



LAUREL HILLS

Queenstown, New Zealand

architectural briefing

January 2019

Key Building Concepts

Laurel Hills aims to provide efficient compact building forms on small sites which have the appearance and spatial qualities of much larger dwellings.

Four essential approaches are adopted to achieve this objective:

1. Utilisation of natural contour where possible, and;
2. Wider and shorter
3. The value of the roof void
4. Embrace the porch and carport

These are covered in more details on the following pages.

Employing these techniques will help deliver:

- Appropriate built-form response for this site
- Greater site efficiency and utilisation
- Accommodate 2 habitable levels within the 5.5m encumbrance
- Help promote 'affordable by design' solutions generally
- Help facilitate variation and personalisation of standardised homes



Clare Road, Merivale, Christchurch
High quality compact building forms on a small site



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Utilising Contour

Utilising contour as an integral part of building design is an effective way of delivering a medium density, free-standing building form.

Using contour, particularly where a site slopes up to the north enables multi-level dwellings by using internal retaining to reduce the building footplate and site size.

This provides a 2 level appearance to the street while the north-facing living court can be accessed directly at-grade from living areas on the level above.

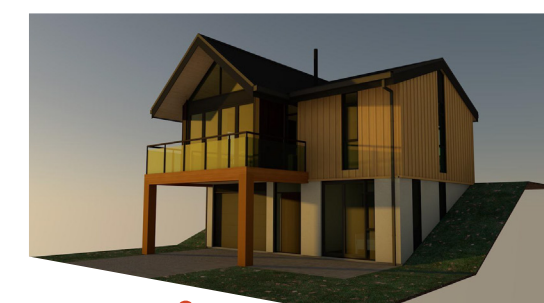
Even on extremely small sites (<200m²) a high level of private living space amenity can be achieved – will living areas opening at grade

The upper level extends over the garage to optimise bedroom and living space

A limited side yard helps provide access to the rear, reduce (or even avoid) external retaining walls and provide a secondary solar access to lower-level rooms

Even with a limited street setback dwellings can achieve a functional living court to lower rooms

Garage set-back ensures provision of 2 off-street vehicle parks



The Bullendale development on Arthurs Point has utilised slope to effect to create quality, cost-effective compact dwellings



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Wider & Shorter

Employing wider but shallower lots helps mitigate a number of issues encountered with modern suburban development. Wider buildings have numerous benefits to all stakeholders.

The 'wider and shorter' approach is premised on the ability to create 2 or more functional rooms facing either the street or rear living court. If a two-level building is being considered this equates to approximately 8m wide.

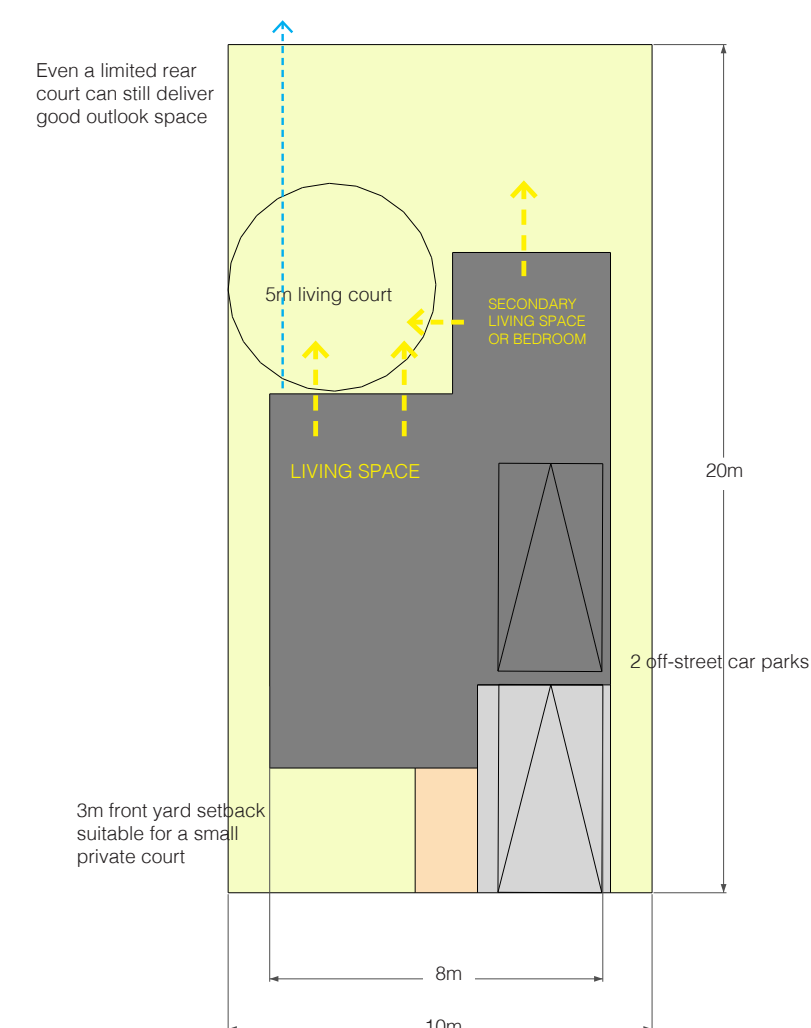
The advantages include:

