This part of the Plan sets out the assessment criteria for medium density housing. The criteria are designed to give designers and builders flexibility and to provide opportunities for site responsive designs, while ensuring that medium density housing developments provide a positive contribution to the character and amenity of residential areas.

The criteria are grouped into the following Design Elements:

**Neighbourhood Character**
Relationship of the development to the surrounding neighbourhood and streetscape.

**Site Layout**
Overall design, character and landscape treatment, including such things as orientation, site access, location and function of outdoor spaces, topography and views.

**Building Location**
relationship to adjacent buildings, site boundaries and height of the proposed development to ensure satisfactory amenity is maintained.

**Visual and Acoustic Privacy**
Layout, and screening to enable privacy from overlooking or unwanted noise.

**Carparking and Vehicle Access**
Design and layout of driveways for resident and visitor car parking to achieve convenient, safe and attractive vehicle access.

**On-site Outdoor Space**
Relationship of outdoor space to houses to enable appropriate levels of privacy, outlook, sunlight and landscape treatment, while also considering maintenance, management, and security.

**Entries to Buildings**
Design and layout to achieve identity and visibility, shelter, security and potential for disabled persons access.

**Site Facilities**
Appropriate location and design of shared facilities for rubbish collection, service connection points, storage and the like.

**Landscape Treatment**
Potential for landscape design to enhance and integrate the development into the surrounding neighbourhood, and create a quality living environment.

**Penihana North**
In Penihana North additional criteria apply which insert new criteria or replace the equivalent matters addressed in the above Design Elements.

For each element an introductory statement discusses the desired approach and issues to be considered. The criteria are intended to guide development rather than prescribe the exact design and layout of developments. However, in some cases, such as height and outdoor space, an indication has been given of an acceptable outcome. This is to give developers certainty over elements which have an important bearing on the overall design of developments.
NEIGHBOURHOOD CHARACTER

Integrating new multi-house development into existing lower density areas can be achieved by careful attention to the relationship with neighbouring properties and streetscape. Important aspects to consider include:

- the character of the road and adjacent sites including buildings and fencing
- how new development can use building form, detailing and landscape treatment to enhance that character.

Whilst meeting urban consolidation objectives, it is still important for sympathetic new development to enhance existing areas. Consideration of detail should include: avoidance of large blank walls or fences facing the road, articulation of the facade to break up long straight frontages, and careful location of garages to avoid car-domination of pedestrian areas, houses facing the road to contribute to the pedestrian environment and to provide a sense of safety.

The relationship of new development to existing buildings should be considered to avoid erosion of privacy and a reasonable transition in scale.

Landscape treatment and fencing should complement existing development and contribute significantly to integrating infill development.

Retaining existing trees or picking up on similar planting themes in front gardens should be considered. Solid high fences can often significantly change the character of the road and reduce amenity for pedestrians.

Developments in new areas will create their own streetscape and landscape character, but articulating frontages to provide visual interest should be considered. Avoiding domination of garages or high solid fences facing the road will contribute to pedestrian amenity and safety.
### DESIGN ELEMENT A

#### DESIGN AND LOCATION OF STRUCTURE

<table>
<thead>
<tr>
<th>ASSESSMENT CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A1</strong> Design of new development has appropriate residential character and detailing to enhance the existing streetscape. Each residential unit should have a sense of address, either fronting the street, or having its front door visible from the street.</td>
</tr>
<tr>
<td><strong>A2</strong> To complement the scale of residential roads, changes of building heights between existing houses and of new development should be not more than one storey.</td>
</tr>
<tr>
<td><strong>A3</strong> Large building facades which are highly visible from the road should be adequately articulated and detailed for visual interest.</td>
</tr>
<tr>
<td><strong>A4</strong> Fences should permit outlook from units to the road to ensure safety, visual contact and surveillance.</td>
</tr>
<tr>
<td><strong>A5</strong> Solid fences should be minimised and used only where the main outdoor space is located in front of the unit and some visual contact from windows can be maintained.</td>
</tr>
<tr>
<td><strong>A6</strong> Garages and carports should be sited and detailed to ensure they do not dominate the road frontage.</td>
</tr>
<tr>
<td><strong>A7</strong> Facilities in front yards such as gates, letter boxes, rubbish bin enclosures, housing for service meters and kerb cross-overs should be compatible in design with the fences and character of the development.</td>
</tr>
<tr>
<td><strong>A8</strong> Landscape treatment should complement the existing neighbourhood and allow for retention of existing trees if appropriate.</td>
</tr>
</tbody>
</table>
Successful design of multi-housing development is based on a thorough analysis of the site, as well as its surrounding neighbourhood. This process of analysis should enable new development to be well integrated into existing neighbourhoods, as well as attaining an economically efficient use of the site which achieves an optimum solution in terms of climatic effects to create a pleasant, manageable living environment.

