

Appendix 1:

Comparative Analysis Documentation

As carried out by Cohousing NZ Ltd March 2002

MEDIUM DENSITY OPEN SPACE COMPARISON

1.0 INTRODUCTION

In order to establish if the Earthsong Eco-Neighbourhood reserves contribution has been assessed at an appropriate level we undertook a comparison of the open space provision of a number of local medium-density housing developments. This appendix documents our working arithmetic and associated assumptions and reasoning.

1.1 METHODOLOGY

The district plan has relatively little to say about open space provision. Thus we found it necessary to approach the issue of reserves provision from first principles. Only by examining the purpose of reserves contributions, can the degree to which a development has mitigated impacts on-site be reasonably established.

The discussion begins by examining the purpose of parks and reserves. *We do this specifically because the plan offers developers the choice of either paying or providing:* “the level of contributions shall take into account... the extent to which on site measures are proposed or provided which achieve the purpose of the particular contribution...” (Citywide Rule 1.5(f)(ii)).

It then follows with a quantitative mathematical comparison of actual open space provision in four case study sites. Lastly we touch on related incongruities in the district plan.

2.0 ASSESSING PROVISION

Before we can measure the extent of open space provision we needed to ask what makes a park a park? From a reading of the legislation, relevant plans, and a measure of common sense we arrived at ten key defining reserves criteria. These are (in no particular order):

A. Extent

All parks and reserves functionality is ultimately contingent upon the existence of open-space land expressly allocated for that purpose. Two sources (ARC 1992, LGA 1974) recommend a minimum quota of 4 ha/1000 people. However a catchment by catchment approach will highlight specific needs. A neighbourhood park will be of a different size and location to a sports park.

B. Position

What overlooks and is overlooked by the reserve? Security is an issue where informal surveillance can be achieved. There is also a need to avoid compromising privacy on rear residential lots.

C. Proximity (access)

Central locations and proximity to areas of dense housing facilitate access, particularly medium density areas. An absence of access barriers like busy road or rail corridors. Accessibility by disabled or the otherwise house bound.

D. Shape factor

While park land areas may serve different sub-purposes as different shapes, it is clear that, on the whole, long narrow strips will have less utility than more evenly proportioned lots. This is particularly so when narrow strips eg road reserves adjoin conflicting uses such as heavy traffic movement.

E. Openness (spatial)

Openness is the fundamental quality that offsets the built up nature of urbanity. While an absence of built structures is implied, some element of community oriented park buildings fits within an overall open-space aim.

F. Green (aesthetic)

Similar to the above, trees, gardens, wetlands and lawn mitigates urban 'builtness'. This is largely an aesthetic or amenity function. The literature suggests that access to greenery and nature is a psychological human need.

G. Ecology

The degree that open-space facilitates the presence of natural ecology. Whether native or exotic, from a biologic point of view the ecology criteria offsets intense human settlements by producing oxygen, treating waste and providing habitat for ecologically essential diverse organisms.

H. Recreational amenity

While open / green space may intrinsically provide a passive recreation, structures like paths and play equipment will add an element of active recreation. Open space may serve as a neighbourhood neutral ground or meeting place. Aspects of enhancing the physical health of the public are associated with exercise and stress relief.

I. Publicness

Implicit in open spaces is a public or common quality. This has shades of meaning. Collective landmarks, open accessibility, a sense of local place, an absence of individual ownership are characteristics that subtly define community open space. A very large backyard may create open space by some of the above criteria, and yet fail to fulfil a reserves function.

The difference between public and commonly owned is perhaps a difference of degree. It is not clear that the traditional method of vesting or officially designating parks as reserves under the Reserves Act is entirely necessary to achieving a public quality. While technically a certain park may be open to anyone, in practical terms only those within finite proximity of the park will use, and claim it as their own. In planning open spaces an 8-minute walk is a commonly used allocation method.

In terms of the degree of protection and care that open spaces attract: whilst it is very difficult to divest a TLA owned park, it is also very difficult to redevelop commonly owned open space such as that found within medium density developments held under the Unit Titles Act. While vested parks may for better or worse benefit from centrally controlled management, conversely commonly owned pocket parks for instance may benefit from tapping into voluntary local maintenance and development energy.

J. Cultural

Heritage structures and other landmarks may be important to people in terms of spiritual wellbeing. Native flora and fauna may be especially important to Maori cultural wellbeing, and in some cases economic wellbeing eg flax harvesting areas.

For our present purpose we take these ten criteria as defining open space. Developments can then be assessed against these criteria.

2.1 CASE STUDIES

Sites studied and analysis area extents

Four sites were chosen in order to compare the provision open space land areas. In order that apples are compared with apples, the sites chosen are medium density developments, developed recently, in the general Henderson area. Edwin Freeman Place was also studied out of interest, as local non-medium density development.