For Council / Developer:

- Greater separation between driveway crossings:
 - › Reduces vehicle dominance of the street
 - › Reduces vehicle pedestrian crossing conflicts
 - › Improves the ability to provide on-street parking
 - › Increases streetscape landscaping = higher quality public realm
- Requires longer blocks, but is neutral in terms of development efficiency and roading required
- On sites sloping north-south, helps reduce the extent of cut and retaining required
- Helps facilitate better solar access into sites
- Ensures better north-facing living courts for south-facing sites
- Helps reduce front yard setbacks

For the Homeowner

- Houses appear larger (and therefore more valuable)
- Reduces over-looking by neighbouring properties – retaining privacy even in more-intensive residential environments.
- Ability to create habitable rooms with outdoor amenity on lower levels
- Helps facilitate porches and decks towards the street to improve sociability and surveillance to the street
- Improves the provision off-street parking
- Can easily accommodate reverse vehicle access from a rear lane (if available)



This example illustrates how a free-standing 2-level compact dwelling can function on a 200m² lot.

A 1.5 level dwelling (like the Bullendale example on the previous page) can provide a full 3 bedroom home.



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Effective Use of the Roof Cavity

Many of Laurel Hill's sites are impacted by the 5.5m maximum building height encumbrance. Even when this constraint can be overcome by earthworks design, the creation of additional habitable space in the roof void remains a design feature to embrace.

Ironically, the larger the footplate the harder it is to utilise the roof cavity (or attic) space. Therefore compact footplate dwellings are ideal to "borrow this" low-cost yet valuable space. Likewise larger dwellings can be broken down into smaller modules to achieve the same result.

This is a good approach to creating space which optimise the locations spectacular vistas.



Use of the roof cavity (or attic) can be a valuable space if considered early in the design process.



Larger dwellings / sites can accommodate a series of smaller structure which in turn enable the attic utilisation



Trelawns Cottage (Arthurs Point) – using the roof void to create a habitable room within a constrained building envelope



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Utilising Building Appendages

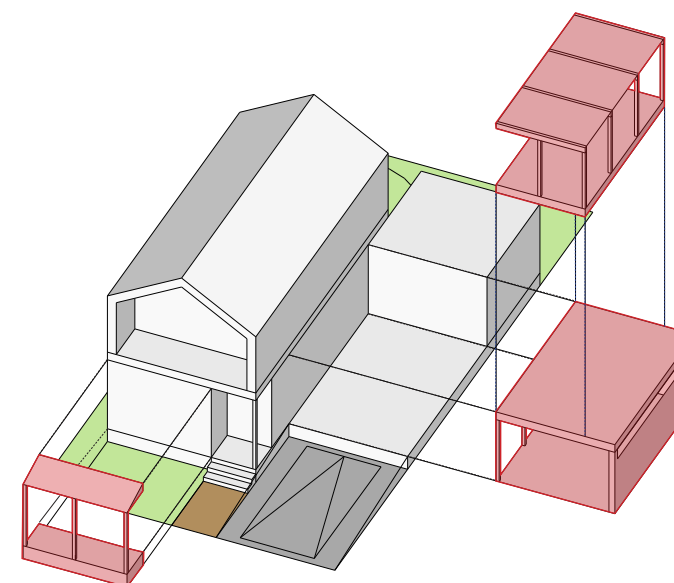
Non-enclosed building appendages such as verandas' and porches provide significant amenity advantages to both homeowners and the community at relatively low cost.

