



# Urban Edges Analysis Report

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## **1.0 Introduction**

### **1.1 Scope and Brief**

This report is in response to a request for advice on the design outcomes of the City's urban edges. In particular it will investigate the following:

1. what should be the approach to the urban edge, hard or graduated?
2. are edge treatments best achieved by the Living 1A zone or some other mechanism?

It should be noted that the following investigation and analysis is set at a high level and provides a general overview of outcomes in Living 1A zones around the City assessed against the L1A environmental results anticipated. It does not provide a detailed analysis of greenfield subdivision design or the design of public open space.

### **1.2 Methodology**

A desktop exercise was first undertaken to study the location, zoning and patterns of open space and urban development in the vicinity of each of the Living 1A zones at a high level, followed by site visits to each of the locations. An analysis of each of the sites was then carried out comparing the 'as built' outcomes with the environmental results anticipated for the Living 1A zone.

### **1.3 Description of the City's urban edge planning context**

The Land Use Recovery Plan (LURP) has inserted a new Chapter into the Canterbury Regional Policy Statement which provides statutory provisions for enabling rebuilding and redevelopment, including priority business and residential areas. These areas are shown on the map attached in Appendix One of this report together with the Living 1A zones, the City boundary, and the LURP Airport Noise Contours.

What is evident from this map is that only some of the Living 1A zones are still located on the City's edge as the Land Use Recovery Plan has released land for residential development which extends beyond most of the former City boundaries. The majority of the Living 1A zoned areas are now fully developed except for a couple of Living 1A deferred zones (including one on the Port Hills), and the final stage of the 'Aidanfield' subdivision (which is in the construction phase).

### **1.4 Overview of the City's L1A zones and locations**

The subdivisions within a Living 1A zone tend to be older and have been developed over the last ten to fifteen years. They are located at the following locations and shown on the map attached in Appendix One, and for the purposes of this report have been labelled as site's 1-9.

1. South of Queen Elizabeth Drive east and west of Marshland Road (site 1)
2. South of the Styx River between the Main North Road and the Northern Arterial (site 2)
3. South of the Styx River west of the Main North Road and east of Cavendish Road (site 3)
4. East of Tulett Park between Claridges and Sawyers Arms Road (site 4)
5. The Crofton Subdivision (site 5)
6. South of Harewood Road adjoining 'Nunweek Park' (site 6)
7. North of Halswell Road between Dunbars Road and the Heathcote River 'Aidanfield' (site 7)
8. North of Sabys Road and East of Halswell Junction Road, 'Kilbride Gardens' (site 8)
9. Shalamar Drive, Living 1A deferred zones (site 9)

## 2.0 Analysis of City 'edges' and outcomes

Each of the Living 1A zones (not including deferred zones) is described below including a brief assessment against the environmental results anticipated for the zone which are as follows:

**Environmental results anticipated** (ref: Volume 3 : Part 2 Living Zones : 1.2 Living 1 (Outer Suburban) Zone : 1.2.1 Living 1A (Outer Suburban Boundary) Zone)

As for the Living 1 Zone, and

- (a) A graduated lowering of residential densities to the rural zone boundary and/or the provision of public open space on that boundary, in order to improve the quality of the rural-urban interface.
- (b) The avoidance of aircraft noise intrusion into residential areas, and the avoidance of pressures to curtail airport operations.
- (c) The provision of high quality living environments, with a mixture of densities, lower residential densities on the rural interface, enhancement of any natural or artificial waterways and provision of public open space.
- (d) The co-ordinated provision and staging of services (particularly sewerage, water and roading) in the Mairehau area south of the expressway, in conjunction with that of the Living 1B Zone in that location.
- (e) A substantial provision of public open space in association with development in Nunweek, Tulett and Masham areas.

### 2.1 South of Queen Elizabeth Drive, 'Site 1'

#### Site description:

This includes residential development directly south of Queen Elizabeth Drive. Section sizes are variable ranging between 504 and 1,346m<sup>2</sup> with the majority of section sizes being at the lower end of this spectrum. There is a pattern of subdivided lots located along the boundary with Queen Elizabeth Drive which suggests that while larger lot sizes were provided for initially, they have since been subdivided. This observation has since been confirmed through conversations with Council's Senior Planners.