Before embarking on a layout plan for the site, time should be spent on-site, preferably at different times of the day to observe the following:

- road network, and pedestrian paths in the vicinity of the site
- site boundaries and type of existing boundary fences
- existing trees and vegetation
- sun position at different times of the day
- view to and from the site
- amount and direction of slope of the site
- direction of prevailing winds
- position of services (water, electricity, sewerage, stormwater)
- adjacent buildings and properties - is the site overlooked?
- location of neighbours’ windows and building frontages
- sources of noise
- location of adjacent outdoor space
- location of local amenities, eg public parks, local shops, schools, etc.

This site analysis is an important first step, prior to the design and layout of the development. It will greatly assist in the overall design character and landscape treatment of the development in relation to its surroundings.

Careful consideration should be given to the orientation of houses and outdoor space to achieve an appropriate relationship with the road or driveways, and so that the best advantage is taken of views and sunlight.

Working through this site check list will also help to ensure that outdoor space is sunny and sheltered from predominant winds, and that adequate privacy is achieved both within the site, and with regard to neighbouring properties.

Other important considerations include location of physical and visual connections to ensure convenience as well as personal safety and security.

Identification of existing vegetation and trees may highlight an opportunity to incorporate them into the development to give it an ‘instant’ established appearance and character.
ASSESSMENT CRITERIA

B1
Ensure the development is well connected into the neighbourhood with adequate vehicle and pedestrian links.

B2
Houses should front existing or proposed roads or driveways wherever possible.

B3
Minimise main outdoor space at the front to avoid high solid fences onto the road, or consider ‘permeable’ treatments such as planting, or lattices to give privacy without creating a solid barrier.

B4
Vary alignment of driveways to avoid a tunnel effect.

B5
Amalgamate two or more sites for redevelopment so that a central road or driveway can be created, and houses can face other houses where they cannot relate directly to a road.

B6
Arrange the development to minimise overlooking of outdoor space, both within the site and the adjoining sites.

B7
In areas with significant off-site noise, arrange houses to limit exposure to high noise levels.

B8
Minimise exposure of living spaces and principle outdoor space to predominant (winter) winds.

B9
Maximise exposure to winter sunshine.

B10
Manipulate the impact of sun and wind by considering the effect of overhangs, eaves, verandahs, pergolas and planting.

B11
Capitalise on views from the site, whilst also considering privacy both within the development and of adjoining sites.

B12
Where possible retain existing trees and vegetation, which can be major assets, and help achieve an ‘instant’ maturing, provide shade and shelter, and help stabilise the soil.
Controls on building location and height need to be considered to provide for the amenity of residents and neighbours, while still achieving a greater density in new developments. Aspects to be considered include:

**SITE COVERAGE**
- Building coverage limits may be necessary to limit stormwater load on existing drainage systems, and also to encourage multi-level developments which enhance thermal efficiency, outdoor space provision and sunlight entry.

**BUILDING HEIGHT AND SETBACKS**
- Controls on building height are intended to limit impacts on privacy and sunlight entry to adjoining sites.
- Setback requirements are minimised to allow efficient use of sites and increased density, however, some control is necessary to protect privacy and sunlight to adjoining sites, and to achieve appropriate integration with existing streetscape character.