Benefits include:

- Increased functional space
- All weather outdoor amenity areas
- Improved interface with the street = increased surveillance
- Increased personalisation of homes.

This concept can be extended to include vehicle garaging – utilising carports in place of enclosed garages.

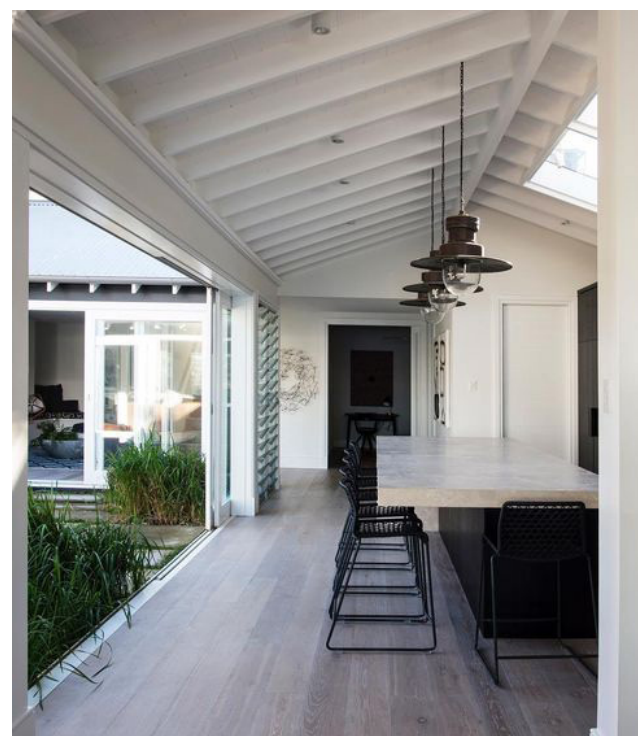
This approach is a further aspect of helping to reduce the footplate of dwellings and deliver a higher density without compromising amenity.



A simple front porch can add real value to a simple building.



Even a small level change allows front porches to get closer to the street while maintaining privacy



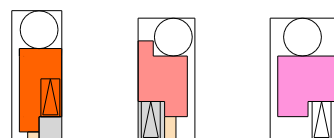
Verandahs can be used within a lot to help shape space and create privacy.



Canopied spaces can add considerable value to any dwelling

The Typologies

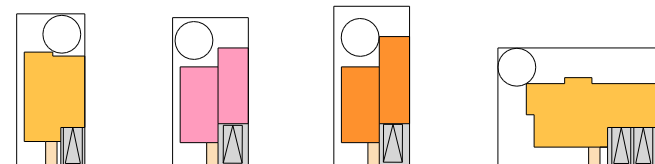
Compact Houses



The most compact typologies that utilise internal site works to deliver compact houses on small lots.

See page **7** for further details

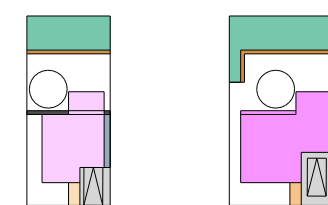
Townhouses



A range of types that utilise lofts/ roof cavities over part of the ground level footplate to deliver family-sized house types on smaller lots.

See page **8** for further details

Retain Houses

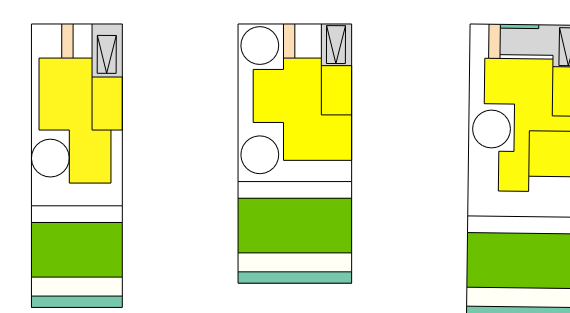


A typology that features internal retaining to create houses compact family-sized dwellings on sloping site areas. These present as two levels to the street but single level to rear living courts.

