This can also assist with mitigating the severity of effects of flooding.

There are important benefits in terms of visual amenity and potentially biodiversity values, and the garden city amenity by ensuring that minimum permeable /planted areas are included in higher density developments. The above is supported and explained in more detail in the Council's Surface Water Management and the Canterbury Water Management Strategy and the accompanying Zone Implementation Programme (overseen by a joint CCC and ECAN committee).

Study of Site coverage by: Buildings, Access and vehicle related surfaces, and Outdoor Living Space

	OLS	Site Coverage (Building + Garage)	Access	Non- pervious (Building + Access)	notes
Brockworth PI 48	27 %	42 %	31 %	73%	
Salisbury St 152154	33 %	41 %	25 %	66%	
Fairfield Ave 36	27 %	45 %	26 %	71%	
Ferry Road 668-670	30 %	47 %	23 %	70%	
Holly Road 138	20 % (201)	36% (368=281+8 7 27%+9%)	44%	80%	RFAR given 0.815 for 839m² site area. Access way is not included as RFAR would be 0.69 if all area were to be included (1022m²). This is an anomaly created by shared accesssways not being included in RFAR when they are a separate lot.
CORNER SITE Tancred St 2	37 %	46 %	17 %	73%	Corner site takes advantage of short accessways possible from two streets and utilisation of additional road boundary setbacks for outdoor living space.

#### **Summary**

	Average excludes corner site	low	high
Total of vehicle related surfaces (but not garages)	30%	17% (excluded from average)	31%.
Total site coverage	42%	41%	47%
Total OLS	27%	20%	37% (excluded from average) High ratio is facilitated by use of two street boundary setbacks for ols.

Study of the above sites indicate that use of single rather than double garages would create opportunities for tree and garden planting without reducing the number of units provided. Capping site coverage at 40% slightly lower than average would facilitate some of the area taken up by garages to be released for planting. See appendix for drawings of the sites studied.

**Interpretation:** Site coverage on typical sites are similar for the total of vehicle related surfaces (between 23 and 31%) and buildings (between 41 and 47%). It is uncommon for OLS provision to exceed the minimum unless the site shape an orientation permits boundary setbacks to be included.

In the studied sites, there is little or no space for tree or garden planting to benefit the residents at site level and contribute to the neighbourhood. Study of the above sites indicate that use of single rather than double garages would create opportunities for tree and garden planting without reducing the number of units provided.

# **Permeability Provision Comparison Table**

Auckland Unitary – Mixed housing suburban and urban zone (Considered equivalent to Christchurch medium density zone)	Reviewed Christchurch City - Medium density zone
<ul> <li>Impervious rule 60% maximum impervious area.</li> <li>Coverage rule 50% max building coverage if more than 1 unit per 300m².</li> <li>Landscape rule 30% minimum landscaped area of which 10% (i.e 3% of site area) to have shrubs and a tree.</li> <li>Front yard rule 50% of the front yard to be landscaped.</li> </ul>	<ul> <li>Site coverage rule 40% max site coverage.</li> <li>Tree and garden planting rule Minimum planted area ratio of 15%.</li> </ul>

## Reason (Christchurch)

Improve stormwater management as well as the city's character in terms of vegetation.

## Purpose (Auckland Unitary Plan)

Impervious surface rule: Manage the amount of stormwater runoff generated by a development.

Landscaping rule:

- •provide for on-site amenity and an attractive streetscape character
- •improve stormwater absorption on-site.

# **Recommendation** Permeability

	Existing control	Recommendation	Reason
Minimum planted area ratio	None	Introduce minimum planted area ratio of 15%.	Improve stormwater management provisions as well as city-wide amenity and character.

#### 3.2.5 High Quality Residential Environments - On-site amenity

**OBJ 5 High Quality Residential Environments** 

Policy 8: Neighbourhood Character, Amenity and Safety

#### a. Outdoor living space

Outdoor living space provisions for small units are routinely breached with the argument that the current standards are not proportional to the unit size. Whilst there can be a wide variety of number and profile of residents in multi bedroom units, the proportionality argument is reasonable for single bedroom units which have limited occupancy. An exception package for single bedroom units is recommended:

Reduction of total OLS area to 16m<sup>2</sup> and if the unit is fully contained on an upper level, then one 6m<sup>2</sup> balcony to form the total private OLS.

