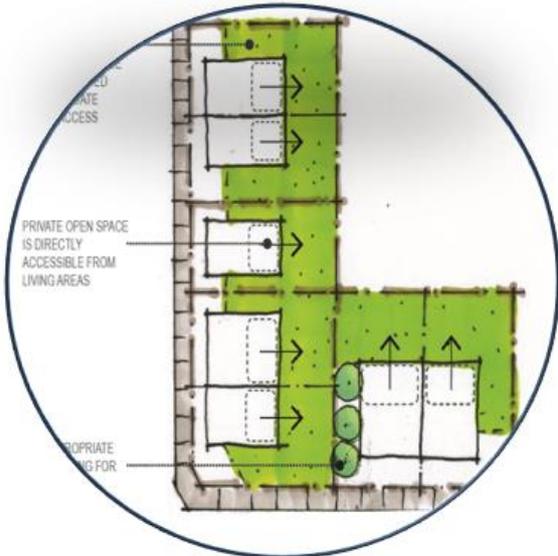
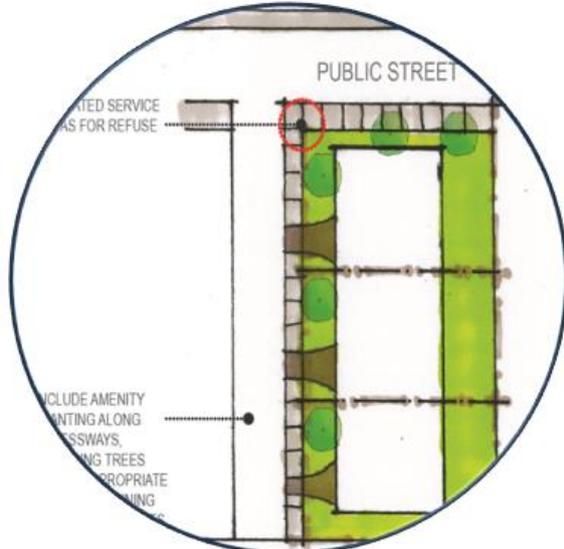


Tuakau Urban Design Guide



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Design Guidance

These principles and guidelines respond to the specific issues and opportunities identified in the context of Tuakau. They are intended to provide direction for future policy development and design guidance for future growth of the town.

I Design guidelines for future residential growth areas

It is recommended that developers work with the council planners in preparing more detailed Layout or Development Plans when proposing development in each of the proposed residential growth areas (stages 1, 2 and 3). Key principles for preparation of Development Plans will include:

- Early engagement with the council, key stakeholders and local community;
- Early concept design, indicating key outcomes sought;
- Site Assessment of:
 - Natural character, including emphasis on natural drainage patterns, topography and vegetation
 - Cultural heritage
 - Open space
 - Hazards
 - Urban form including land uses and the transport and open space network
 - Wastewater, water, stormwater networks.

Outcomes of the Layout or Development Plans should provide direction for future development in regard to the following matters:

- Street hierarchy (based on a formal or informal grid pattern)
- Layout of local neighbourhood centres (co-located with neighbourhood parks and other local amenities)
- Provision for a mix of residential densities including compact and low density residential
- Integration with existing urban areas
- Walking and cycling connections, particularly with neighbourhood centres, parks and other local amenities (with an average walking time of 5-10 minutes to local amenities, including local shops, kindergartens and, as far as achievable, schools)
- Provision of an open space hierarchy. In particular, open space should provide:
 - Natural waterways and ecological corridors
 - A variety of park sizes
 - Green corridors
 - Multi functional space (with possibilities for shared use)
 - A mix of passive and active recreation opportunities.
- Provision for local recycling stations and organic waste centres.

Proposed walking and cycling connections, block layouts and provision of open space should all be designed in accordance with 'Crime Prevention through Environmental Design' (CPTED) Principles.