These are also utilised on the northern boundary (against Ladies Mile Highway - SH6) to help facilitate the landscaped bund area.

See page **9** for further details

Urban Houses

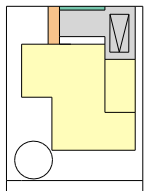


These are larger (generally) single level dwellings on smaller sites.

They are used extensively on the southern boundary against Maxs Way to help integrate with and minimise visual impacts on neighbours

See page **10** for further details

Villa



A more conventional responses for larger (450m²+), flatter sites which suit a personalised response within agreed design parameters.

These have not been illustrated.



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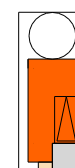
Typology: Compact House

Compact house types provide a cost-effective alternative to apartment living by providing 2 level dwellings with small footplates on extremely compact sites (<150m²).

They are typically utilised where earthworks within the site lowers building platform levels to facilitate the provision of 2 floors below the 5.5m height constraint allow. Whilst they can be developed as free-standing dwellings the best utilisation is as attached dwellings – either as duplexes or terraces, as desired.

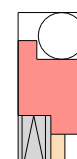
There are 3 variants of this type which can deliver 2–3 bedrooms with 1-2 off street car spaces dependent on configuration. To achieve this they have higher site coverages, limited street setbacks and constrained rear open space.

This typology is 'affordable by design' and provides a viable option for single or small family households (such as starter couples or empty-nesters).



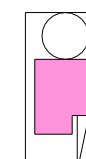
A
Minimum Lot
Dimensions: 6.5m(w) x 17m(d)
Size: 110m²

Dwelling:
Site Coverage: <51%
Footplate: 56m²
GFA: circa 90m²
Bedrooms: 2
Off-Street Parking: 1 internal



B
Minimum Lot
Dimensions: 7.5m(w) x 16m(d)
Size: 120m²

Dwelling:
Site Coverage: <45%
Footplate: 50m²
GFA: circa 100m²
Bedrooms: 2 or 3
Off-Street Parking: 1 or 2



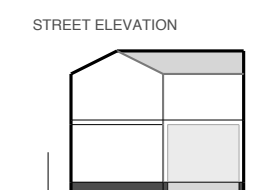
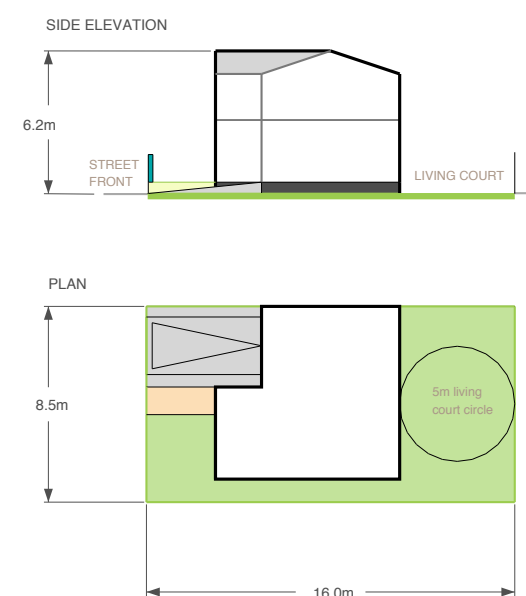
C
Minimum Lot
Dimensions: 8.5m(w) x 16m(d)
Size: 110m²

Dwelling:
Site Coverage: <45%
Footplate: 54m²
GFA: circa 110m²
Bedrooms: 2 or 3
Off-Street Parking: 1 or 2

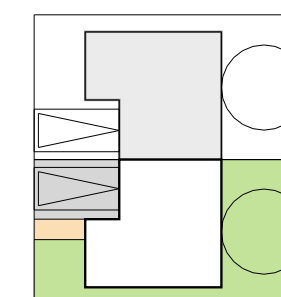


Compact house, Austin, USA

Even a limited elevation change from the street helps create a functional outdoor living space and improve privacy, even with a limited setback from the street.