**DAYLIGHT AND SUNLIGHT**
- Arrangement and design of houses should permit appropriate levels of daylight and sunlight to internal spaces, as well as outdoor space.
- New buildings should not significantly reduce sunlight to outdoor spaces, or main rooms of adjoining sites.
ASSESSMENT CRITERIA

C1
The setback of houses from road frontage should be appropriate to the efficient use of the site, comfort of residents, and the streetspace.

C2
Buildings should be designed and located to ensure no significant loss of amenity to adjoining sites which are not part of the medium density housing development. Overlooking of these properties should be avoided and the height in relation to boundary controls set out in rule 5.1(ii) of the Living Environment should be complied with to ensure reasonable sunlight and daylight access. The maximum height of buildings should not exceed 11.0 metres.

C3
Houses are encouraged to be linked to allow efficient use of sites.

C4
Building form and site layout is designed to minimise impermeable surfaces and allow efficient stormwater management. Impermeable surfaces should not exceed 65% of the net site area.

C5
Habitable rooms should be located to receive adequate daylight.

C6
Daylight to adjacent habitable rooms and outdoor space should not be significantly reduced.

C7
Sunlight is to be provided to outdoor spaces.

C8
Houses should be oriented to obtain winter sun in main living spaces.
Visual and acoustic privacy are very important considerations in order to achieve a satisfactory living environment in developments where density is increased. These developments can accommodate a range of household types, and are likely to impact on adjoining sites to a greater extent, so care must be taken.

Perceived loss of privacy in outdoor space areas caused by overlooking by upper level windows or balconies can be a problem, both for new development and for neighbours. Direct views from windows in new developments into neighbours’ windows should be limited.

Acoustic privacy between houses in new developments is also very important. Lack of it can be a major cause of frustration, and cause loss of control over one’s own environment.

The New Zealand Building Code requires that building elements which are common between occupancies are constructed to prevent undue noise transmission to the habitable spaces of household units.

Consideration should also be given to the impact of noise from the surrounding environment such as busy roads, railway or industry.
<table>
<thead>
<tr>
<th>DESIGN ELEMENT D</th>
<th>VISUAL AND ACOUSTIC PRIVACY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSESSMENT CRITERIA</strong></td>
<td></td>
</tr>
<tr>
<td><strong>D1</strong></td>
<td>Outdoor space and living rooms of adjacent houses should be protected from direct overlooking by house layout, screening devices, separation distance or landscape treatment.</td>
</tr>
<tr>
<td><strong>D2</strong></td>
<td>Windows of one house should not face directly into those of another, unless direct views are restricted with screening or planting or the windows are offset or sufficiently distant.</td>
</tr>
<tr>
<td><strong>D3</strong></td>
<td>Transmission of noise between houses should be minimised by such means as: • not abutting living rooms or garages of one house to bedrooms of another house • separately locating and containing plumbing for each house • use of appropriate noise-resistant wall, ceiling and floor materials and construction details.</td>
</tr>
<tr>
<td><strong>D4</strong></td>
<td>Active recreation facilities should be located away from bedrooms.</td>
</tr>
<tr>
<td><strong>D5</strong></td>
<td>Driveways and car parking areas should be located away from bedroom windows of adjacent houses, or acoustically screened.</td>
</tr>
<tr>
<td><strong>D6</strong></td>
<td>Noise sensitive areas such as sleeping spaces should be located away from major roads, railway lines etc and protected by noise shielding devices if necessary.</td>
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</tbody>
</table>
CARPARKING AND VEHICLE ACCESS

Car parking and driveways to medium density housing developments require careful design to ensure efficient use of the site, convenience and safety for residents and users, and a satisfactory approach in terms of the streetscape and surrounding neighbourhood.

The provision of resident and visitor parking will be affected by the number and size of houses proposed and the location of the site in terms of the surrounding Roading Hierarchy.

On-site visitor parking is often difficult to provide where density is increased, and the management and use of shared visitor spaces can be problematic.

In general, the minimum requirement for medium density housing developments will be for one car parking space per residential unit, however on some sites additional provision for visitors or additional residents’ cars will be necessary, for example due to location on main arterial routes.

The design and location of garages and carports are very important to the success of the development in terms of convenience and safety as well as integration into the surrounding streetscape and neighbourhood. They should not dominate the road frontage.