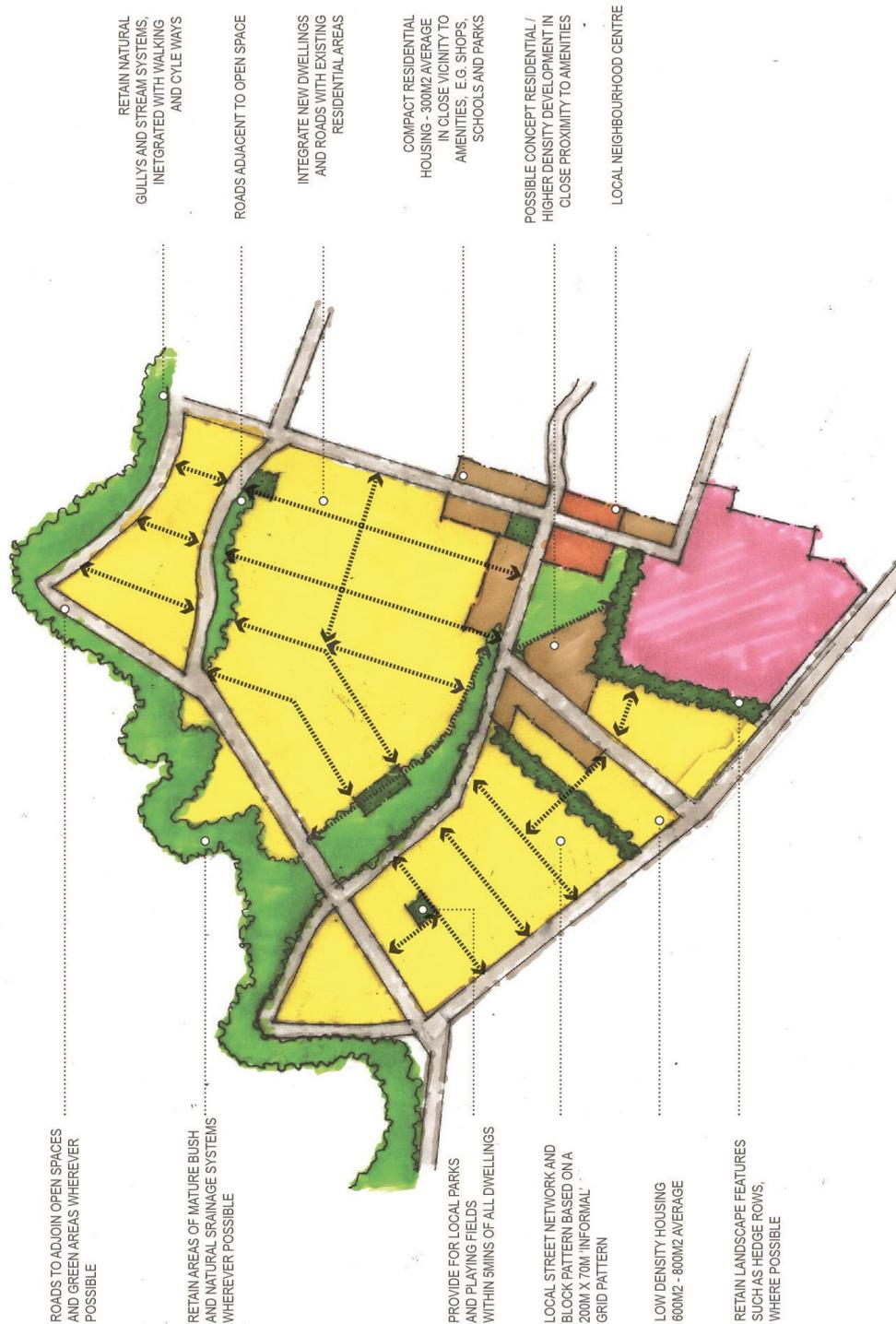


Figure 1. Indicative Development Plan for Taukau's northwestern growth area (Stage I) illustrating key design principles and outcomes (note, layout is indicative only and subject to future planning and design).

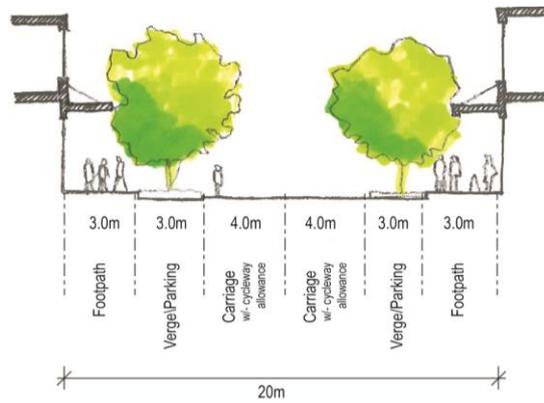


Figure 2. **Growth Areas – typical road cross sections: Neighbourhood centre**

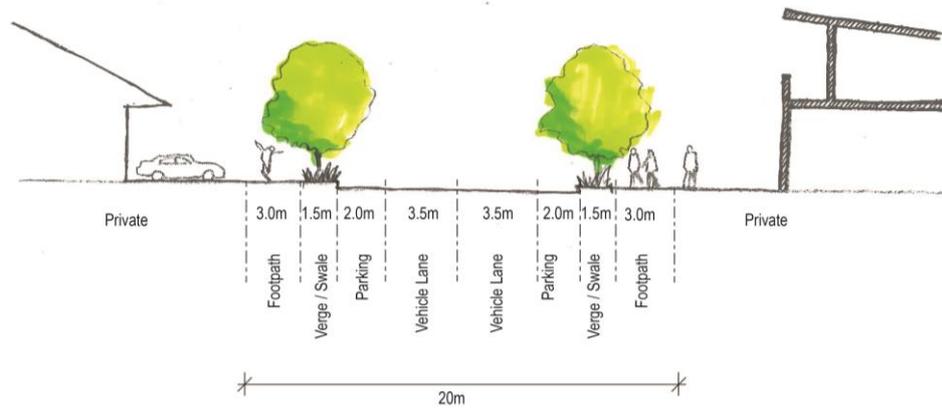


Figure 3. **Growth Areas – typical road cross sections: Collector Roads**

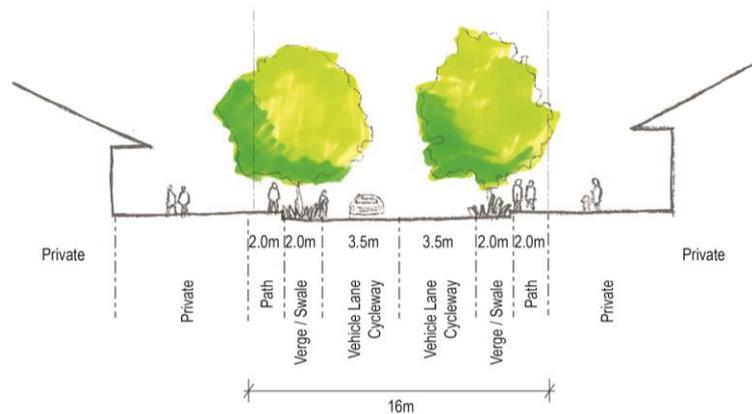


Figure 4. **Growth Areas – typical road cross sections: Local Roads (minimising road corridor width where possible)**

2 Design guidelines for subdivision and block layout (existing and future residential growth areas)

Subdivision and block layout, whether at a small or large scale, plays an important role in 'sustainable' urban growth. Where designed appropriately, new growth areas will minimise travel times and associated environmental effects, while maximising accessibility to local amenities, personal and community health and safety, and social interaction.