The following page shows the case studies and the extents of the site areas studied (plotted to same scale):

Bounds:
COROGLLEN



Coroglen

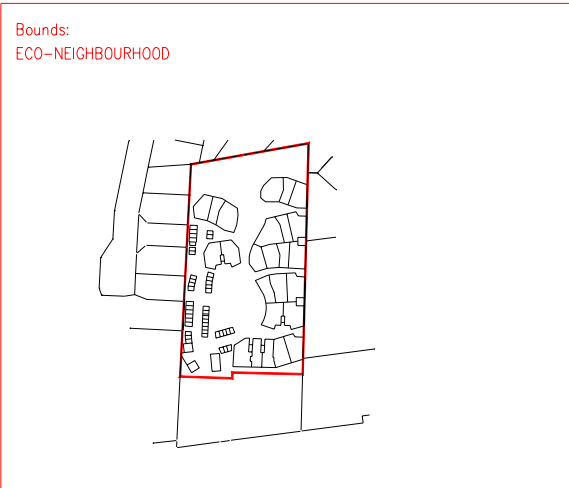
Developer: Universal Homes

Date built: 2000

Location: Amesbury Way, Ranui

Lots: 99

Bounds:
ECO-NEIGHBOURHOOD



Earthsong Eco-Neighbourhood

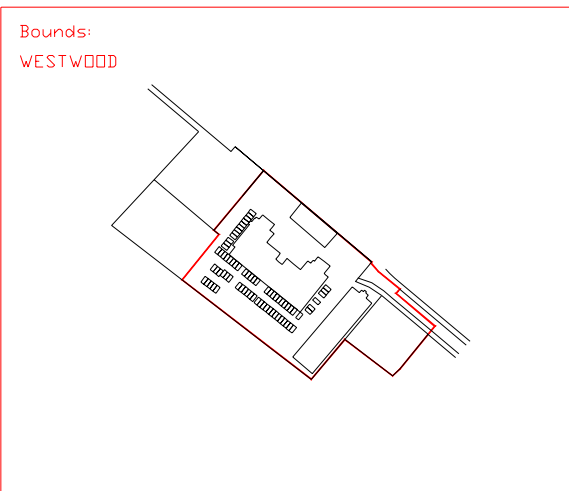
Developer: Cohousing NZ Ltd

Date built: 2002

Location: 457 Swanson Rd, Ranui

Lots: 32

Bounds:
WESTWOOD



Westwood Condominiums

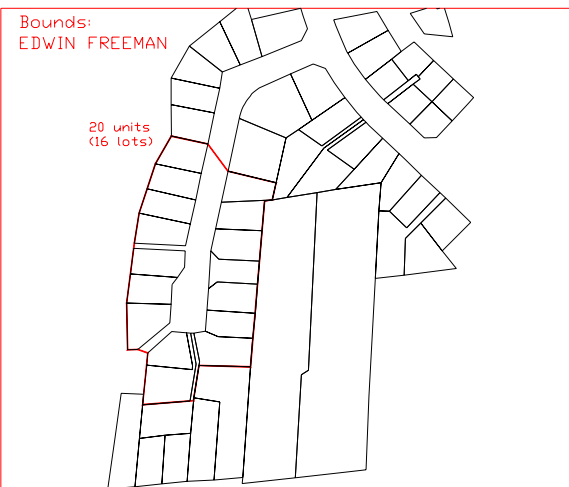
Developer: Bridgecorp Holdings

Date built: 2001

Location: Westwood Ho Rd, Kelston

Lots: 210

Bounds:
EDWIN FREEMAN



20 units
(16 lots)

Edwin Freeman

Developer: unknown

Date developed: circa 1980s

13-31 Edwin Freeman Place, Ranui

Lots: 20 (incl cross lease)

2.2 DATA CATEGORY EXPLANATION

Each site has been divided cleanly into three non-overlapping land-use categories as determined by primary function:

Built space

Birdseye footprint only, with any eaves not included. Carports and garages are excluded. Ancillary buildings and structures are included, eg water tanks, and rubbish compounds. Garden sheds have been excluded for simplicity. Note that Built space is not a measure of floor area.

Car space

This includes drives, car parks, garages and the roading proportion sufficient to provide access to the whole site. Whilst enclosed garages have secondary uses, one such use is not open space. Footpaths are not included.

Open space

In our examination of the case study sites, differences in the nature of open space provision led to the adoption of 5 different area measures. The first 2 are broad measures of open space as defined by criteria E, F and G. The last three are measures that reflect dedicated useable common (DUC) open space as defined by criteria B, C, D, I and J.

- Method 1: is all open space, ie: total site area less car space less built footprint
- Method 1b: is all open space as with method 1, inclusive of common buildings
- Method 2: is DUC open space separate from dwellings
- Method 2b: is DUC open space as in method 2 inclusive of common buildings
- Method 2c: is DUC open space as in method 2b inclusive of node areas

In essence these measures assess both total open space, and also that which has more of a reserve character. The measures are a quantitative measure, which combined with an assessment of quality criteria can logically be used to determine the degree to which the demand for open space can be absorbed on site.