ATTACHING TYPOLOGIES



When attaching typologies, driveways should be consolidated to reduce the number of vehicle crossings and improve on-street parking opportunities.



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Typology: Townhouses

Townhouses are used extensively in the development, providing good family sized homes on small (150–350m²) lots.

Like the Compact House typology, Townhouses utilise internal site earthworks (but to a reduced extent) to lower building platforms to achieve two functional levels over part of the building footplate. This approach helps solar access between building and into both the public realm and private living courts, as well as optimise views.

The upper level generally utilises an elevated roof cavity to create habitable lofts and functional ceiling heights. The 4 variants can deliver 3-4 bedrooms and up to 4 off-street car spaces.

They have higher site coverage and limited street setbacks but can still deliver generous internal areas and outdoor living spaces.



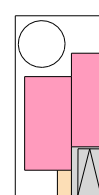
A

Minimum Lot

Dimensions: 9m(w) x 20m(d)
Size: 180m²

Dwelling:

Site Coverage: <50%
Footplate: 86m²
GFA: <120m²
Bedrooms: 3
Off-Street Parking: 2 (tandem)



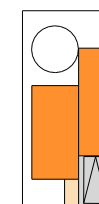
B

Minimum Lot

Dimensions: 10m(w) x 19.5m(d)
Size: 195m²

Dwelling:

Site Coverage: <45%
Footplate: 90m²
GFA: <145m²
Bedrooms: 3
Off-Street Parking: 2 (tandem)



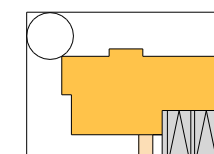
C

Minimum Lot

Dimensions: 10m (w) x 21m(d)
Size: 210m²

Dwelling:

Site Coverage: <45%
Footplate: 96m²
GFA: circa 145m²
Bedrooms: 3 or 4
Off-Street Parking: 2 (tandem)



D

Minimum Lot

Dimensions: 20m(w) x 15.5m(d)
Size: 300m²

Dwelling:

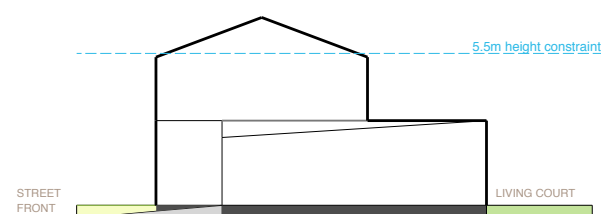
Site Coverage: <45%
Footplate: 125m²
GFA: circa 150m²
Bedrooms: 3+
Off-Street Parking: 4



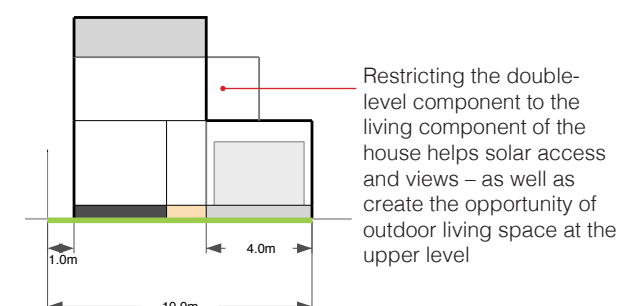
Artist Impression - Bridesdale Farm

Roof forms can vary. This helps create articulation in the streetscape as well as individualisation of individual dwellings

SIDE ELEVATION

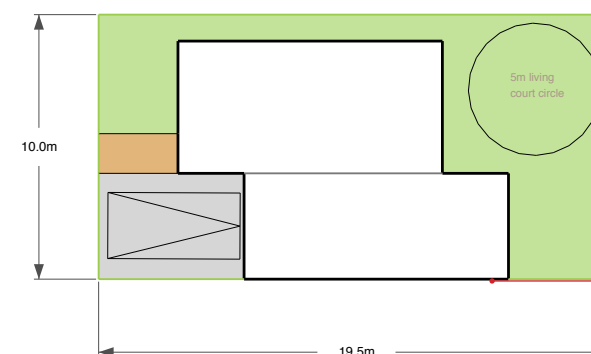


STREET ELEVATION



Restricting the double-level component to the living component of the house helps solar access and views – as well as create the opportunity of outdoor living space at the upper level

PLAN



Townhouses are well suited to a 'zero-lot' configuration where the house can be built to one boundary (usually the garage) for a limited distance.