Key matters for consideration when designing subdivision and block layouts include:

- Establishment of walkable neighbourhoods. This should include:
 - Connections with existing walking, cycling and vehicle networks
 - Enabling future walking, cycling and vehicle connections to be realised
 - Establishing 'walkable blocks', averaging 200m x 80m, based on a formal or informal grid pattern
 - Avoid cul de sacs as far as possible (and minimising cul de sacs to approximately 150m).
- As far as possible, providing all dwellings with a 'street address', i.e. avoid rear lot development
- Designing open spaces, walkways and cycle ways to be overlooked by public roads and dwellings
- Designing in accordance with CPTED principles, with emphasis on passive surveillance of public space while maintaining private, high amenity private space
- Within larger subdivisions and/or in close vicinity to local amenities, provision for a mix of residential densities ranging from smaller sites (i.e. as low as 300m², providing for compact, duplex or semidetached dwellings) to medium size sites (i.e. up to 800m², providing for single detached dwellings and ancillary buildings).
- Orientating sites to maximise passive solar gain from the north (in particular, and as far as possible, avoiding sites with private outdoor living space facing to the south); in this regard, subdivision should aim to align the majority of roads north south, and lots east west.
- Minimising earthworks (including building platforms) to avoid disturbance to natural landforms, steep slopes and adverse effects on streams.
- Designing walking, cycling and vehicle connections to minimise earthworks.
- Facilitating sustainable drainage strategies, including:
 - Minimising impermeable surfaces
 - Soak pits within residential areas and adjacent to streets
 - Provide for swales, rain gardens and retention ponds
 - Provide for local retention ponds and soakage areas in close vicinity of compact residential sites.
- Designing appropriately landscaped streets (including street trees) to reflect the local function and characteristics of the neighbourhood.

PRIVATE OPEN SPACE TO REAR OF SITES

NORTH-SOUTH ORIENTED BLOCKS / EAST-WEST ORIENTED SITES

BUILDING FRONTING STREETS

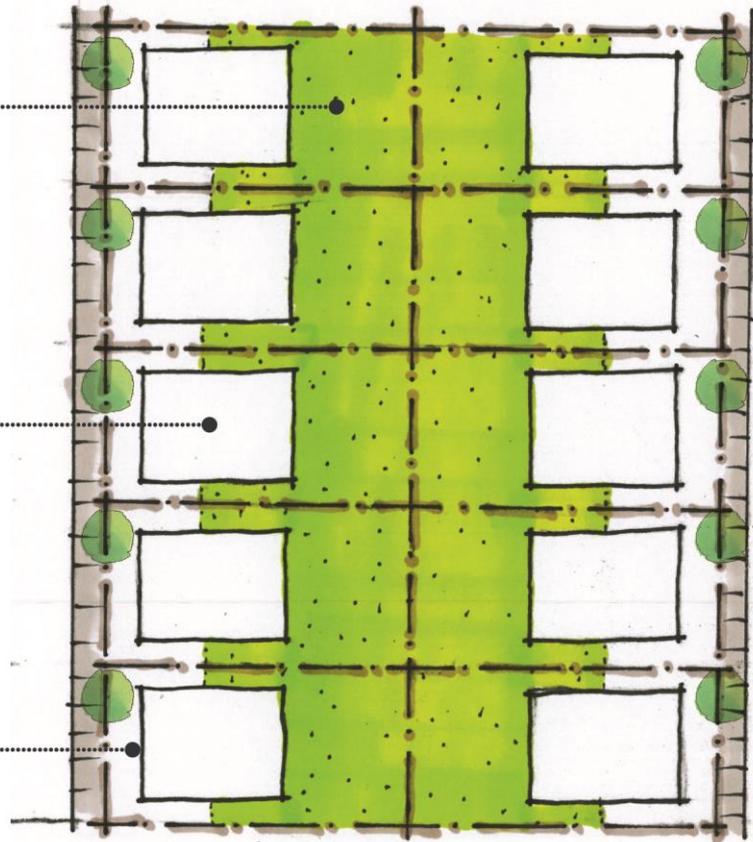


Figure 5. Preferred residential block layout pattern.



Figure 6. Preferred residential public / private site layout / relationship.

3 Design guidelines for residential development – existing and future residential growth areas

The following guidelines aim to address prevailing issues associated with residential development in Tuakau, particularly at a site by site scale. In many instances the guidelines will however also be relevant to subdivision design.

3.1 Street Address

Issue

'Rear lot' development and 'infill' development have the potential to lead to dwellings that do not front onto public streets and become hidden down access ways. The lack of relationship to the street results in reduced public and personal safety, quality of social environments and character, and issues relating to servicing and accessibility (see Figure 7).

Objective

Dwellings front on to and have front door access to a public street, combined with good on-site amenity that contributes positively to the public environment.

Guidelines

- Design subdivisions and dwellings to address streets and public places, providing 'active frontages' through windows and entrances facing the street.
- Where four or more dwellings are proposed, avoid right-of-ways or rear access lanes; rather provide for a design solution that promotes dwellings facing onto a public street or laneway designed as a public place.
- Within existing residential areas, infill developments of four or more dwellings should only occur on sites with a minimum site frontage of 36 metres.

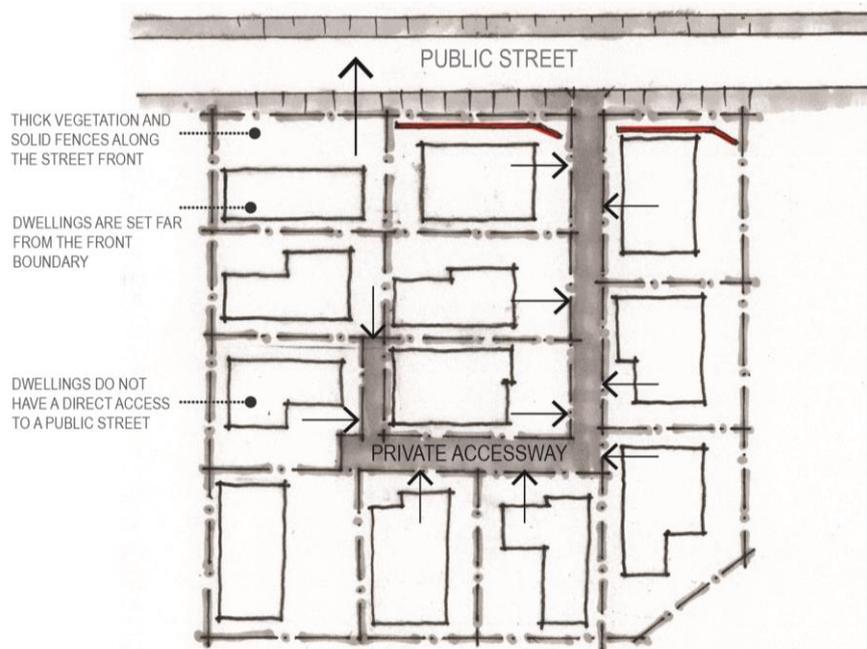


Figure 7. Example of a badly designed site that is inward facing and does not address the street.