It is considered impractical to provide a balcony as large as  $16m^2$  for a single bedroom unit that is located on an upper floor only. The  $6m^2$  private area for single bedroom unit is considered equivalent to  $16m^2$  private area on the ground floor. Balconies have the opportunity to borrow visual space from around whereas ground floor areas are often surrounded by buildings or fences.  $6m^2$  in a balcony has adequate space for a table and chairs as well as a small area for service or plants.

Proposed name	Suburban residential				Central City
			Multi unit suburban	Medium density	(under review - CERA)
Operative name	L1	L2	EPH equivalent	L3	L4: under review
Total	90m² - no change	50m²- no change	30m²- no change	30m <sup>2</sup> -no change + new 1 bedroom exception 16m <sup>2</sup> total	
Private			16m² - no change	16m² - no change	
Min dimension	6m- no change	4m-no change	4m - increased from 3m	4m- 1.5 if balcony - no change	
Min area for balcony				6 m² which can also be the min private if upper level one bedroom unit.	

For consistency across the city, L3 zones require more outdoor living area than Central City zones because L3 areas have less ready access to the central city high amenity significant outdoor spaces (such as Hagley Park and the Avon River) to balance a smaller outdoor living provision.

#### b. Privacy

Low level of privacy is observed in L3 areas especially with respect to privacy between adjacent sites where there is continuous development along side boundaries. As a contrasting example, intensive perimeter block development typologies such as terraced housing or perimeter apartments seen internationally allow for the centre of the blocks to act as green lungs or at least open space breathing areas. The site by site development perpendicular to the street in Christchurch eliminates any green belt or green centre establishment within urban blocks, creating permanent overlooking of adjacent sites along their long boundaries. Established trees and high level of vegetation along side boundaries could be one way to mitigate this but this is a difficult control to introduce and/or enforce and difficult to achieve with existing narrow site widths.

Privacy issue was identified in recent plan change 53 (operative since 2011) and was explored in some detail. The recommended rule package at the time facilitated development concentrated in two buildings separated by a privacy distance of 12m. These were not supported by the Council/commissioners in concern for consequential density reduction. For some of the discussion, see also Appendix 5 PC53 -Privacy discussion thorugh submissions.

The writer of this report considers that the issue can be addressed by an overall typology change where 2-4 storey buildings are located parallel rather than perpendicular to the street making maximum use of the additional separation distance and outlook afforded by the street width (20m in most of Christchurch). The current plan review priorities and time frame do not permit expansive exploration at this scale.

#### **Recommendation** outdoor living space and privacy

	Existing control	Recommendation	Reason
Outdoor living space	Min area and min dimension	Keep status –quo but introduce one bed unit exception.	OLS requirement proportional to occupancy.
Privacy	Separation distances	Keep status –quo	Adequate in absence of new typology.  Explore ways to address as part of continued plan review.  Explore non-statutory actions such as identification of pilot areas and obtaining high landowner engagement, to provide case studies and examples.

Additionally, Hamilton City rules are compared to Christchurch City operational rules in table below in order to research if solutions may be found in other district plans. **The provisions are similar with minor variance. See below.** 

# District Plan Review 2013-14 s.32 technical report Residential Built Form, Character and Amenity

Hamilton - Residential Zone	Privacy Distances	Christchurch L1-2-3	Separation distances
Set back for a balcony or habitable room at upper level: Unless: -Windows are at 60° or more to the boundaryWindow sill at 1.7m or higherOpaque or obscured glazingWritten consent from the occupier of the adjoining property.	except if adj. to an access way, entrance strip (of 6m or less width), right of way, private way or access lot. (ES note: unclear what the set back is if adj. to access)	Set back for a balcony or a living area at FF or above.  Unless: -Windows are at 90° or more to the boundary -Window sill at 1.6m or higher.	4m
Ground floor (GF) privacy distance  Eave to eave distance within the	None 3m	Set back from any internal boundary for a living area on GF.  Building separation on	3m If adjacent to an access, then 1m.  3m in L1
same site		the same site	

# 4. Further Opportunities for Simplification / Consolidation

# 4.1 Residential Suburban Zones (Operative L1-L2)

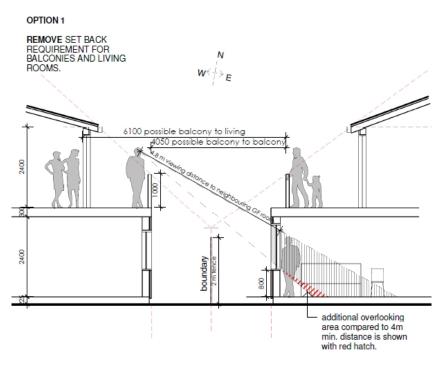
The following rules have been identified by staff or requested by the technical advisory group (TAG) for consideration with a view to deletion or simplification.