Typology: Retain Houses

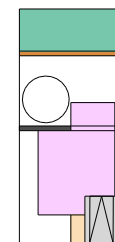
Retain Houses utilise internal and external retaining to create compact, family-sized dwellings on areas of the site with more slope without requiring a significant engineered solution.

While the functional site size of lots is relatively small (230–350m²) the actually size may be far larger incorporating further upper slopes. These may be used for revegetation or integrate with landscape bunding in the public realm. As a result, while having a very compact house development area, they have a relatively low site coverage.

They provide quality outdoor living spaces by ensuring rear living courts have northern aspect and internal living areas opening directly to this at-grade on the upper level.

The approach frees the lower level to accommodate internal parking and additional living areas such as an office or bedroom.

They present as two levels to the street and single level to the rear living court, while staying below the 5.5m height constraint.



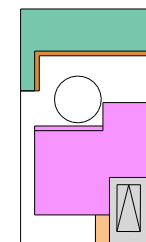
A

Minimum Lot

Dimensions: 11m(w) x 21m(d)
Size: 230m²

Dwelling:

Site Coverage: <35%
Typical GFA: <125m²
Bedrooms: 3
Off-Street Parking: 2 (tandem)



B

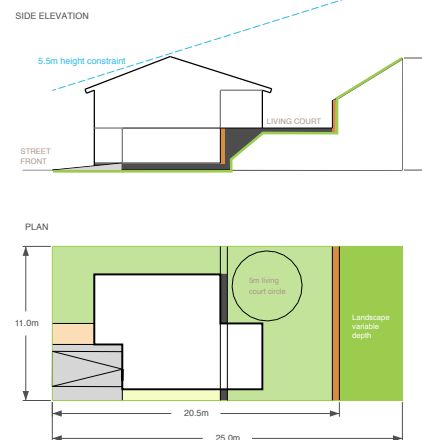
Minimum Lot

Dimensions: 15m(w) x 21m(d)
Size: 315m²

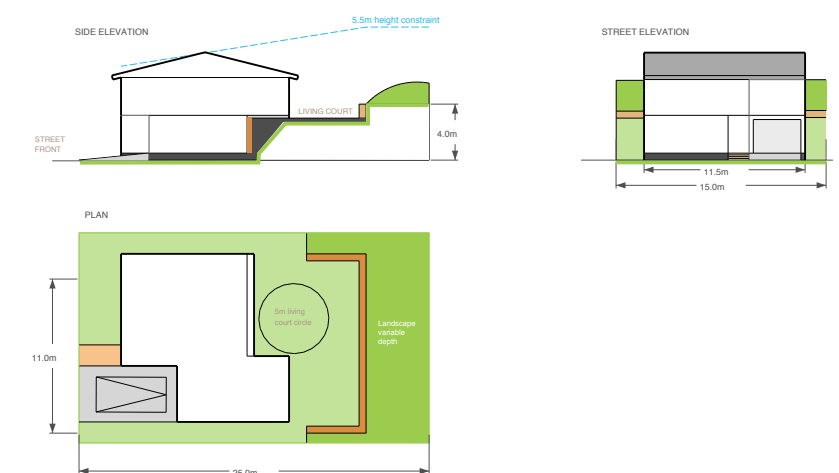
Dwelling:

Site Coverage: <35%
Typical GFA: <145m²
Bedrooms: 3 or 4
Off-Street Parking: 2 (tandem)

NARROW (A)



WIDE (B)



The Retain House model can be used on any area that slopes up to the north. By retaining within the house it can accommodate over 5m of level change in the section depth (circa 25m) net of further undevelopable landscape.