Surface treatment of driveways should be considered to minimise the extent of impermeable surfaces, and enable on-site filtration of stormwater.

STREETS AND ACCESS WAYS

The need for internal roads as opposed to driveways will be dependent on the size of the development and the number of houses provided. Consideration needs to be given to the management and maintenance of these areas, which could range from the provision of a road under control of the Council, to a private shared driveway managed and maintained by a body-corporate.

Appropriate traffic calming measures such as bends, landscape treatment and overall road design to ensure safe operating speeds, gradients and visibility will be necessary. For larger developments a traffic engineer should be consulted.

Refer to Rule 12 of the Living Environment for provisions relating to parking bays, manoeuvring space, driveway width requirements, gradients and vehicle crossings.
### DESIGN ELEMENT E  CAR PARKING AND VEHICLE ACCESS

#### ASSESSMENT CRITERIA

**E1**

Sufficient *car parking* should be provided to meet the projected needs of residents, including visitors. In general the minimum requirement is one parking space per residential unit. Visitor parking may also be necessary in large *developments*, or when the potential for *off-site* visitor parking is limited.

**E2**

*Car parking* facilities should:
- be close and convenient to houses
- be secure, or allow visual contact from houses
- be well ventilated if enclosed
- be well-lit and have well-lit pedestrian links to houses
- clearly identify any visitor parking
- be separate from *bedroom* windows to minimise noise and fumes.

**E3**

*Car parking* areas and garages may be grouped to make efficient use of land, including the use of parking bays on *roads* and *driveways* internal to the *medium density housing* area.

**E4**

*Car parking* and *driveways* should:
- allow safe and efficient vehicle movements
- minimise access points, where abutting arterial routes, and ensure vehicle egress in forwards direction
- not dominate the *view* of the *development* from the *road*
- be surfaced and graded to ensure efficient stormwater disposal
- be *planted* with shade trees and *screening vegetation* where practicable.

**E5**

A *Traffic Engineer* should be consulted for the design of *shared driveways* for larger *developments*. 
Depending on the scale of a multi-house development there are a range of options for the provision of outdoor space, including private areas, communal outdoor space which is only available to the residents, and communal space that may be open to the public.

PRIVATE AND COMMUNAL OPEN SPACE

Consideration needs to be given to the quality of space provided and also to the household types the development is aimed at, both now and in the future. For example elderly people may prefer smaller outdoor spaces, while houses for families with children may require larger, ground level, private, or communal play areas. The management of outdoor space also needs to be considered to achieve maximum usability and minimum ongoing expense.

Private Outdoor Space

Outdoor Space is exclusively owned and looked after by the residents of an individual dwelling. It could include ground level outdoor areas, courtyards or balconies at upper levels.

Communal Outdoor Space

Communal outdoor space or recreation facilities can be provided for shared use by residents within a development. It may be appropriate to provide reduced areas of private outdoor space where easy and direct access to communal outdoor space or shared facilities is available. Dwellings should face towards communal outdoor space to ensure good visual contact and ease of access. At least one edge of a communal outdoor space should open onto a road or vehicle driveway. On-going maintenance and management will need to be organised as part of body-corporate responsibilities.

In general, communal outdoor space should be limited and clearly defined as it can often become underused, expensive or difficult to manage.

Communal areas for driveways, landscape treatment, paths, rubbish bin areas or letter boxes should be kept to a minimum, to reduce costs of management and maintenance.

Layout and design of the development need to consider the quality of the outdoor space provided, including such aspects as outlook, sunlight, relationship to house, size, privacy, fencing, landscape treatment and management.

PUBLIC USE OF OPEN SPACE

In some instances it may be appropriate to provide a combination of smaller private outdoor space, together with a large outdoor space such as a park which is able to be used by residents and the public in general. This may be the case, for example where a site has access to a stream which may be used and enjoyed by the wider community. In such cases it may be appropriate for the Council to manage or own the space as open space, but this would have to be negotiated on a case-by-case basis.
ASSESSMENT CRITERIA

F1
Location of outdoor space should take advantage of views from the site, or create a pleasant outlook from living spaces through landscape treatment of the space itself.