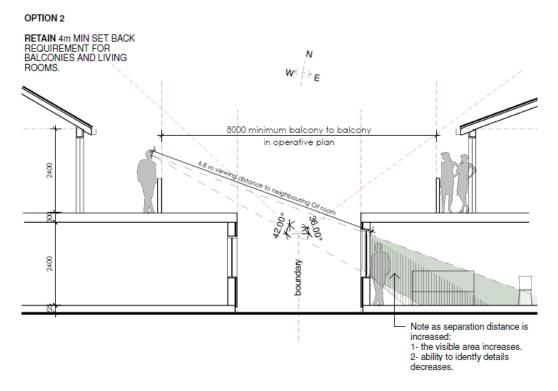
Control	Recommendation	Reason
Outdoor living space minimum requirement in context of the new minor dwelling provision.	<b>Retain</b> at 90m² total per site.	If there are two dwellings, the total outdoor area would be shared, practically equating to $45\text{m}^2$ for each. This is consistent with the $50\text{m}^2$ requirement for the next density level L2.
Maximum floor area under "separation of buildings"	Remove.	The operational rule is intended to manage effects of non-residential activities. These are now dealt with under the activity table, under restricted discretionary status. See also discussion in main s32 document.
Privacy distances for balconies and living areas under "separation from neighbours".  See 4.1.1 beow.	Retain separation distance for balconies and above ground level living areas.  Remove separation distance for ground level living areas.	The existing separation levels area already documented to be inadequate where a high level of detail can be recognised across properties. See Plan Change 53 Urban design technical report on privacy.  On ground level, the typical separation via fence provides adequate visual separation.
	See diagrams on following page.	
Continuous building length rule. See 4.1.2 below.	Remove.	The operational rule is intended to deal with the effects of large non-residential buildings in living zones. Non-residential activities are now dealt with a new activity table. See also discussion below.

## 4.1.1 Separation distances

The existing separation levels area already documented to be inadequate where a high level of detail can be recognised across properties. It is recommended that existing distances are retained for first floor and above.

On ground level, the typical separation via fence provides adequate visual separation therefore additional distance is not considered necessary. See also Plan Change 53 Urban design technical report on privacy.





#### 4.1.2 Continuous building length

This rule intends to mitigate effects of large unarticulated building facades by prescribing steps for walls and ridges that are longer than 20m. In practice it introduces a bleak permitted baseline of 20m long blank facade. The prescribed depth and length of steps are rarely able to be complied with on specific instances. In many cases a simpler design with high quality materials and architectural detailing would lead to a better outcome than that of prescribed/forced articulation.

The effects of building bulk and scale are addressed via the urban design (UD) assessment matters in multi-unit developments where there is higher potential for buildings to reach 20m. In smaller grain residential development in the rare instance that a house reaches 20m, there are openings and articulation such as windows which provide the degree of articulation expected in residential context.

#### Operative plan rule:

# Continuous building length - ridgelines and parapets - residential and other activities Updated 14 November 2005

No length of any ridgeline/s and/or horizontal parapet/s of a building, or buildings separated by a length of less than 3.6m (from ridgeline and/or parapet to ridgeline and/or parapet), combined with the length of any distance/s between the ridgeline/s and/or horizontal parapet/s shall exceed 20m without providing either a horizontal step of at least 2m, or a vertical step of at least 1m. The minimum length of all steps shall be 6m.

#### except that:

- (i) This rule shall not apply to any part of a ridgeline and/or horizontal parapet which is more than 10m from every internal boundary and more than 6m from every road boundary.
- (ii) Where a step occurs within 6m of the end of the ridgeline and/or horizontal parapet at the end of the building, the length of that step need only equal the remaining length of the ridgeline and/or horizontal parapet.

(Refer to Appendix 1A and the definitions of step, length and ridgeline for further clarification of this rule.)

# Continuous building length - exterior walls - residential and other activities Updated 14 November 2005

(a) Steps shall be provided along the length of exterior walls in accordance with the following table:

Length of exterior wall	Minimum number of steps		
< or = 20m	0		
> 20m < or = 24m	1		
> 24m < or = 28m	2		
> 28m < or = 32m	3		
> 32m	4 + 1 for every additional 10m of length over 32m		

- (b) Where steps are required by (a) above:
- (i) One step shall have a minimum depth of 2m. Any steps required thereafter shall have a minimum depth of 1m.
- (ii) One step shall have a minimum length of 2m. Any steps required thereafter shall have a minimum length of 4m.
- (iii) No length of any exterior wall shall exceed 20m without a step of the required dimension having commenced.
- (iv) The required steps shall be provided at all levels of the exterior wall.

