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Introduction

Each of the four topics presented in the Urban Structure section relate to the qualities of a development that are defined at subdivision design stage but experienced by its future residents.

Subdivision must provide a carefully designed framework for subsequent development to respond to. Decisions made at subdivision stage can impact upon matters such as residential privacy, access to sunlight and options for accommodating vehicles. Therefore, subdivisions design decisions must repeatedly consider the implications on the development, and residents, that will follow.

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Subdivision design carefully manages the difference between public space and private space to that ownership is clear at all times.

Orientation and outlook

Design Outcome

Subdivisions are carefully planned relative to slope and orientation to maximise sunshine, views and privacy.

Vehicle access

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Subdivision design incorporates vehicle access to sections. Future purchasers are made aware when sections are subject to vehicle access restrictions, such as steep slopes.

Maintenance and renewal

Design Outcome

Subdivisions should consider the long term maintenance consequences of components that have a finite lifespan, and for any other burdens (in terms of maintenance needs, use restrictions

or financial costs) that may impact on future residents.

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Public space and private space

Design Outcome

Subdivision design carefully manages the difference between public space and private space so that ownership is clear at all times

People take more pride and responsibility for land that is their own.

With successful design, this sense of ownership can extend to adjoining sites, the street, and open spaces. People respond to damage or invasion of property differently depending on whether they are on a site they own, share or which belongs to someone else.

Better Design Practice

- Lots should be designed to have an obvious public 'front' that faces the street or public space, and a private 'back' facing other 'backs'. Other than corner lots, lots should enjoy three private edges.
- Public fronts should not sit next to private backs unless there are major access issues or large spaces separating them (such as dense bush).
- Subdivisions should be designed so that members of the public cannot access natural features and amenities that sit on private land.

Rules of Thumb

1. Design subdivisions from the outside in, treating the fronts and backs of lots within the same subdivision alike at the site's boundaries.

2. Common private space, including any private roads or lanes, should be treated as public space for the purposes of applying the fronts and backs principle.

3. Dedicated rear lanes for higher density development sites should be thought of as a back space, but should be secure and free from general public access.

They should only be designed in conjunction with a development of that type.

4. Consider whether the target demographic of the subdivision will prefer privately owned space, common space or publicly owned space.

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Orientation and outlook

Design Outcome

Subdivisions are carefully planned relative to slope and orientation to maximise sunshine, views and privacy

Better Design Practice

- Density should be focussed where residents can benefit from views and outlook.
- Where a high quality view exists, fronts and backs should be carefully managed between lots so that future development will not impact upon privacy.
- Design lots to get the most sunshine possible. Sunny private spaces should be located away from public spaces (so that if residents put up large walls / fences for privacy, it does not impact upon the street), while lots and subsequent buildings should provide a 'front' that addresses the street or public space.
- Lot shapes should be varied in shape and size, to benefit from maximum sunshine in relation to their orientation. For example:
 - sites facing south can be narrower and deeper, which means a house in front and a north-facing outdoor living area behind.
 - sites facing north can be wider and shallower, which means a house and an outdoor area can sit side-by-side and enjoy a good aspect
 - sites facing east or west can have vehicle crossings and building platforms specified on the southern side, leaving the northern side clear for sunny outdoor living.

Rules of Thumb

1. Show a building platform, outdoor living space and any turning space on a subdivision plan.

2. Aim for lots to have only one boundary on a public 'front' or street, to help achieve a high level of privacy and amenity.

A lot on a street corner (including fronting onto a road and an open space) will have up to two public 'fronts' to consider.

3. Plan lots so that vehicle access is not on the northern edge of a site, which can stop sunshine from reaching habitable rooms.

This is relevant when planning for street trees and on-street parking bays.

4. Consider imposing development controls the building platform of lots that may block the views of lots behind, such as:

- requiring development on a section fronting the coast to be within a certain height or RL ('reduced level') limit, so that development on a lot behind can see out above it.

- requiring development on a lot to follow a contour so as to maintain the form of a prominent ridge or landform.

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Vehicle access

Design Outcome

Subdivision design incorporates vehicle access to sections. Future purchasers are made aware when sections are subject to vehicle access restrictions, such as steep slopes.

Planning for vehicle access, particularly on sloping sites or sites adjoining busy roads, can be a major limitation on house design and must be considered early in the subdivision design.

Circumstances where vehicle access is dictated include:

- sloping lots, due to the need for workable gradients from the street onto a parking pad, including transitions
- lots along busy roads, due to the need for on-site manoeuvring
- corner lots, due to the need to locate vehicle crossings as far away from the intersection as possible
- lots along roads that have formed parking bays along them, due to the need to avoid vehicle crossings from cutting through the parking spaces.

Better Design Practice

Lots should be designed so that vehicle access does not result in:

- footpaths undermined by the presence of too many vehicle crossings
- wide, sweeping vehicle crossings that allow cars to cross the footpath at very high speeds
- the need for inefficient flush medians and other road features that allow for vehicles to queue before turning off the road
- building platforms that are surrounded by driveways and turning spaces, and the associated noise these bring.
- Ensure vehicle crossings do not result in a loss of existing on-street parking bays.
- Ensure purchasers are told when lots have restrictions (whether regulatory or practical) on where vehicle access can be located.
- Street and block design should avoid a prevalence of garages dominating the public street environment, by incorporating rear lanes and parking courts where possible.

Rules of Thumb

1. Include details of street trees, on-street parking bays and locations where vehicle access into sites could be provided without conflicting with street trees or parking bays on the subdivision's landscaping plan.

2. Consider imposing requirements on how close to street trees a vehicle crossing can be without being subject to specific design requirements.

This can remove future problems associated with root growth damaging driveways and demand for tree removal by residents.

3. Consider planning lots to have shared vehicle access to minimise disruption to the street's amenity.

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Maintenance and renewal

Design Outcome

Subdivisions should consider the long term maintenance consequences of components that have a finite lifespan, and for any other burdens (in terms of maintenance needs, use restrictions or financial costs) that may impact on future residents.

While subdivisions will create a pattern that lasts for more than 100 years, many individual components within them have a limited lifespan. These can require regular maintenance or periodic renewal. Examples include:

- private stormwater detention or treatment devices
- private driveways and access ways
- private retaining structures
- areas of private covenanted bush
- private fences and barriers adjoining public roads or
- walkways communal car parking and recreation areas

These costs can be significant and, if not budgeted for by the landowner, can become financially crippling. If maintenance is not carried out, a range of serious health, safety, and amenity problems can arise.

Better Design Practice

- Subdivisions should minimise long term public and private running costs, as well as short term capital costs. This can be achieved by considering a range of layouts, densities and solutions and favouring the one that requires the least amount of large-scale works and large-scale engineering structures. Lifecycle costs, as well as the initial development and construction costs, will need to be considered.
- Any long term maintenance and renewal costs that must be met by property owners and are not subject to public funding must be communicated to land or property owners clearly, before any lot or property purchase is finalised. This information should be distributed to Auckland Council so it is aware of the liabilities facing residents.