F2
Outdoor space should be located in relation to adjacent buildings to ensure adequate admission of sunlight. In particular, outdoor space should be adjacent to main living spaces and be positioned to maximise sun admissions.

F3
Internal layout should be considered together with location of outdoor space to achieve an appropriate relationship with main living spaces.

F4
Outdoor space should be located and designed to achieve an adequate level of visual privacy. Overlooking by neighbours should be minimised. Where unavoidable, appropriate screening or landscaped devices should be utilised.

F5
Fencing and Landscape Treatment should assist with ensuring privacy and security, and creating an attractive living environment. Where outdoor space abuts a road, there should be careful design to achieve a good visual connection between the house and the road, while achieving privacy, without the need for high walls or solid fences.

F6
Size of outdoor space should be adequate for the numbers of people living within the house and for the development as a whole.

F7
Private Outdoor Space:
- suggested minimum size for outdoor space for one bedroom units: 25m² either at ground level, or a combination of ground level outdoor space and balconies. For units at upper levels with balconies, a smaller area may be satisfactory;
- suggested minimum size for two or more bedroom units: 50m² either at ground level, or a combination of ground level outdoor space and balconies.

Communal Outdoor Space
- where communal outdoor space or facilities are to be provided as part of the overall development,
the area of private outdoor space allocated to each house can be reduced, as long as each unit has easy and direct access to the communal area. In this instance:

- houses at ground floor level should include small, outdoor courts with a minimum area of 16m², and a minimum dimension of 3.0 metres;
- houses at first floor level or above should include a balcony or balconies with a minimum total area of 4m²;
- communal outdoor space or shared recreational facilities should be provided on the basis of 100m² for every five houses.

**F8**

Appropriate management and maintenance systems should be in place for communal outdoor space dependent on the scale of development and the extent of communal access.

Communal outdoor space should be faced by dwellings to ensure good visual contact for...
Within more intensive housing developments it is important to ensure that each unit achieves an individual sense of address, and that house entries are easily accessed and secure.

**ASSESSMENT CRITERIA**

**G1**  
House entries should be located where they are clearly visible from the road or shared driveways so that visitors can easily identify a particular house.

**G2**  
House entries should provide a sense of personal address, shelter and transitional space around the entry.

**G3**  
Entries at ground floor level should be accessible to disabled people.

**G4**  
House entries in multi-level developments should be designed to minimise large numbers of entries off long corridors.

**G5**  
House entries should be well-lit.
SITE FACILITIES

More intensive housing developments often include facilities which are shared between residents, such as rubbish collection areas, mail boxes, service meters and so on.

These elements need to be carefully designed and located to be convenient for residents and the relevant service authority, as well as to ensure that they complement the overall design of the development.

In some developments access will be required for service or emergency vehicles, and driveways will need to be adequately designed to accommodate these.

Other aspects which need consideration include external storage for lawn mowers, bicycles and the like, and clothes drying facilities.

Storage facilities can often be provided as a part of garaging or outdoor space areas, but can also be formed as a separate area.

ASSESSMENT CRITERIA

H1 Garbage bin enclosures are to be sized to accommodate the garbage receptacles as required by Council, and to provide for recycling collection.

H3 Combined garbage bin enclosures are to be located adjacent to the road for ease of collection, or where internal to the site, allowing for adequate access and turning by garbage collection vehicles.

H4 Combined garbage bin enclosures are to include a tap and sump for the cleaning and washing down of the area.

H5 Mail boxes are to be located adjacent to the footpath, in accordance with requirements of NZ Post.

H6 Meter boxes are to be located in accordance with requirements of the relevant authority.

H7 Each house should be provided with a lockable external store of waterproof and durable construction. As a guide it should have a minimum volume of 6m³ and may be part of the garage, or locker in a carport.

H8 Open air clothes drying should be provided where possible, in areas screened from the street.

H9 In large scale developments with internal, shared driveways, requirements for emergency vehicles such as fire and ambulance should be designed and provided for in accordance with the requirements of the relevant authority.

