

**ATTACHMENT A**

**DESIGN GUIDANCE FOR RESIDENTIAL  
SUBDIVISIONS**

# DESIGN GUIDANCE FOR RESIDENTIAL SUBDIVISIONS

## Introduction

Hamilton City Council wishes to take a stronger and more visionary role in guiding the future development of Hamilton's built environment to ensure that it can better reflect the dreams and aspirations of the City's community. To this end, Council has articulated its strategy for urban design in CityScope.

CityScope recognises that for new urban development to be sustainable, it needs to be integrated with the natural environment whilst ensuring that the resulting buildings and spaces contribute to making attractive places for people. In order to achieve this, it is important that future development in the City is based on sound urban design principles.

The process of land subdivision is the first stage in developing the City's form and sets the pattern for subsequent built development. In particular, the way in which land is subdivided for residential purposes has a major bearing on the type of living environments that are created for residents of the City. The quality of these environments is heavily dependent on their connectivity and permeability. It is crucial therefore, that these elements of urban design are incorporated into the design of residential subdivisions at the very earliest stage of their planning.

Inadequate connectivity and permeability in residential subdivisions are extremely difficult to correct later on as land ownership becomes fragmented and built development begins to take place.

## Purpose of this Guidance

The purpose of this design guidance is to assist developers with the creation of residential subdivisions that achieve high levels of connectivity and permeability. It sets out the considerations to which Council will have particular regard in the determination of applications for resource consents.

The Hamilton City Proposed District Plan defines 'connectivity' and 'permeability' as follows:

**Connectivity** – in terms of subdivisional planning means the ability to provide a well-connected movement system which makes connections to adjoining land, local facilities and surrounding neighbourhoods through interconnectivity of the local road, pedestrian and cycle networks.

**Permeability** – the extent to which an environment provides choice and ease of movement through it from place to place. The starting point for a permeable development is the existing system of links into and through the site from the surrounding neighbourhood.

This Guidance needs to be read in conjunction with Rule 6.2.2 of the Proposed District Plan which sets out the provisions that apply to resource consents. Council staff will use this guidance to help interpret the District Plan's performance outcome and assessment criteria.

The well-designed subdivision of land and buildings is integral to the sustainable management of land. The principles in this guide are intended to help developers shape the site and create a more vibrant sense of place. The layout of roads and the linkages between different sections are critical elements in the achievement of streetscapes, enjoyable and stimulating urban environments and distinctiveness for the city. Applications for subdivision will therefore need to demonstrate an understanding of the existing character of the development site and its place within the context of the wider neighbourhood and Hamilton City.

This design guide places emphasis on qualitative amenity values rather than technical criteria. It is intended to encourage more careful thought and responsiveness to the physical context of the site and to create higher amenity values for the future inhabitants of an area.

This guidance focuses on the following design elements for subdivisions:

- Site Analysis and layout
- Permeability and Connectivity

### **Site Analysis and Layout**

The visual, physical and historical characteristics of a site and its surroundings should be assessed and used to help determine the design cues for a new development. The aim should be to create an appropriate character and allow an understandable layout to be achieved. (Fig 1.)

A five-minute walking circle around the site will help identify the following:

1. Key landscape features, whether these are natural or culturally significant (eg; lakes, streams, pa sites) or built features (eg, churches, heritage buildings)
2. On smaller sites neighbouring buildings and the orientation of their private outdoor areas.
3. Nearest public transport, shops, schools, parks and reserves and whether these are existing or planned
4. Opportunities for street linkages by road, footpath, cycleway to neighbouring sites
5. All possible vehicle access points
6. Stormwater flow paths and possible stormwater management needs (eg, balancing ponds, swales)

In addition, attention should be given to:

- Site levels and orientation (eg opportunities for maximising solar gain and drainage flows)
- Key views and long distant view shafts
- The availability of exiting infrastructure such a water pipers, sewer pipes and roading.