In terms of design outcomes the sections are all oriented away from Queen Elisabeth drive (despite this being the northern boundary of the subdivision) with a continuous high fence along the boundary and a narrow landscape strip with tree planting. Planting within this 5m planting strip softens views of the boundary fence from Queen Elizabeth Drive creating the impression of an attractively planted edge. However the planting also shades properties immediately to the south of the boundary. Access to quality public open space is limited with an insufficient setback from the state highway to provide for a quality walking route along the northern boundary.



Figure 1: Aerial photograph showing the Living 1A zone adjacent to Queen Elizabeth Drive

#### Assessment against the Living 1A environmental results anticipated:

In terms of the environmental results anticipated, a graduation of densities is not perceivable on site and public open space is likewise not well provided for in this location. While the visual amenity of the urban/rural interface has been improved by a narrow planting strip, the overall quality in terms of walking connections and space available for adequate setbacks from the road and adjacent properties has not been provided. While currently situated on



the urban edge, land further north has recently been zoned for residential development through the LURP.

## 2.2 South of the Styx River between the Main North Road and the Northern Arterial, 'Site 2'.

### Site description:

This subdivision has a north facing edge which overlooks the Styx River and is adjoined by a local road (Willow View Drive) and a park and esplanade reserve. Houses front onto the road with a mixture of open frontages and low fences. Section sizes are similar and measure between 700-800m<sup>2</sup>. In some cases the site coverage is extensive with some very large dwellings.



Figure 2: Aerial photograph showing the Living 1A zone adjacent to the Styx River between the Main North Road and the northern arterial.

### Assessment against the Living 1A environmental results anticipated:

Overall the City edge in this location is well defined and provides for public access, recreation, and high levels of amenity. The natural character of the Styx River has also been enhanced with an esplanade reserve and a recreation reserve provided. Overall there is no noticeable decrease in housing densities. This subdivision no longer forms the urban edge in this location with land to the north recently rezoned for residential redevelopment through the LURP.

### 2.3 South of the Styx River west of the Main North Road and east of Cavendish Road, 'Site 3'

#### Site description:

Section sizes in this subdivision vary widely between 700m and 2083m<sup>2</sup>. Houses are generally orientated away from Styx Mill road with high fences adjoining the road and sections facing south onto internal roads. Sections along Styx Mill Road (i.e. the urban edge in this location) are smaller and site coverage is fairly high. While there is a small pocket of larger sections adjacent to the Main North Road the majority of sections are not obviously larger than for the Living 1 zone. There is some opportunity for access to the Council owned Styx Mill Reserve to the north although this would require crossing a busy road. Likewise houses do not overlook the reserve – probably because of the desire to face away from Styx Mill Road.



Figure 3: Aerial photograph showing the Living 1A zone adjacent to the Styx River west of the Main North Road and east of Cavendish Road.

#### Assessment against the Living 1A environmental results anticipated:

This subdivision includes a small area where housing densities appear much lower. This is located alongside a stream which adjoins one of the local roads. While this and other areas of public open space are included in the subdivision, the most noticeable natural feature is the Styx Mill Reserve on the north side of Styx Mill Road which does assist with defining the urban edge in this location. This subdivision no longer forms the urban edge to the City in this location with land to the northern side of the Styx River in Belfast forming the new urban edge.



## 2.4 East of Tulett Park between Claridges and Sawyers Arms Road, 'Site 4'

### Site description:

Housing in this location generally faces north towards Tulett Park onto a narrow road and linear park measuring between 20 and 40m in width. Houses typically face the road which is 8m in width with low or no front fences. Several houses are located on the other side of the road and have face both directions with a street frontage onto Glasnevin Drive and low open front yards facing Tulett Park. Site coverage appears to be quite high on the majority of these sections with most dwellings being much larger houses. Sections average around 700m<sup>2</sup> in size.