#### except that:

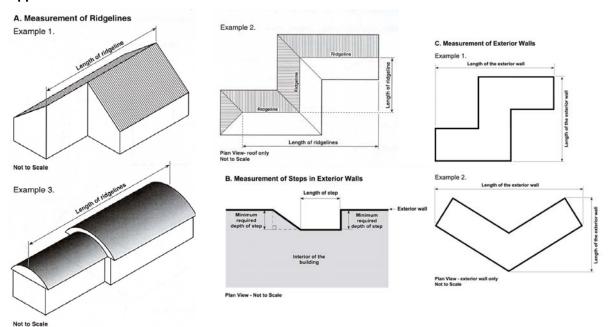
(i) This rule shall not apply to any part of an exterior wall which is more than 10m from every internal boundary and more than 6m from every road boundary.

## District Plan Review 2013-14 s.32 technical report Residential Built Form, Character and Amenity

(ii) Where no part of a building exceeds 5.5m in height, this rule shall not apply to any exterior wall of less than 28m in length.

(Refer to Appendix 1A and the definitions of step, depth, length and ridgeline for further clarification of this rule.)

## Appendix1



# 4.2 Medium Density Zone

The following rules have been identified by staff or requested by the technical advisory group (TAG) for consideration with a view to deletion or simplification.

Control	Recommendation	Reason
Building overhang	Retain.	It avoids the dominance of large overhangs both on site and as viewed from the street. Survey of resource consents show that only minor breaches are applied for and the rule is performing its function.
Entry landscaping	Reduce from 3m <sup>2</sup> to 1.5m <sup>2</sup> with min dimension of 0.6m.	This will rationalise the area and minimum dimension requirement in line with common site widths and common building dimensions on ground floor.
UD trigger rule	Retain.	The operational trigger at 3 units is an effective threshold where likelihood of adverse effects of multi-unit is increased due to increased building size and occupant number.
Qualitative assessment matters	Retain content but simplify and reformat.	User feedback suggests that the qualitative assessment matters were complex and lengthy although containing high quality content.

# 5. Recommended Rule Changes Summary

# 5.1 Residential Suburban (Operative L1 and L2)

#### **INTRODUCTED NEW OR DELETED**

- Introduce street scene controls to require
  - Max 1m solid fence or 50% transparency up to 2m height to fences within the road boundary set back
  - o 2.0 m wide landscaping to street
  - o Max 4.5 m width to driveways
  - o Max 50% ratio of garage to total street elevation
- Remove 20m max length rule for walls and ridge line

#### **REFINEMENTS:**

- Remove site coverage bonus for single storey. i.e. 35% coverage with additional 5% possible as Restricted Discretionary.
- 2No exceptions for relocation of garage into road boundary set back for existing houses only see diagrams.
- Match permitted accessory building length to medium density zone. i.e. 10.1m instead of 9m.

#### L1 overlay

- Retain minimum site size 450m² as the permitted standard
- Reduce minimum site size to 400 m<sup>2</sup> as the non-complying standard

# L2 overlay

- Retain minimum site size 330<sup>2</sup> as the permitted standard
- Retain minimum site size to 300 m<sup>2</sup> as the non-complying standard

# 5.2 Residential Medium Density (Operative L3)

#### **INTRODUCTED NEW OR DELETED**

- Introduce 40% site coverage.
- Introduce 15% planting requirement.
- Reduce RFAR to 0.7 for single site developments OR remove RFAR.

#### **REFINEMENTS:**

- Reduce entry landscaping requirement to 1.5m<sup>2</sup> with min dimension of 0.6m.
- Note the ability to use the difference between legal and formed access way width for landscaping.
- Introduce single bed unit total OLS exception at 16m<sup>2</sup>.
- Introduce minimum balcony area of 6m² which can be the total private OLS for a single bedroom unit.
- Introduce reformatted qualitative assessment matters –see also separate discussion.
- Remove 20m max length rule for walls and ridge lines for 1-2 units.

# 6. Appendices

Appendix 1 Street scene – Garage and hard surface domination

Appendix 2 RFAR examples and consequential breaches.

Appendix 3 Site coverage study drawings.

Appendix 4 PC53 discussion and illustrations on Privacy and Community Safety (especially with respect to fences)