Fig. 1: An example of site analysis

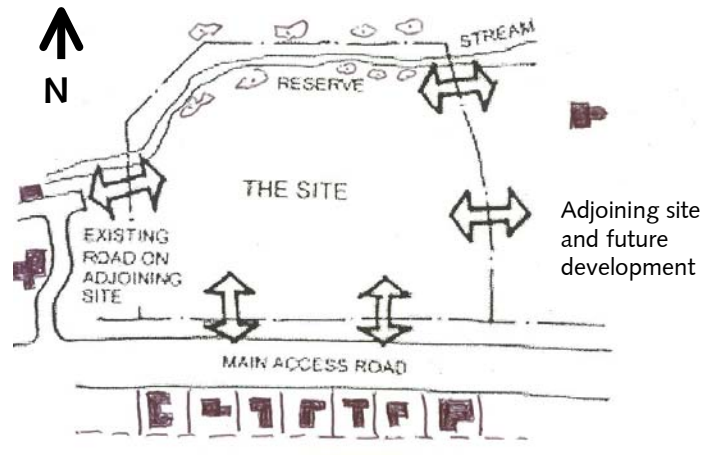


Fig. 2: Layout planning reflecting connectivity and permeability developed from site analysis

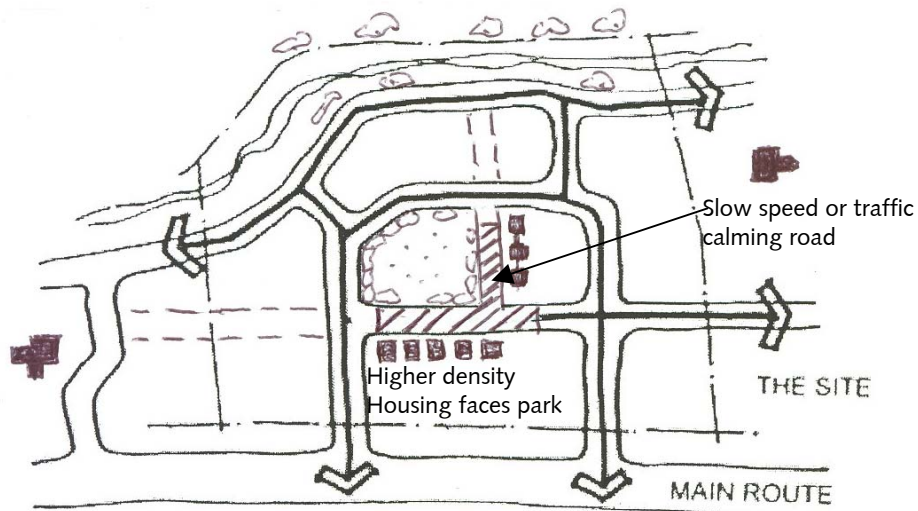
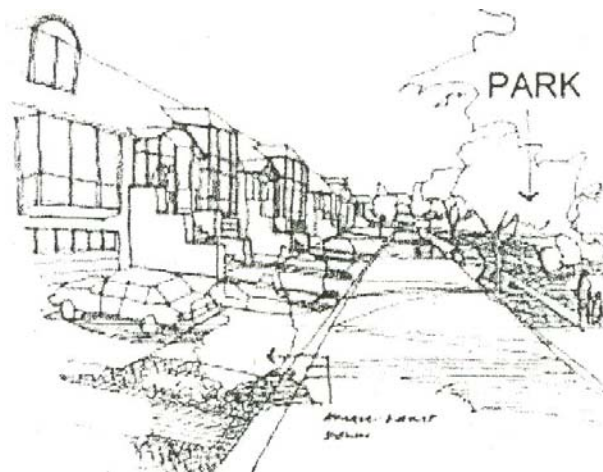


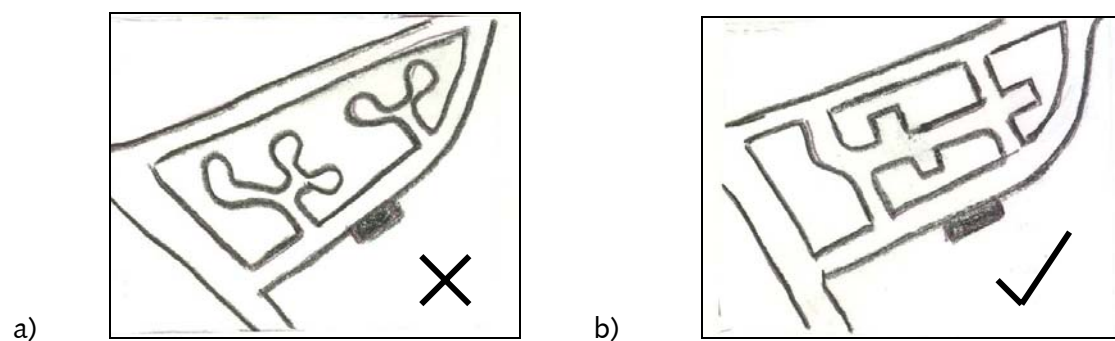
Fig.3: Illustration of high density residential facing onto park or reserve