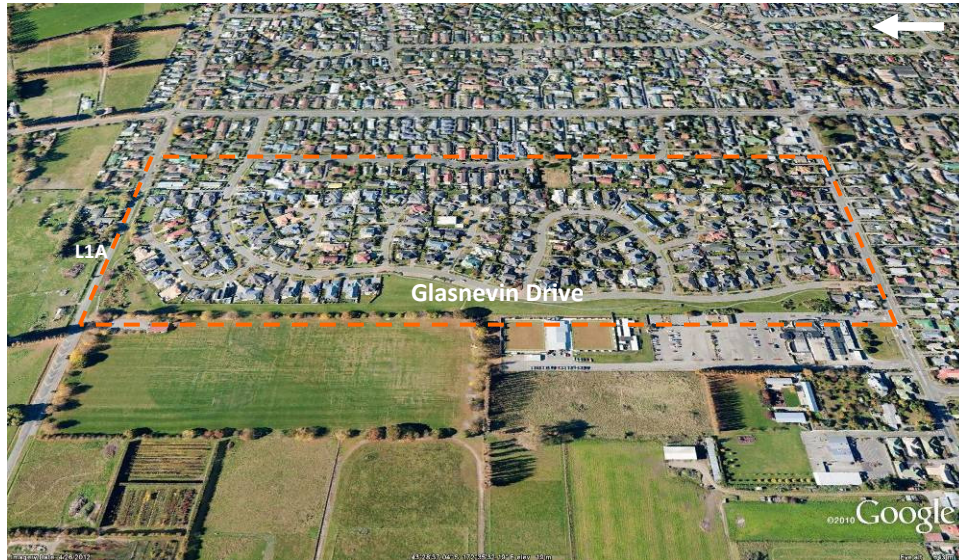


Figure 4: Aerial photograph showing the Living 1A zone adjacent to Tulett Park between Claridges and Sawyers Arms Road.

### Assessment against the Living 1A environmental results anticipated:

A gradual lower of residential density is not visible in this subdivision. However some noticeably larger houses are locating adjacent to Tulett Park overlooking the Park creating a mixture of densities in this location. While a large amount of public open space is provided with the presence of Tulett Park it is not particularly accessible for people other than sports park users with an absence of walking connections. Overall the quality of the rural – urban interface is good in this location with relatively large areas of public open space and high levels of amenity. While forming part of the rural/urban edge at present, this subdivision will soon be adjoined by the new Highstead subdivision to the north which will become the new rural urban edge adjoining the Airport Noise Contour.

## 2.5 Crofton Subdivision, 'Site 5'

### Site description:

This is an area of development immediately adjoining the Styx River, which spans both the north and south sides of the River. Lot sizes vary considerably ranging between 488 and 12,054.8m<sup>2</sup> achieving a variety of site coverage and on site amenity outcomes. Public access is provided within a narrow esplanade reserve strip of between 14 and 20m in width adjoining the Styx River. While a walkway exists in this location it is not of sufficient width in some places to provide a quality walking experience.





Figure 5: Aerial photograph showing the Living 1A zone adjacent to the Styx River between Sawyers Arms Road and Harewood Road.

Assessment against the Living 1A environmental results anticipated:

This Living 1A zone appears to achieve most of the environmental results anticipated for the zone with a variety of lot sizes, provision of public open space, and enhancement of the Styx River (although this could be improved in terms of public access). The viability of this zone and the maintenance of these outcomes into the future is uncertain however given the precedent for subdividing the Living 1A zone. This subdivision does form the urban edge in this location with further residential development to the north west limited by the LURP Airport Noise Contours. This is one example of an edge with irregular geometry or a graduated edge – as opposed to a hard edge.

## 2.6 South of Harewood Road 'Nunweek Park', 'Site 6'

Site description:

In this case properties are fronting onto Nunweek Park and generally overlook the Park with low or no boundary fences. Section sizes range between 760 and 1,659m<sup>2</sup>. There are some larger sections with correspondingly large house sizes. Some public open space is provided which weaves through the site in a number of locations following the Styx River and tributaries.