2.3 DATA SOURCES

Data for this analysis has been taken from a combination of sources as noted:

Earthsong	Project survey CAD data
Coroglen	Aerial photo, WCC GIS data, developers plans and site visit
Westwood	LINZ survey plans, developers plans and site visit
Ed Freeman	Aerial photo, GIS data, and site visit

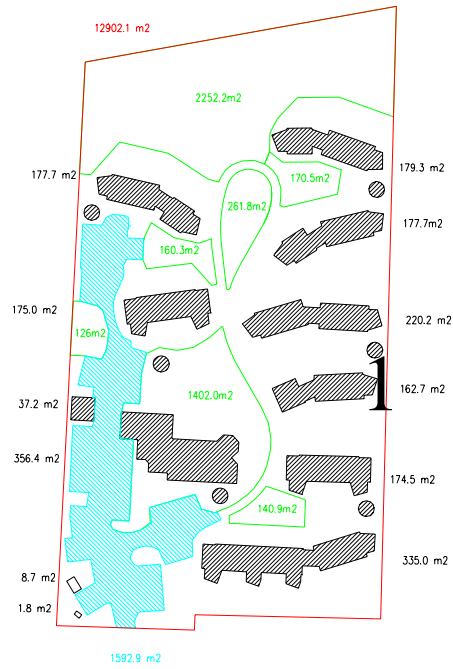
All site areas were plotted and calculated with some accuracy using CAD software. Minor errors of alignment may occur particularly between cadastral and service data sources. The CAD files are available on request should there be a desire to verify the software calculations.

2.4 WORKING DRAWINGS

The drawings that follow are all plotted to the same scale. Sheets 1 to 4 show the aerial area analysis; and Sheets 9 to 13 document the working arithmetic.

Sheet # 1

ECO-NEIGHBOURHOOD

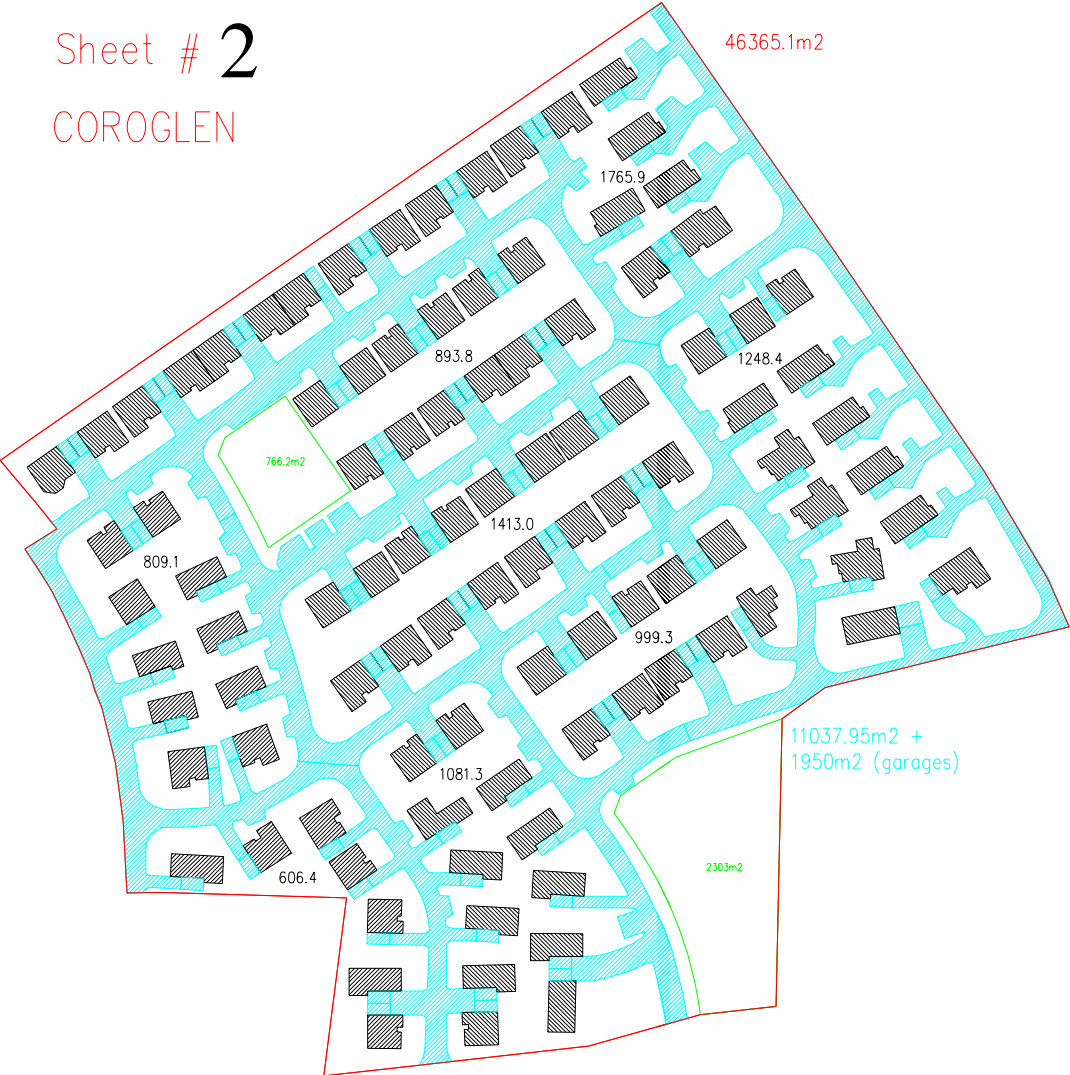


This Bar 100metres (SCALE 1:1000 or 1:2000 @ A4)