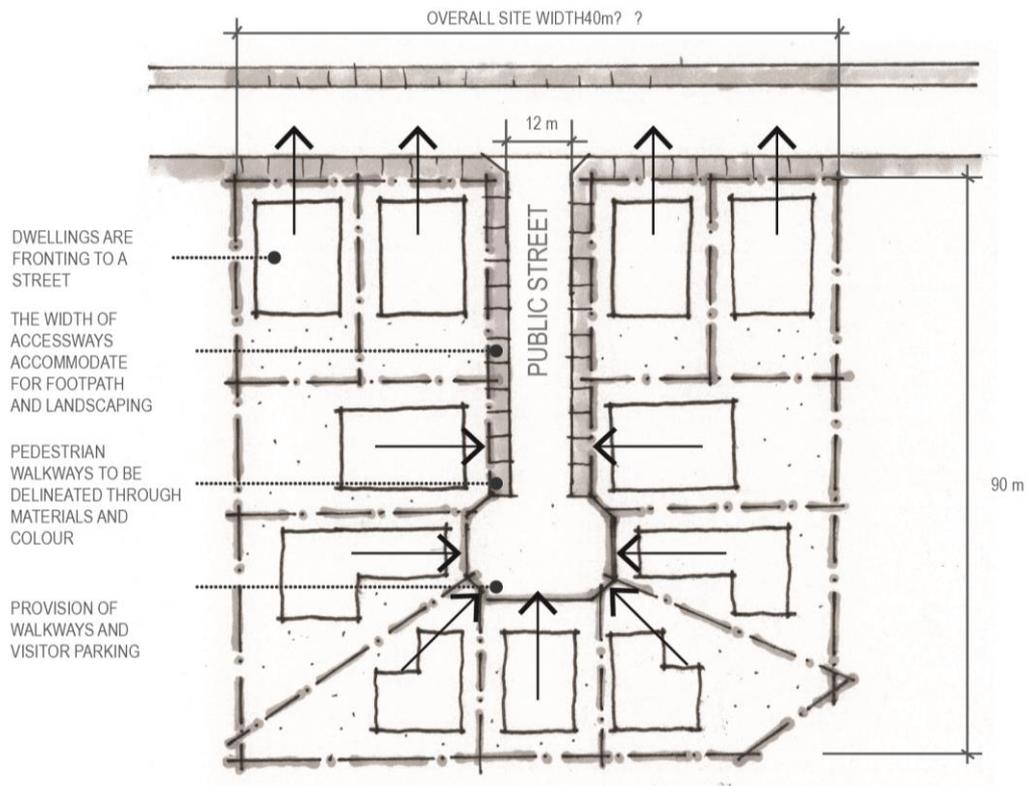


Figure 8. Example of a well-designed site that maximises relationship with the street and public realm.

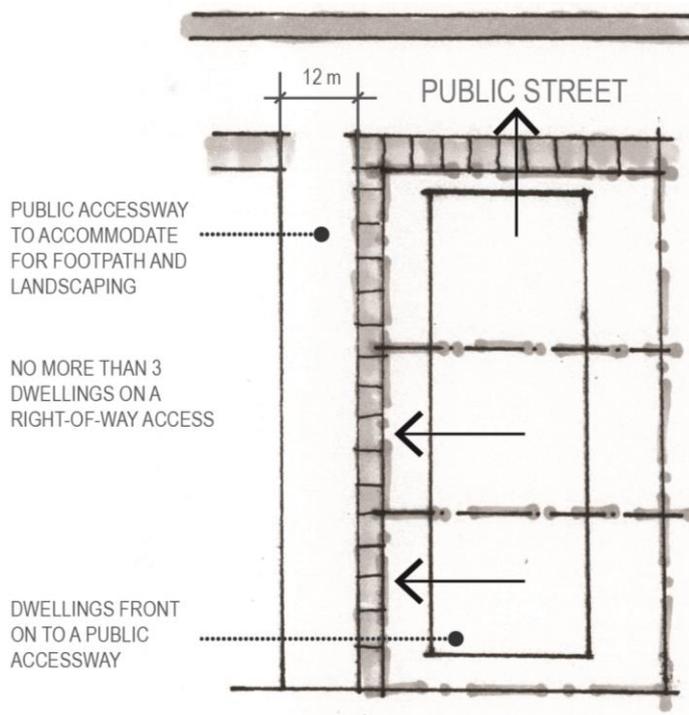


Figure 9. Avoid more than 3 dwellings on a single access lane



Precedent 1. Dwelling with no street address



Precedent 2. Dwellings with good street address

3.2 Access

Issue

The proliferation of right-of-way and cul-de-sacs results in dwellings disconnected from the public realm; reduces permeability within the wider environment, and has the potential to reduce safety for users, particularly pedestrians.

Objective

Dwellings have a direct, positive relationship to the street and surrounding public spaces.

Guidelines

- a. Where possible, avoid right-of-way developments through alternative access design approaches, e.g. through site connections; dwellings addressing the street; short cul de sacs.
- b. Provide a clearly visible front door that is accessible from the street.
- c. Driveways should be reduced in width nearer the footpath. Restrict paving to areas essential for vehicles to manoeuvre and ensure the remainder of the site is well landscaped.
- d. Houses with front entry vehicle access should have lot depths of at least 20m.
- e. Access ways should be sized to allow refuse trucks to easily manoeuvre within the development, or a well-screened refuse point should be provided next to the front boundary of the site.



Precedent 3. Clearly visible door that is accessible from the street



Precedent 3. Clearly visible door that is accessible from the street

3.3 Privacy

Issue

Lack of quality outdoor and indoor living space and positioning of dwellings on site (in relation to adjoining dwellings) can reduce on-site privacy and amenity, particularly where infill or badly designed subdivision occurs.