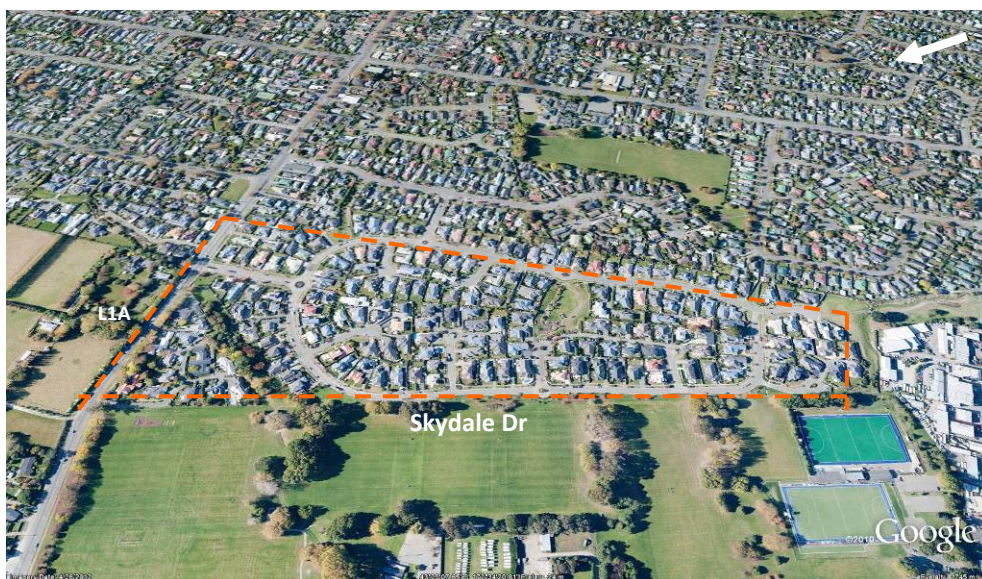


Figure 6: Aerial photograph showing the Living 1A zone adjacent Nunweek Park.



Assessment against the Living 1A environmental results anticipated:

Apart from a small number of sections which are much larger, the majority of lot sizes are very similar and not unlike the Living 1 zone. Public open space in the form of on and off road connections has been well provided for in terms of the overall quantity but the legibility and way finding is problematic. The outlook to Nunweek Park to the north provides a pleasant outlook and together with the Styx River and other open space connections provides a high level of neighbourhood amenity. This subdivision does form the urban edge in this location with further residential development to the north west limited by the LURP Airport Noise Contours.

**2.7 North of Halswell Road between Dunbars Road and the Heathcote River, 'Site 7'**

Site description:

The subdivision known as Aidenfield is located between Halswell Road, Dunbars Road, and the Heathcote River. The provision of public open space appears to have been well provided throughout the subdivision, and a number of sections have a pleasant outlook to the Heathcote River.



Figure 7: Aerial photograph showing the Living 1A zone known as Aidenfield.

Assessment against the Living 1A environmental results anticipated:

A variety of housing densities are available in this subdivision which includes some elderly persons housing, and medium density housing. The graduated housing density is not apparent. Public open space appears to be generally well provided for with an esplanade reserve strip providing walking connections throughout the subdivision. No longer on the edge of the City this Greenfield subdivision is now surrounded by further residential subdivisions to the north, west and south.



## 2.8 Kilbride Gardens north of Sabys Road and East of Halswell Junction Road, 'Site 8'

### Site description:

This area is known as Country Palms, and while it did form an urban edge to South west Christchurch in the past, it no longer fulfils this role given the LURP direction for the future development areas in this location. Section sizes range between 535 and 1131m<sup>2</sup> and there is a noticeable pattern of subdivision which has occurred.



Figure 8: Aerial photograph showing the Living 1A zone known as Kilbride Gardens.

### Assessment against the Living 1A environmental results anticipated:

The graduated density is not being achieved here with no noticeable increase in site size. Open space outcomes in terms of public open space provision on the urban/rural boundary are also not evident. No longer on the edge of the City this Greenfield subdivision is now surrounded by further residential subdivisions to the north, west and south.

### 3.0 Discussion

Having observed the Living 1A zones in Christchurch including the 'as built' outcomes on site it is evident that while some of the environmental results anticipated for the zone appear to be being achieved, others are not. The 'graduated densities' outcome (environmental result anticipated (a)) does not appear as a strong overall outcome in almost all of the L1A subdivisions surveyed with larger lots being subdivided, or large houses being established on larger sites reducing the appearance of graduated density (refer figure 10 below). An obvious exception was Croftons subdivision which contained a noticeably large area of lower density residential development (refer section 2.5). While this is a general land use pattern in the majority of the Living 1A zones there are small pockets of noticeably lower density housing in site 3.