Sheet # 2

COROGLLEN

46365.1m²



This Bar 100metres (SCALE 1:1000 or 1:2000 @ A4)

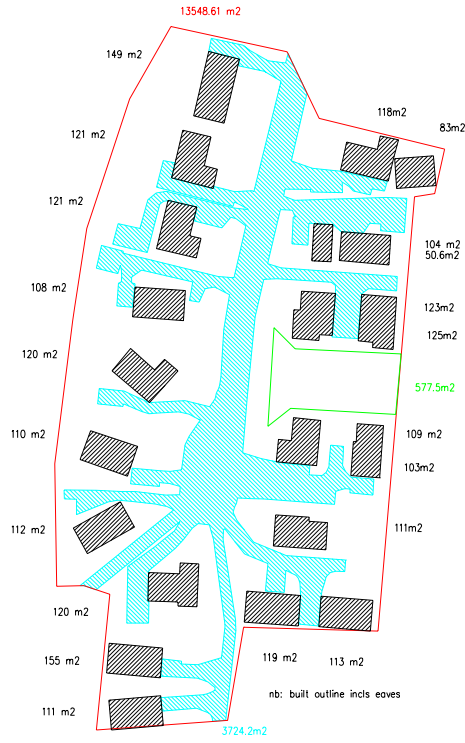
Sheet #3
WESTWOOD



This Bar 100metres (SCALE 1:1000 or 1:2000 @ A4)

Sheet # 4

EDWIN FREEMAN



This Bar 100metres (SCALE 1:1000 or 1:2000 @ A4)

Working arithmetic: Eco-Neighbourhood

m2	Eco-Neighbourhood		
BUILT		117.7	
(sum of house areas)	175		
	37.2	(workshop)	
	356.4	(com house)	
	8.7	(power shed)	
	1.8	(trans)	
	335		
	174.5		
	162.7		
	220.2		
	177.7		
	179.3		
	83.4	(tanks)	
Total		2030	m2
<hr/>			
CARSPACE			
drives and carparks	1592.9		
Total		1593	m2
<hr/>			
OPEN SPACE			
(common, usable, not asociated with homes)	2252.2		
(incls common house)	261.8	632.1	(nodes)
	1402	356.4	(chouse)
	126		
Total		4042	

No. of units	Eco-Neighbourhood		
	32	1	%
	m2	m2	
Total area	12902	403	100%
Carspace	1593	50	12%
Built footprint	2030	63	16%
Open space method 1	9280	290	72%
Open space method 1b	9636	301	
Open space method 2	3658	114	
Open space method 2b	4014	125	
Open space method 2c	4646	145	

nb Method 1 is all open space, ie Total area less carspace less built area
 Method 1b is all open space as above, plus com house
 Method 2 is dedicated usable common open space separate from dwellings
 Method 2b is dedicated usable common open space separate from dwellings incl com house
 Method 2c is all dedicated usable common open space incl com house & nodes

Working arithmetic: Coroglen

m2	Coroglen	
BUILT	1765.9	
(sum of house areas)	999.3	
	1248.4	
	893.8	
	1413	
	809.1	
	606.4	
	1081.3	
Total	8817.2	m2

CARSPACE		
Roads and drives	11037.95	
Garages	1950	
Total	12988	m2

OPEN SPACE		
(common, usable, not associated with homes)	2303	
	766.2	
Total	3069.2	m2

No. of units	Coroglen		
	99	1	%
Total area	46365	468	100%
Carspace	12988	131	28%
Built footprint	8817	89	19%
Open space method 1	24560	248	53%
Open space method 1b	24560	248	
Open space method 2	3069	31	
Open space method 2b	3069	31	
Open space method 2c	3069	31	

- nb** Method 1 is all open space, ie Total area less carspace less built area
 Method 1b is all open space, incl com house
 Method 2 is dedicated usable common open space separate from dwellings
 Method 2b is dedicated usable common open space separate from dwellings incl com house
 Method 2c is all dedicated usable common open space incl com house & nodes

Workings arithmetic: Westwood

m2	Westwood	
BUILT	1351.5	
(sum of house areas)	901.8	
	73.2	(poolshd)
	74.3	(rubbish)
Total	2400.8	