Objective

Residential development maximises privacy between adjoining dwellings while retaining amenity and outlook to the surrounding neighbourhood.

Guidelines

- a. Maintain adequate separation between facing habitable areas through built form orientation and setbacks.
- b. Use appropriate landscaping and other non-invasive screening devices while maintaining sufficient outlook and amenity for each dwelling.



Figure 10. Avoid dwellings overlooking one another, while maintaining appropriate outdoor living space and street relationship.

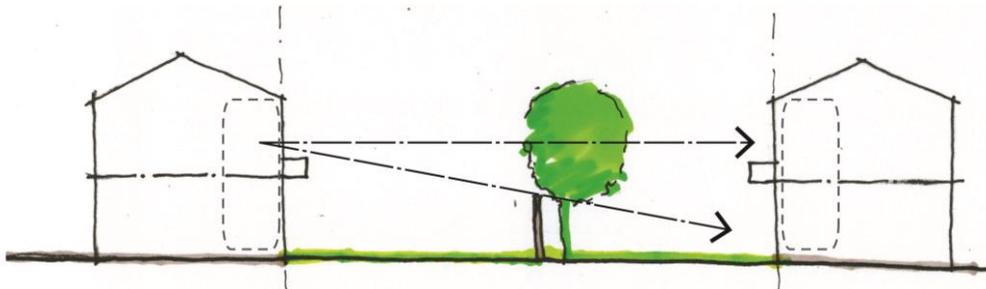


Figure 11. Maintain an approximately 12m distance between upper levels facing one another.

3.4 Outdoor living space (private open space)

Issue

Inappropriately designed and located outdoor living spaces do not facilitate functional outdoor areas and servicing and may impede the provision for adequate daylight, privacy and safety.

Objective

Functional external outdoor living spaces that are well-orientated for solar access, relate to the dwelling and its immediate external environment and offer functional amenity for residents.

Guidelines

- a. Provide outdoor living space that is functional in size, providing for a range of outdoor activities such as dining, play and gardening. As a guideline, outdoor living space should be at least 80m² in area and have a no dimension less than 4m.
- b. Orientate the open spaces where there is adequate solar access, directly accessible from indoor living areas.
- c. Private open space should be appropriately screened for privacy and security.



Precedent 5. Outdoor living space that is functional in size



Precedent 6. Outdoor living space with appropriate screening

3.5 Landscaping

Issue

Tuakau is characterised by its rural horticultural context. While there has been good opportunity for integrating planting, landscaping and sustainable practices into residential development during the last two decades, generally, this has not taken place. The compact residential infill developments have taken place on very small lots with a high proportion of hard surfaces required for roofing and paved areas for vehicle access. This high coverage of impervious landscapes has negatively impacted the amenity of the town's environment and created stormwater issues. There has also been little use of green landscaping in recent infill residential development to enhance public spaces and streetscapes.

Objective

Residential development is integrated with high quality landscaping that contributes to amenity, privacy and creates visually pleasing public spaces. Landscaping and permeable surfaces facilitate storm water management and provide an opportunity for growing/planting.

Guidelines

- a. A minimum of 25% of the open space surface area on site should be retained as soils (i.e. areas of soil unimpeded by structures or paving of any kind, appropriate for landscaping and/or

gardening) and/or on-site stormwater management. In instances where there is not enough area, stormwater treatment measures should be integrated with the development design.

- b. Landscape planting and using permeable surfaces allows stormwater to soak into the ground and helps reduce runoff. Care should be taken to understand stormwater flow patterns and avoid obstructing them when designing the layout.
- c. Frontages should, where possible, incorporate some landscape to contribute to streetscapes with good public amenity, while maintaining passive surveillance (visual connection) with the street.
- d. Fences on a road or reserve boundary should not exceed 1.2 metres in height and shall not be close-boarded, masonry or of another type of solid construction
- e. Provide rain tanks and water saving devices to reduce water consumption.

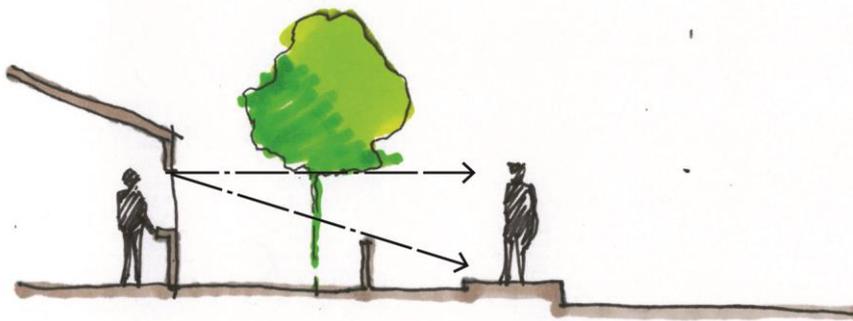


Figure 12. Provide for appropriately landscaped frontages while also maintaining passive surveillance (visual connection) with the street.



Precedent 7. Retain large areas of soils on site



Precedent 8. Landscaped Frontages

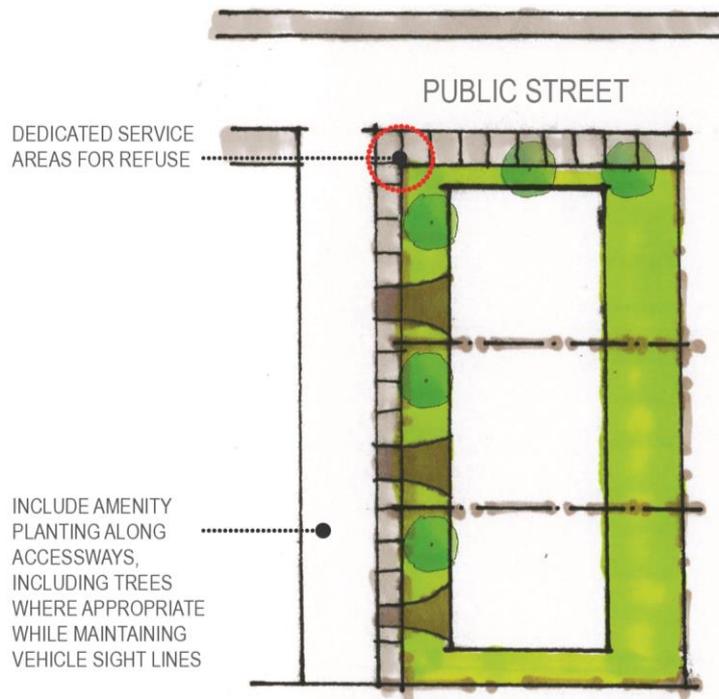


Figure 13. Landscaping remains an important element within small developments.