## Connectivity and Permeability

### Key Principles:

- Good connectivity and permeability in subdivisions will promote linkages with the surrounding locality and thereby reduce travel distances, car usage, pollution and improve the ability for social interaction.
- Ensure accessibility and permeability in the local road, connector and minor arterial network by connecting to the existing street structure
- Enable a choice of modes of transport and provide a layout with good links and connections to surrounding neighbourhoods, residential areas, schools, recreation parks and reserves.
- Avoid a predominance of cul-de-sacs within a subdivision in order to maintain permeability and road interconnection.
- Well designed, and connected local roads can provide all the best safety features of cul-de-sacs while increasing accessibility and reduce road distance travelled.
- Ensure user safety in the street and security of property by facilitating a high degree of natural surveillance.
- Design speed regimes that are consistent with the road function of the street and the character of the adjacent land use



**Fig. 4: Illustrates connection and permeability through greater interconnection with the surrounding neighbourhood**

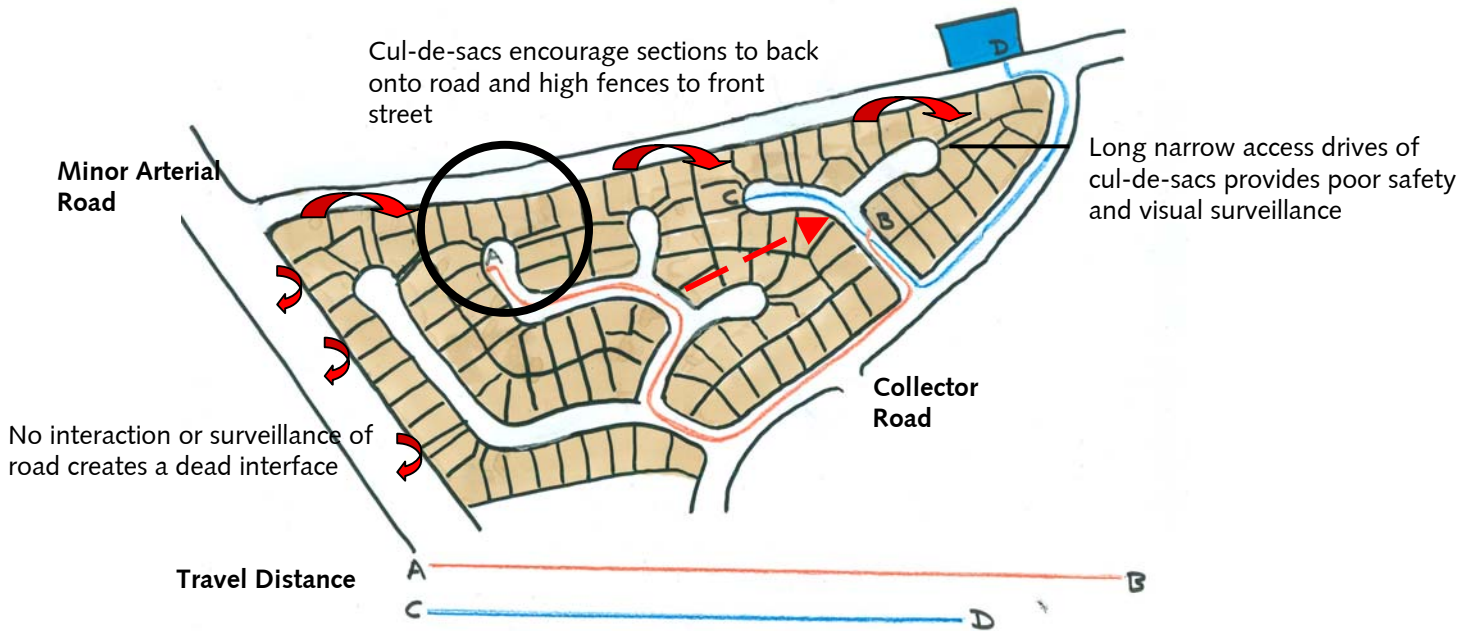
## Good Practice Requirements

- New roads and accessways should connect to the existing road network and should avoid a pattern of cul-de-sacs with few through roads. (Fig 4)
- Provide shared public accessways that connect residential areas with public transport services, parks, reserves, schools and local shops. Pedestrian or cycle only routes should be avoided.
- Integrate access for pedestrians and cyclists into the main road network
- Cul-de-sacs may be appropriate as exceptions where other road patterns would result in vegetation being cleared, gully's being crossed or streams being piped or where there are topographical restrictions due to gradient.