I1 Private outdoor space should generally be allocated to individual units for ease of management. Where communal outdoor space is proposed, then a body-corporate should be considered to maintain these areas.

I2 Major existing trees should be retained and protected from damage where possible.

I3
LANDSCAPE TREATMENT

Landscape treatment is vital to the integration of multi-unit developments into the surrounding neighbourhood, as well as to the creation of a quality living environment for residents. Issues to be considered include:

• location of landscape treatment in public areas, communal areas and private areas
• planting types appropriate to the site and locale, to assist with achieving privacy, and creating an attractive environment, while not requiring unduly high maintenance
• paving and surface finishes to driveways, roads and paths. Semi-permeable surfaces will assist with rain water drainage and reduce the pressure on stormwater systems. Large areas of impermeable surfaces should be avoided
• fencing types should contribute to the surrounding streetscape, and the development as a whole
• existing vegetation can be a major asset and provide an ‘instant’ established appearance. Where practicable it should be incorporated at the site planning stage
• maintenance is an important consideration. Whether a private, communal or public responsibility, maintenance requirements should reflect the household types the development is aimed at.

Landscape treatment should assist with blending new developments in with the surrounding streetscape.

14 Landscape treatment should not affect the structure of proposed buildings.

15 Paving to paths, driveways and near entries should be selected for convenience and safety, whilst recognising the desirability of limiting impermeable surfaces.

16 Large areas of impermeable surfaces should be avoided to minimise loading of the stormwater disposal system.

17 Landscape treatment should enhance energy efficiency by, for example, providing shade in summer to west-facing windows, and allowing penetration of winter sun and shelter from winter winds.

18 Landscape treatment should improve privacy between houses.

19 Landscape treatment should minimise risk of damage to overhead and underground services.

110 Fencing types should enhance the development and streetscape. Large blank walls facing the road should be avoided.

111 Selection of planting types should consider their relationship to living spaces or outdoor space, relationship to the road, and ongoing maintenance requirements.
For medium density housing in the Living Environment (Penihana North) the following design criteria apply, and where relevant replace specific matters addressed in the previous Design Elements.

The Plan limits the type of development possible within the Living Environment (Penihana North) to medium density housing and establishes a preference as to the type and density of housing possible. This applies within the vicinity of the Swanson railway station and Swanson Town Centre. As outlined in Policy 11.55, Penihana North offers a unique opportunity to create new urban development within this ‘greenfields’ location which can provide quality medium density housing. This is a response to and recognition of the suitability of this land for more intensive development and the recent ‘double tracking’ of the railway and the upgrading of the railway station for passenger transport.

**DESIGN ELEMENT J**

**PENIHANA NORTH**

**ASSESSMENT CRITERIA**

**J1**

Development should be consistent with the Penihana North Urban Concept Plan and the relevant matters identified in the Subdivision Design Criteria for Penihana North where a land use consent application precedes or is concurrent with subdivision.

**J3**

The maximum height of buildings should not exceed two storeys to achieve an appropriate neighbourhood character in Swanson.

**J3**

The type of medium density housing provided in Penihana North should be predominantly based on detached townhouses and/or semi-detached duplex houses. Higher density types of medium density housing may occur on land within 250 metres of the Swanson train station (central point) and Swanson Town Centre (central point), in close proximity to secondary road links, key pedestrian networks and open space areas (as identified on the Penihana North Urban Concept Plan), provided that the predominant type of housing remains as detached townhouses and/or semi-detached duplex houses. Outside of a radius of 250 metres from the Swanson train station and Swanson Town Centre, the preference is for development to provide detached townhouses.

**J4**

Buildings set backs from the road boundary on front sites should create an appropriate streetscape and maintain pedestrian amenity by providing:

- a maximum setback of 6 metres;
- a minimum setback of 3 metres;
- a minimum setback for any garage of 5 metres where the door of the garage generally faces the road.

**J5**

Fences on the road boundary, or between the road boundary and the closest building on the site should generally not exceed 1.2 metres in height.

**J6**

Development should achieve an appropriate roadscape with Christian Road consistent with the outcomes anticipated in Rules 4.1(h) Greenfields Subdivision and 6.1 Front Yards of the Living Environment