3.6 Responding to and enhancing Neighbourhood Character

Issue

Often greenfields subdivision and development, and infill development, are designed with little or no regard for existing neighbourhood and/or landscape character. Within existing urban areas, this is often exacerbated by a lack of relationship to the street where infill development occurs.

Objective

Residential development contributes to the positive character of the street and neighbourhood through design that responds to local characteristics and addresses the public realm.

Guidelines

- a. Within existing urban areas, site development, including infill development, should respond sympathetically (through use of contemporary architectural responses) to the following:
 - Location of existing buildings relative to the street
 - Existing scale and bulk, providing for a transition in scale where this is necessary
 - Building forms and rooflines
 - Proportions of windows and other elements
 - Materials and colours
 - Planting / landscaping.
- b. Provide for varied use of materials common to the surrounding environment.

- c. Avoid garage dominance by limiting garage width to 40% of the lot frontage for houses with frontage to the street, and by setting garages at least 2m behind the front façade of the dwelling.
- d. In right-of-way developments, minimise the impact of driveways by combining adjacent driveways, narrowing wider driveways where they cross the footpath, or making use of back lanes.
- e. Avoid blank walls on the street edge.



Precedent 9. Avoid blank walls along the street edge



Precedent 9. Avoid blank walls or garage dominance

3.7 Stormwater Management

Issue

The majority of residential infill developments have taken place on very small lots with a high proportion of hard surfaces required for roofing and paved areas for vehicle access. This high coverage of impervious landscapes creates stormwater issues.

Objective

Ensure that landscaping and permeable surfaces are integrated with residential development to facilitate storm water management.

Guidelines

- a. Landscape planting and using permeable surfaces allows stormwater to soak into the ground and helps reduce runoff. Care should be taken to understand stormwater flow patterns and avoid obstructing them when designing the layout.
- b. A minimum of 25% of the open space surface area on site should be retained as soils (i.e. areas of soil unimpeded by structures or paving of any kind, appropriate for landscaping and/or gardening) and/or on-site stormwater management. In instances where there is not enough area, stormwater treatment measures should be integrated with the development design.

4 Tuakau Town Centre

This section provides an overview of the ‘key moves’ suggested for Tuakau town centre. The approach is based around a number of key structuring elements to assist in promoting growth of a compact centre that remains the heart of the surrounding community. Further more detailed planning and design will be appropriate as known development opportunities come to the fore (e.g. supermarket development; train station development; other significant development within the town centre).

In considering the town centre, an analysis (including key issues) of the area and surrounding context has been undertaken. Subsequently, key considerations and assumptions that have informed the key moves include:

- Consolidating growth within the existing zone commercial area
- Reopening of the train station for passenger transport in the medium to long term
- Recognising residential growth will occur primarily to the west and south of Tuakau in the medium to long term, and providing appropriate land use and connections accordingly
- Enhancing the overall pedestrian experience within the town centre, particularly along West Street and St Stephens Ave, to attract locals and visitors to the area, as well as commercial investment
- Identification of appropriate land uses to catalyse growth and co-location of other uses
- Over the next 25 years, Tuakau is likely to see a doubling in demand for total retail to approximately 16,000m².
- There is a significant shortfall in supermarket retail provision in the form of a medium sized supermarket. This will become more pronounced over the next 25 years.
- There is an oversupply of convenience retail, which will balance out over the next 25 years.
- Based on the above, the primary retail focus remains on the town centre, within the existing ‘Business Zone’ area, with some limited, non competing, convenience retail provided through neighbourhood centres.

Key Outcomes Sought

The majority of the available development land is located along West Street and St Stephens Ave. It is important to create perimeter blocks within the town centre as a whole, and to encourage continuous active frontages (encouraging greater pedestrian movement around secondary streets). It is vital that development of the secondary streets (i.e. West Street and St Stephens Ave) does not draw existing activity away from the main street (i.e. George Street), but rather that these streets will have their own focus, e.g. a community focus for West Street, and a commercial focus for St Stephens Street. A focus on more legible and safer pedestrian routes that respond to existing and future destinations will encourage further pedestrians (locals and visitors) to frequent the area in the future.

Importantly, the vision for development needs to be long term. When considering one off development, this needs to be in the context of the vision for the town centre in 20 years, not only the next 5 years.

Based on the above, and with reference to Figure 14, future development should follow the following guidelines:

- Require the continuation of the two storey ‘street wall height’ along George Street. Where taller buildings are proposed, these should be set back by at least 4m from the third level above.

- Require active frontages and awning cover at the ground floor along George Street.
- Require active frontages along Liverpool Street, West Street, St Stephens Ave, Jellicoe Ave and Madill Road, and overlooking public open spaces (e.g. Central Park).
- Provide for a consistent building setback along Liverpool Street, West Street, St Stephens Ave, Jellicoe Ave and Madill Road, and overlooking public open spaces (e.g. Central Park), with parking to the side or, preferably, rear of buildings.