- Parks and reserves should be located where they are highly accessible from the surrounding neighbourhood
- Use public open space to form a centre for a development. Parks should be bounded by streets – with housing fronting them. This will provide a dual purpose by giving housing an attractive outlook which in turn will provide informal surveillance for the park, making them safer (Fig 3.)
- Higher density housing patterns should surround and look onto parks and reserves where they can share the amenity value of this open space (Fig 2 and Fig 3)
- Design roads so that they facilitate safe and convenient pedestrian and cycle use.
- Discourage rat running on local roads by ensuring that connector and arterial routes are more visible and direct. Use planting, street materials and narrow carriage way width and other traffic calming measures to reduce traffic speeds. (See Council's Development Manual Vol. 2 Part 7 for more details).

### Benefits :

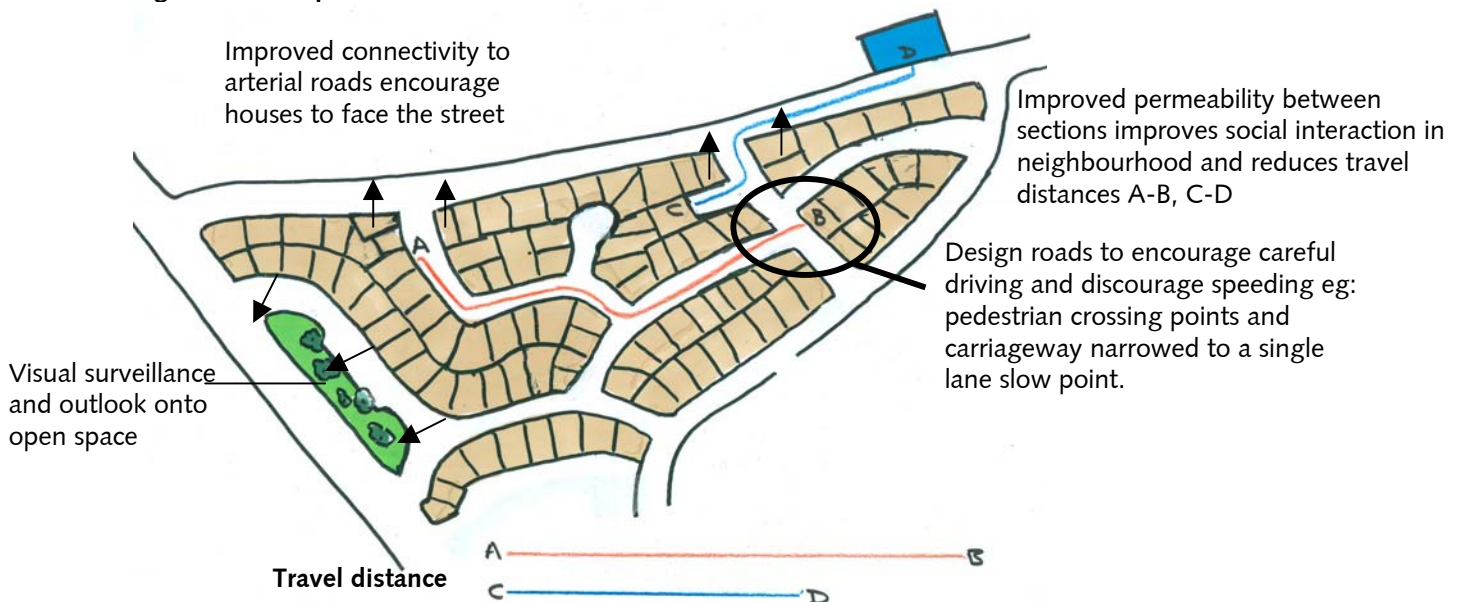
- Creation of more attractive neighbourhoods
- Reduced travel distances and consequent pollution
- Encourages walking and cycling
- Improves community contact and informal surveillance from passing traffic
- Allows easy access to facilitates such as parks and reserves
- Encourages greater use of public open space
- Creation of generally safer environments

**Fig. 5: An example of Poor Subdivisional Practice**



- The subdivision above is poorly designed with low permeability and interconnection between streets.
- Sections turn their backs onto the arterial roads which encourages high fences and reduced visual amenity and personal safety for street pedestrians
- The distance to travel from A- B and C-D is excessive and created by cul-de-sacs with no through linkage.

**Fig. 6: An example of Good Subdivisional Practice**



- Provision of a parallel service road off a busy minor arterial road may encourage buildings to face the street, with less need for fences and more informal visual surveillance.