CARSPACE		
drives and carparks	4812.6	
Total	4813	\$

OPEN SPACE			
(common, usable, not asociated with homes)	1189.7		incl poolshed
	552.1		
	785.8		
	#	609	(upper decks)
		74.3	(poolshd)
		338.5	(gym)
Total	2527.6		

No. of units	Westwood		
	210	1	%
Total area	12748	61	100%
Carspace	4813	23	38%
Built footprint	2401	11	19%
Open space method 1	5535	26	43%
Open space method 1b	5609	27	
Open space method 2	2453	12	
Open space method 2b	2866	14	@
Open space method 2c	2866	14	

nb Method 1: is all open space, ie: total site area less car space less built footprint

Method 1b: is all open space as with method 1, inclusive of common buildings

Method 2: is DUC open space separate from dwellings

Method 2b: is DUC open space as in method 2 inclusive of common buildings

Method 2c: is DUC open space as in method 2b inclusive of node areas

nb \$ an extra 1065 m2 of underground parking is not counted as carspace

upper level decks not counted as bulk open space

@ includes (underground) gym

Working arithmetic: Edwin Freeman

m2	Edwin Freeman
BUILT	149
(sum of house areas)	121
	121
	108
	120
	110
	112
	120
	155
	111
	119
	113
	111
	103
	109
	125
	123
	104
	51
	83
	118
(less eave allowance)	-104
Total	2282 m2

CARSPACE	3724.2
Total	3724 m2

OPEN SPACE 2	577.5
(common, usable, not asociated with homes)	
Total	577.5 m2

No. of units	20	1	%
	m2	m2	
Total area	13549	677	100%
Carspace	3724	186	27%
Built footprint	2282	114	17%
Open space method 1	7542	377	56%
Open space method 1b	7542	377	
Open space method 2	578	29	
Open space method 2b	578	29	
Open space method 2c	578	29	

nb Method 1 is all open space, ie Total area less carspace less built area

Method 1b is all open space, incl com house

Method 2 is dedicated usable common open space separate from dwellings

Method 2b is dedicated usable common open space separate from dwellings incl com house

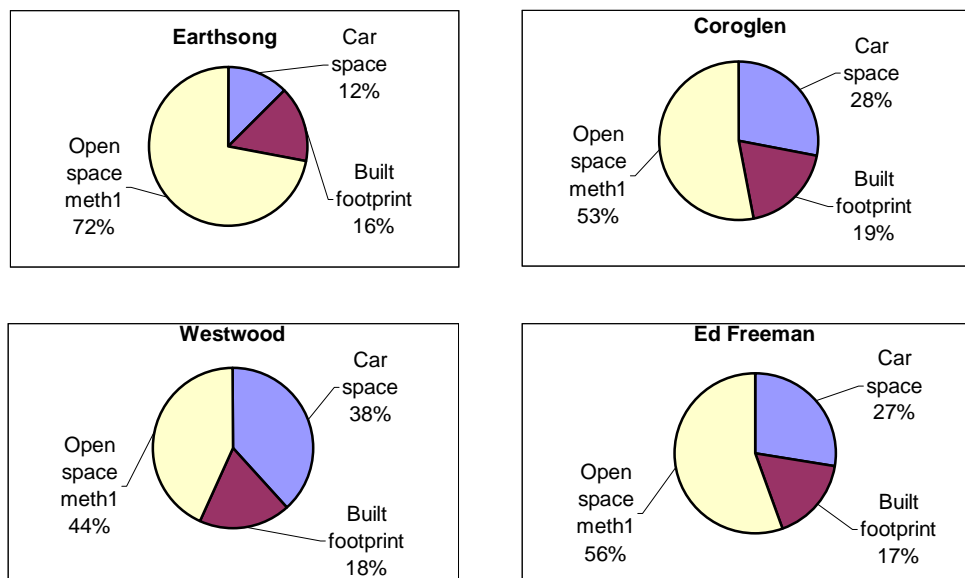
Method 2c is all dedicated usable common open space incl com house & nodes

2.5 COMPARISON OVERVIEW

The CAD area data was totalled in the worksheets. Note that these results differ slightly from data provided in our letter to WCC of 8.11.2001. Improvements in accuracy have resulted from changing from a tracing overlay method to a CAD software method. Table 1 lays out the results of the area comparison in a square meter per household form. The pie charts in Graph 1 summarise the use of land by percentage of total site.