Further to the above, the following Town Centre Outcomes are also sought – refer Figure 15 (note, numbering indicates a general location only; proposals will be subject to further planning and stakeholder engagement):

1. **Gateways** - these may include signage and landscaping upgrades, and should be combined with pedestrian crossing enhancements (signalling to drivers the need to slow down and be more aware of non-vehicle users).
2. **Transport Hub** - it is considered that any future bus hub should be located in close vicinity to both the train station and the town centre. Provision of open space in the vicinity will assist to provide space for people waiting for buses or trains.
3. **Supermarket location** - supermarket location will be reliant on the ability of the supermarket suppliers to obtain land with adequate parking and access. Ideally, the supermarket will be centrally located, in close vicinity to public transport and key movement routes. Approximately 2,000-3,000m² will likely be required. Car parking should be located to the rear of the building, away from the street, allowing a clear retail frontage facing the street and public realm.
4. **Central Park** - opportunity exists to establish Central Park as a focal point within the town centre, overlooked by key community amenities. The adjoining site to the south offers opportunity for a community/public focused building, such as may include relocated Council offices and/or library, combined with other community focused amenities. Central Park should be designed as a multi-use space that reflects the culture and demographic of the town.
5. **Mixed-Use Development areas** - currently West Street and St Stephens Street remain under developed. Future development should be encouraged over these areas, subject to development achieving a strong relationship with the public realm (e.g. achieved through active frontages and consistent bulk and a location that addresses the street).
6. **Passenger Train Station** - the historic station location provides an opportunity to integrate with both the town centre and Palms Shopping Centre, and will encourage east west pedestrian flows through the town. Potential exists for a park and ride to the north. If provided in a different location, it should be closer to the centre as opposed to further away.
7. **Potential redevelopment / improvement site** - for ambulance station, fire station training facilities and residential housing.
8. **New public open spaces** – located along key desire lines, public open spaces designed to reflect local character and identity will enhance amenity values as the centre grows, and provide opportunities for residents and visitors to enjoy free time within the town centre.



Figure 14. Tuakau Town Centre Concept Plan: Land Use Strategy

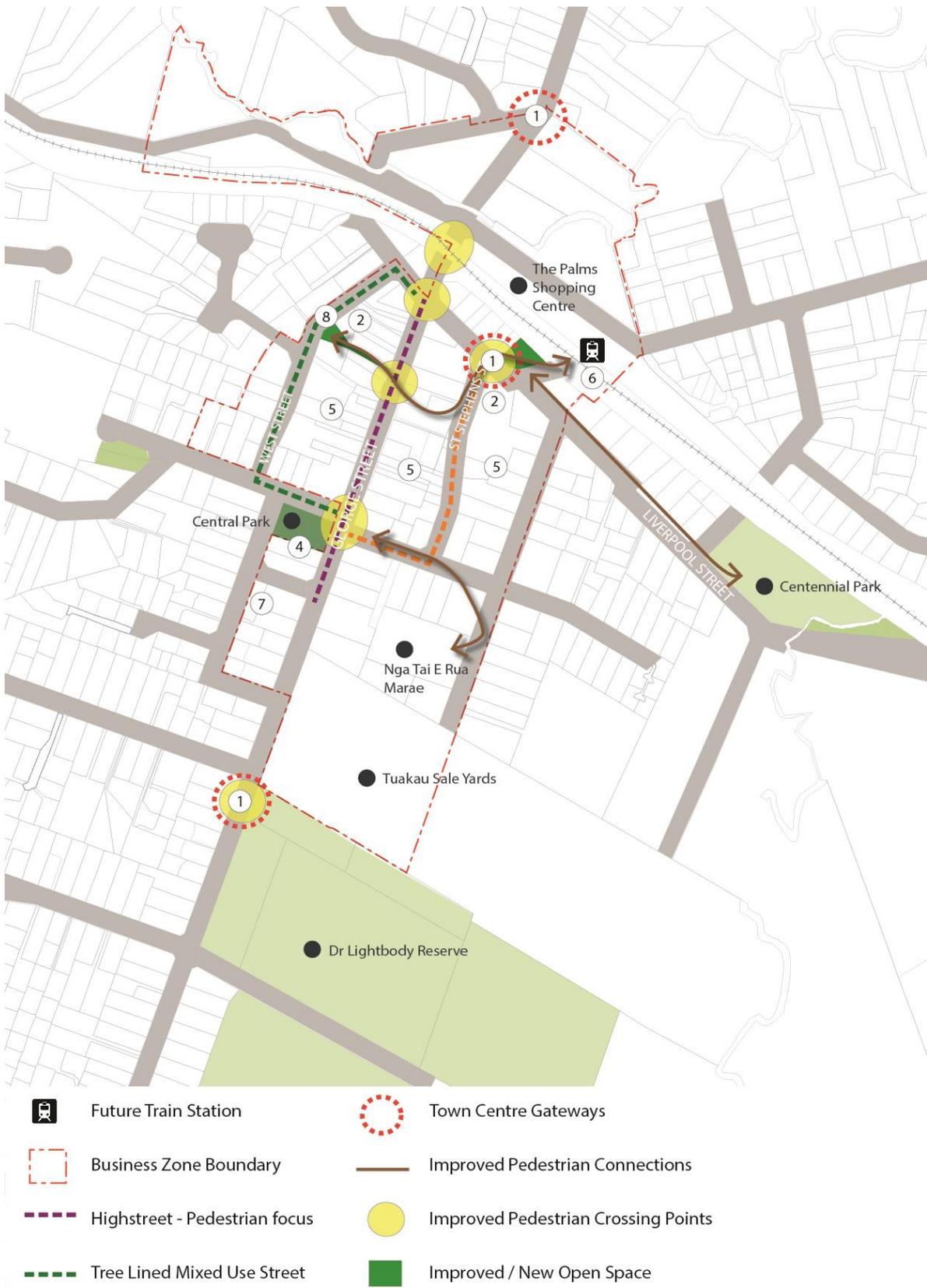


Figure 15. Tuakau Town Centre Concept Plan: Connectivity and Movement Strategy



Figure 16. **George Street: retain the existing street frontage and building height**