Figure 10: Large dwellings on larger lot sizes at site 2



Figure 11: The provision of open space is in the public realm 'Styx Mill Conservation Reserve' (site 2)

In terms of the quality of the rural/urban interface (environmental result anticipated (a) cont.) some of the most attractive 'urban edges' are being achieved as a result of landscape features such as the Styx and Heathcote Rivers' being incorporated into the design and layout of residential neighbourhoods. Good outcomes were also achieved where Parks were integrated into the residential zone (with walking/cycling connections, active edges etc). A noticeable trend where houses adjoined reserves and landscape features such as these was for the adjoining dwellings to be large (and often two levels) and situated to overlook and face onto the neighbouring open space. This generally assisted with ensuring a level of visual and physical interaction with properties adjacent to open spaces (refer figure 11 above and figure 12 below).

In contrast the poorest urban/rural edge outcomes were observed where the urban edge was adjoined by a major road such as Queen Elisabeth Drive (major arterial) or Halswell Junction Road. In these cases inadequate room has been provided for a setback between housing and major roads, buffer planting, and the incorporation of well designed pedestrian or cyclist linkages. In future it would be desirable for Council to specify a more generous setback (minimum of 10m) in this location.



Figure 12: Large houses overlooking Nunweek Park



Figure 13: The urban/rural edge adjacent to Queen Elisabeth Drive. Note: tall evergreen planting shades properties behind (site 1).



With regard to environmental result anticipated (e) it does appear that generous amounts of open space have been provided in conjunction with Nunweek and Tullet Park's (site's 4 and 6). It should be noted however that while sizeable areas of open space have been provided this is associated with sports parks which does not necessarily equate to high levels of amenity for all users.

#### **4.0 Conclusion and Recommendations**

This report has found that out of the eight Living 1A zones surveyed; only two still form the urban edge to the City (site's 5 and 6). The other Living 1A zones have since had land released beyond them for residential zoning through the LURP.

In terms of the environmental results anticipated for the Living 1A zone this report has found that in general a graduated lowering of residential densities is not noticeable in most of the Living 1A zones. This is thought to be either because of a pattern of subdivision where originally larger lots have been subdivided or because of built site coverage where there is a pattern of larger dwellings being established on these sites.

It should be noted that the Croftons subdivision is an exception to the general findings of this report with noticeably larger lots resulting in a graduated (in terms of residential densities) rather than hard edge approach. It also creates an irregular shaped urban edge unlike the other sites which have regular geometric lines, and at present provides a very different edge environment much more integrated with the dominant open space qualities of the adjoining rural zone. The Crofton subdivision did not read as a well defined urban edge as a result of the remaining open space and irregular edge geometry. While providing a high level of local amenity it is a less defined edge both in terms of the visual qualities and prospective future development.

In terms of what is recommended for the treatment of the City's edge and whether a 'hard' or 'graduated' approach is appropriate (for housing densities), it depends on the outcomes sought. If high amenity edge environments are sought, a key finding of this report is that high quality urban/rural interfaces and City edge neighbourhoods are achievable without a noticeable graduation in housing densities. In relation to the quality of the urban/rural interface this report has found that what is important to urban/rural edge quality is the design and layout of the edge and adjoining development to provide adequate space for the enhancement of natural features, recreation opportunities, and well designed walking and cycling linkages. One of the major detractors to achieving quality edge outcomes in the sites surveyed was where housing was located too close to major roads. This should be prevented in future through the provision of adequate open space setbacks (of at least 10m wide) in these locations.

In terms of mechanisms used it has been observed that some of the highest quality urban/rural interfaces were achieved through the use of Outline Development Plans which have the ability to control spatial layout and site coordination and connectivity. Given the importance of the spatial layout, proportions of open space on the urban edge, and connectivity to achieving good outcomes, it is recommended that outline development plans are provided which include guiding policy text to address future City boundary issues at a site specific level of detail.



Appendix One: Map showing the location of Living 1A zones in relation to LURP Residential and Business Areas