	Earthsong	Coroglen	Westwood	Ed. Freeman
	m ² /hh	m ² /hh %diff	m ² /hh %diff	m ² /hh %diff
Car space	50	131 +162%	23 -54%	186 +272%
Built footprint	63	89 +41%	11 -83%	114 +81%
Open space method 1	290	248 -14%	26 -91%	377 +30%
Open space method 1b	301	248 -18%	27 -91%	377 +25%
Open space method 2	114	31 -73%	12 -89%	29 -75%
Open space method 2b	125	31 -75%	14 -89%	29 -77%
Open space method 2c	145	31 -79%	14 -90%	29 -80%
Total area	403	468 16%	61 -85%	677 +68%
Density (gross)	24.8	21.4	164	14.8

Table 1: Summary of area usage per household



Graph 1: Differences in land use by site proportion

2.6 COMPARISON ANALYSIS

One of the most notable results above is the minimal amount of space devoted to vehicles on the Earthsong site: Earthsong is about a third of Coroglen; and a quarter of Edwin Freeman. (The Westwood case differs in that the underground parking area was not measured as car space)

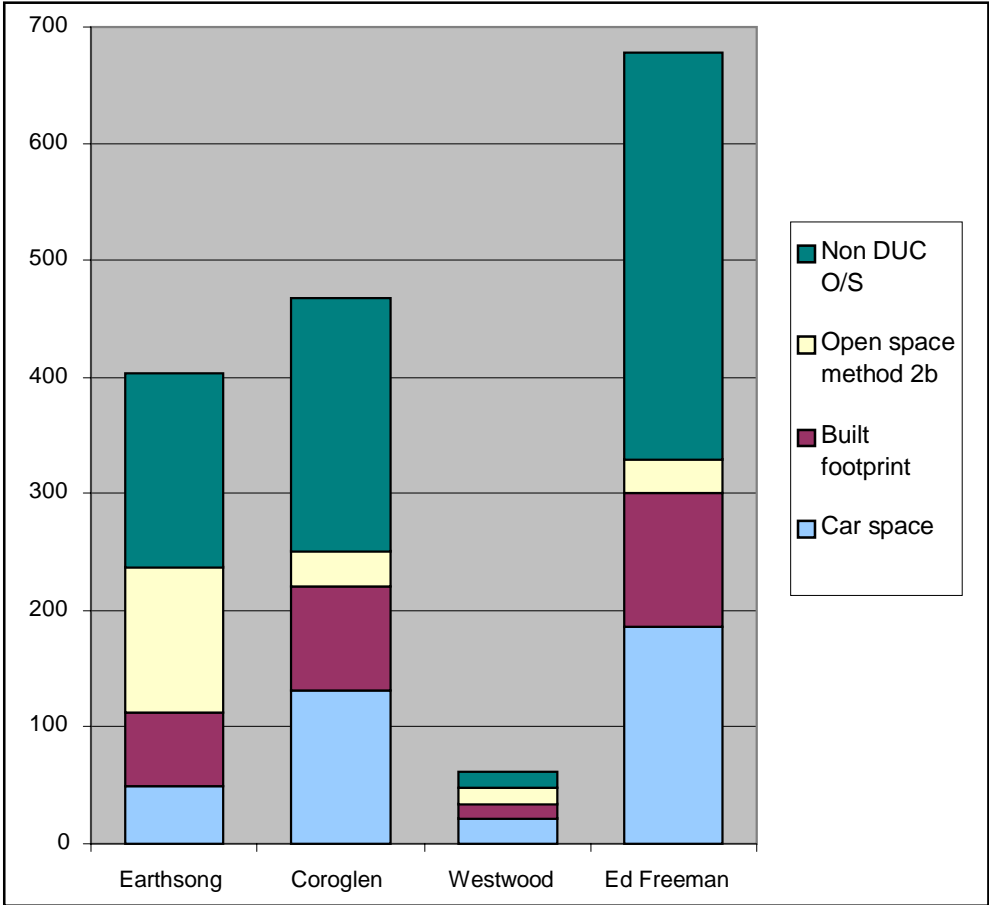
Regarding the built area, the difference the number of storeys makes to both the percentages of the site and the area per household can be seen clearly. Westwood has the least built

footprint followed by Earthsong. An interesting question is: what happens to the resultant freed up space? It is clear that Westwood simply increases its density, while Earthsong increases open space.

Even without discussing which of the open space measures should be used it is clear that Earthsong, in comparison with Coroglen, has in fact provided more open space by *any* definition, anywhere from 13 to 368 % more. The same applies for the Westwood case anywhere from 793 to 1015% more. As these three medium density developments are comparable in time and place, this data alone suggests WCC have not been even handed.

A great deal of discussion could be had surrounding which of the measures is most applicable. Being beyond the scope of this analysis we suggest a compromise by adopting method 2b. This method incorporates almost all of the criteria A-J. (It excludes common open space defined as ‘nodes’, that is to say, shared gathering places in each cluster of houses, granting that this space will be used predominantly by the people in that cluster). It includes common buildings because it has been adequately demonstrated (in a previous letter) that in the Earthsong case the common built space is entirely over and above the square meters of private floor area normally provided for housing. In this suburb at least, the belief that Earthsong houses are smaller, is a myth.

By using Open space method 2b we see the following graph 2:



Graph 2: Absolute spaces allocated (square meters) per household

The case of Edwin Freeman—thus far not discussed—is best seen in the graph 2. Being a typically 1980s sprawling low-density suburb much of the space is taken up by roading and large private yards.