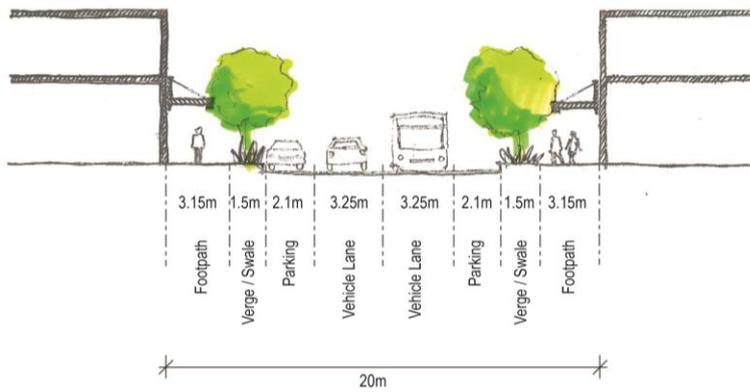


Figure 17. **Tuakau Town Centre typical road cross sections: George Street, showing two storey high built form along road corridor**

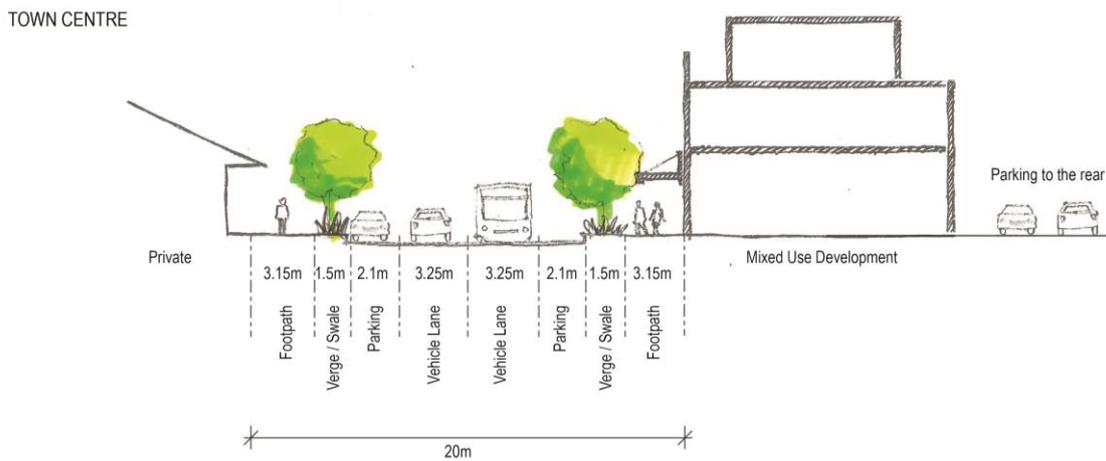


Figure 18. **Tuakau Town Centre typical road cross sections: West Street, showing three storey mixed use to east and parking to rear**

5 Open space design guidelines

Parks, open spaces and the streetscape are important elements of a town centre and residential neighbourhoods. They provide opportunities for recreation and social interaction, and their spaciousness contrasts with the built form of the urban areas.

The manner in which a subdivision relates to or provides public spaces (such as roads, parks, and streams) is very important for visual amenity and safety. Too often parks are inconveniently located, inappropriately sized or poorly overlooked, being made up of left-over land from the lot design process.

The standard and appearance of street trees, plantings, paving, walls, fences, seats and other structures play an important role in establishing the identity, quality, amenity, visual interest and character of a subdivision.

Key issues identified in the Tuakau and Ngaruawahia context:

- Limited public open space within existing and proposed residential areas.
- Lack of relationship between open space and surrounding land uses.
- Limited amenity landscaping within new neighbourhoods.
- No obvious links between open spaces / parks.

Key outcomes sought include:

- Enable environmentally cost effective and responsive design.
- Enable opportunities for contact between residents and social interaction.
- Identify and accommodate natural and cultural elements in and around the site, creating a unique identity.
- Maintain and enhance ecological values.
- Create unique identity that responds to the existing characteristics of the area.
- Maintain natural storm-water paths.

Open Space Design Principles

- Provide open spaces based on what type of space would add the greatest value to the neighbourhood. In some instances, high quality ecological corridors or pedestrian linkages are more desirable than neighbourhood reserves if there are existing parks close by.
- The number of parks and open spaces in a neighbourhood and their amenities need to be based on:
 - The needs of the community reflected by population density and demographics
 - The types of users and their requirements
 - The participation rates for selected activities
 - Use and access to existing facilities, and gaps in amenity provision
 - Opportunities for dual purpose functions (active and passive recreation).
- Locate open spaces where they are highly prominent and accessible within the local area. Open spaces should be located within walking distance of all allotments, positively contributing to residential amenity; typically aim for no more than 400m of actual walking route distance, but 200m wherever possible.
- Use open spaces as a design feature, adding value to the lots by strategic location of dwellings in relation to open spaces. Parks should not be made of 'left-over' land. The location and design should be informed by the neighbourhood context and site analysis.
- Open space design should always seek to offer the following qualities:

- Be usable and functional, allowing for a variety of passive and/or active recreational activity, including children’s play, sports, and social gatherings
 - Provide for seating and, where appropriate, toilet and changing facilities
 - Be of ecological value, by connecting to and extending adjoining habitat areas and green spaces; preserving habitat areas on site (e.g. mature trees, wetlands and water courses) and incorporating ecological planting of native species
 - Where appropriate, assist in the implementation of sustainable drainage strategies
 - Be centrally located, as opposed to peripheral
 - Be integrated with existing walkways and cycle routes
 - Be overlooked and positively addressed by adjacent streets and/or walkways
 - Be designed so as to be physically accessible to all residents
 - Be visible from adjoining streets and residential development, so as to enhance safety
- Locate and design parks to take advantage of existing trees and features of interest (natural and cultural), adding identity to the neighbourhood.
 - Any significant areas of vegetation on site should be retained and enhanced. Such retention may be incorporated into boundary treatment or site features and should, wherever possible, form part of a wider green network.
 - Provide open spaces overlooked by streets and dwellings, to improve safety and encourage use of open spaces (refer figure 19). Evidence shows that open space overlooked by streets and dwellings benefits from greater use over longer periods of the day. In particular, the movement of vehicles past open space, along with the coming and going of residents and overlooking dwellings, increases passive surveillance, reducing the likelihood for crime. In this regard, it is recommended that at least 50% of open space edges should front public streets (with residential land use on the opposite side).



Figure 19. Provide open spaces overlooked by streets and dwellings, to improve safety and encourage use of open spaces