While we note that this is the only instance in the whole comparison where any of the open space measures exceeds that of Earthsong (377m²/hh cf 290m²/hh) there are many reasons why this comparison is less applicable. Some of these are:

- Private yards do not meet criteria I
- Much of the yard space has minimal functionality by virtue of comprising narrow side yards, and expansive non-private front yards.
- Large rear yards also often have sub-optimum functionality owing to being bare and unlandscaped. They also tend to have no real access relationship to the house.
- The Edwin Freeman case was developed in another era, under an entirely different reserves contribution scenario.

The above reasoning notwithstanding two observations are worth making:

1. It is interesting to note that despite “smart growth” induced density increases the basic suburban proportions have changed surprisingly little. This can be seen in the comparisons between Coroglen and Edwin Freeman in graphs 1 and 2.
2. That Edwin Freeman has achieved 87m² per unit more *total* open space is somewhat diminished in value by the fact that it took 274 m² per unit of extra land space to achieve it. Smart design has allowed Earthsong to achieve on a one third smaller site:
 - comparably sized houses by floor area as either Edwin Freeman or Coroglen
 - a generally higher quality of private yards with ideal indoor outdoor flow and shape factor (being at least 7m by 7m)
 - *and* a total of 96m² per unit more openspace *of a reserve character* than Edwin Freeman.

2.7 COMPARISON CONCLUSION

Table 2 compares Earthsong open space of a reserve character with the other 3 developments.

Open space method 2b	m ² /hh	EE as a % of
Earthsong	125	
Coroglen	31	403%
Westwood	14	893%
Edwin Freeman	29	431%

Table 2: Earthsong open space as a percentage of other developments

What is interesting about the above table is that if 4 ha/1000 people is any guide to open space provision, then Earthsong has in fact already provided in excess of this amount on site (125x1000/2.4=5.2 ha/1000). It is repeated that this has been achieved while still providing average size houses, vehicular access, and private yards of better than average functionality.

By way of contrast much of the new ‘greenfield’ development—including Coroglen—has retained the single-level-detached-house-dominating-the-lot model. Density increases have thus served to erode the utility of the remaining private open space, squashing the private yard into usually awkward leftover spaces. Such development can be seen as a vast “sea of roofs” in many places in the city. Conversely we note that Coroglen has scaled down both roading and housing setbacks to good effect in addition to some use of zero lot line / duplexing.

Lastly to return to the issue of criteria I. The 30m² of open space provided in the Coroglen and Edwin Freeman developments is in each case vested as public reserves. These areas were provided by developer contributions. While the District plan is vague on this matter it seems

clear that actual vesting is not required to achieve the effect of a reserve. Talking to council staff it is plain that enough medium density examples exist to show that non vested reserves have been recognised as achieving the effect.

We note also the semi-superceded s285 of the LGA: “Where the subdividing owner makes provision for the setting aside within the land on the scheme plan of open space for the use only of persons to live within that land, the council may take into account the whole or part of the areas to be set aside when assessing the area to be set aside as reserves under this section or, as the case may be, the contribution to be made”

3.0 ISSUES

3.1 OTHER FACTORS TO BE INTEGRATED

“You can’t look at open spaces and ignore traffic design... NZ has the fourth highest number of vehicles/capita in the world”¹.

Despite the fact that this analysis deals primarily with reserves, the Resource Management Act places an obligation on users of land and TLAs to *actively* promote sustainable management and this leads by definition to a need to consider interrelated issues simultaneously.

When making any attempts to measure or facilitate open space provision we therefore should also be cognisant of the impact on other related planning objectives. These public good objectives tend to interact, at times synergising, at times conflicting with the provision of open space.

Objective	Example of open space interaction
<u>Open space objective</u>	
<u>Containment objective</u> Densification / urban containment /	<ul style="list-style-type: none"> • Intensive as opposed to extensive parks better • Multi purpose parks needed
<u>Water objectives</u> Hard surface reduction Treatment of runoff	<ul style="list-style-type: none"> • Parks dispersed by pollution generation zones are better placed to treat pollution at source.
<u>Mixed-use objective</u> Traffic demand reduction / mixed uses/ transit positive nodal devlpt	<ul style="list-style-type: none"> • Parks dispersed through residential zones will reduce traffic demand
<u>Social objective</u> Community enhancing / meeting places / privacy /safety	<ul style="list-style-type: none"> • Intensive as opposed to extensive parks better • Community based management a plus • Diverse provision better meet diverse needs
<u>Bonus objectives</u> Additional uses / food production, wastewater treatment / economic development/ business support	<ul style="list-style-type: none"> • Multi purpose parks • Robustness created by multiple parks and dispersion of open space

If financial contributions are not to be seen primarily as an income source for TLAs, then the economic incentive/impetus they create must be carefully assessed for outcomes for both reserves and other sustainability objectives.

¹ Minister Marion Hobbs (2002) speaking at the March 5 launch of the MfE Urban Design guidelines *People, Places and Spaces*

3.2 A BETTER WAY TO ASSESS PROVISION

Because the financial contribution clauses in the Plan have been appealed, it is clear that others find the provisions unnecessarily arbitrary.

While the 6% of developed lot value policy bears a passing resemblance to the cost of providing reserves in general, it bears no firm correlation to on-site provision whatsoever. Over and above an adequate building platform, the value of urban development sites is proportional to things such as neighbours, views, aspect, proximity of services, and other essentially extrinsic things.

The only real impetus created by a 6% by lot value policy is for developers to try to reduce the value of the lot, a rather self-defeating impetus we suggest when considering any of the above objectives. In terms of developer driven density increases the 6% rule does not correlate at all well. When increasing density the sum of combined lot values increases at a much lesser rate than the rate of density increase which in turn correlates with impacts on reserves.

We suggest that the open space quality criteria offered here could be developed into a method to assess open space provision. The criteria could be weighted and an overall score arrived at. This could form the basis of a fairer method to charge for residual impacts on reserves.

3.4 RESERVES PROVIDERS

Our attempt to find clear definitions of “the purpose of the particular contribution” highlighted a particular issue, which we note below.

Firstly nowhere in the plan is the actual purpose of the contribution expressly or coherently defined. Policy 5.10.27 states that “financial contributions should...be taken for the purpose of avoiding, remedying, mitigating or offsetting ... adverse effect(s) [of the activity]”. However this alone does not explain how or what constitutes an effect on reserves, or what is the purpose of reserves, information obviously needed if effects are going to be avoided in the first instance.

On one hand Citywide rule 1.4(f)(i) tells us that the level of the contributions should be related to the extent that the activity’s adverse effects have been avoided, remedied etc “on-site”, but on the other hand the plan elsewhere explains that a reserve is “land defined...pursuant to the Reserves Act 1977 or land which is defined...as Open Space environment”. If this is taken literally then it appears *impossible* that on-site measures can be provided, ie a ‘hamstring’ situation.

However other phrasing suggests that perhaps we do not need to take it so literally. Eg: the Anticipated results from Objective 5.10.27 include achieving “levels of public open space sufficient to provide for the recreational needs of residents”. Despite the plan’s definition of open space we feel this phrase at least gives a common sense purpose of reserves and therefore reserve contributions.

We conclude that the plan is particularly and unnecessarily geared to a standard policy of council being the sole reserve provider. In fact we find this sentiment reinforced in the medium Density criteria which says that “ In general communal outdoor space should be limited and clearly defined as it can be underused, expensive and difficult to manage”. We are glad that it says ‘in general’ because we are confident that the Eco-Neighbourhood project will in time ably

demonstrate that it *can* be otherwise.

We also note that other policies conflict with this paradigm, eg: Policy 11.28 “Medium density housing should be comprehensively designed so that a high quality of internal amenity is provided to the overall development”; with an Anticipated result, same objective: to achieve “integration of the natural and built environment”.

More confusion exists in policy 6.23: medium density housing must be designed in such a way “that allows consideration of open space ...to be adequately addressed”. The very fact that many medium density housing developments are comprised in Unit Title subdivisions prevents by definition the above from happening because open space is defined in the rules as “land within...the open space environment”.

The broader definition of reserve taken in this appendix is supported not only by common sense, but also by the *Regional Open Space Strategy* ARC (1992:4): “Open space is land or airspace or a body of water or a combination of these things which provides recreational, educational or other physical, spiritual, or social benefits and/or provides for the conservation of natural, cultural, or historic resources and landscape elements”.

We suggest that this situation where the plan fails to accommodate non-council amenity provision is in fact contrary to the effects based approach that the RMA91 requires TLAs to take. See also Brookers RM (2002:A5.06), “The role of the council under the RMA is ...to enable people and communities to provide for their wellbeing, not to direct how that is to be achieved *Wakatipu Environmental Soc Inc v Queenstown Lakes DC* 2000.”

4. CONCLUSION

We have offered a common sense definition of what a reserve is, by looking at the basic criteria that evaluate reserves. By this definition there is unarguably more than one way to meet that purpose. We have noted an inconsistency in the plan whereby it is somewhat unforseen, that adverse effects can actually be *directly* avoided by providing open-space ‘on-site’, instead of council avoiding the impacts on the developers behalf by taking money or land.

To the contrary we have shown, we believe beyond any doubt, that the Eco-Neighbourhood development has made substantial efforts to minimise adverse impacts on reserves by indeed “providing measures on-site” to the degree of over 5 ha/1000 people.

We understand that the citywide average provision of reserves is 6.6 ha/1000 people. If we take this level of provision as a ‘zero effect’ baseline, then assessing the Eco-Neighbourhood project at the maximum amount can only be seen as grossly incongruent and unjust.

The project has provided a well-intentioned and vastly comprehensive medium density design, expending considerable sums of money and time to achieve this effect. In all fairness this should be recognised by council. Doing otherwise will without doubt erode councils documented objective of an eco-city.