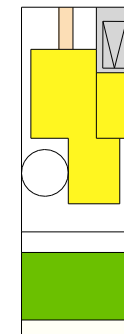
Typology: Urban Houses

Urban Houses are (generally) single level dwellings on smaller sites (300–450m²) lots. They represent a smaller version of the larger Villa House (not illustrated) with wider street frontages to help reduce the visual impact of cars and garages, and help shape a less car-dominated streetscape.

These types are used extensively on the southern boundary against Maxs, and like the Retain House typology, integrate with unbuildable slopes to create substantial larger lots. This also offers the opportunity to incorporate small components of two-levels within the house with little additional visual impact.

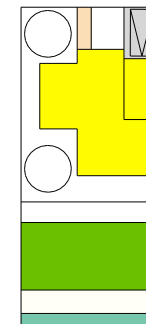
The types typically feature an 'L' shape to help create enclosed courtyard living areas to the rear along with porch/canopied areas to the street.

The type is well suited to utilise a 'zero lot' boundary treatment along one edge to optimise site efficiency.



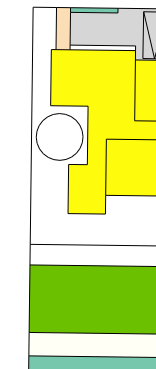
A
Minimum Lot
Dimensions: 12m(w) x 26m(d)
Size: 312m²

Dwelling:
Site Coverage: <45%
Typical GFA: 130m²+
Bedrooms: 3
Off-Street Parking: 2 (tandem)



B
Minimum Lot
Dimensions: 15m(w) x 23m(d)
Size: 345m²

Dwelling:
Site Coverage: <45%
Typical GFA: 145m²+
Bedrooms: 3+
Off-Street Parking: 2 (tandem)

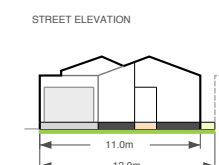
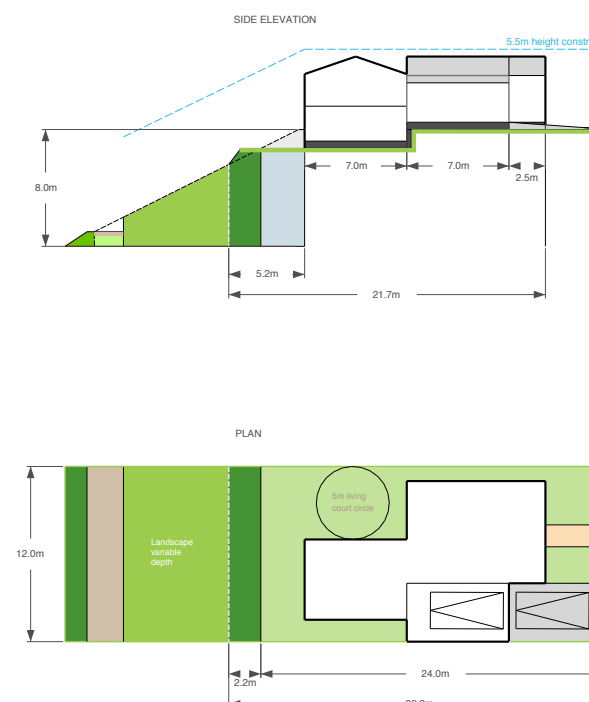


C
Minimum Lot
Dimensions: 15m(w) x 27m(d)
Size: 405m²

Dwelling:
Site Coverage: <45%
Typical GFA: 175m²+
Bedrooms: 4+
Off-Street Parking: 2 (tandem)

When used on the boundary to Maxs Way, there is potential to add a two-level component to dwellings by a minimal lowering the building platform along the edge.

This helps increase surveillance of the planned pedestrian path at the lower edge of the bank.



The lot sizes identified represent use within the site. The effective lot sizes along Maxs Way include unbuildable slope and are much larger.

Bringing It Together - Architectural Style and Materiality

The architectural language of Laurel Hills will integrate closely with landscape elements to provide a coordinated design aesthetic to create a cohesive streetscape and help shape a distinct neighbourhood identity.

Materials will include:

- Rendered walls
- Weatherboards
- Vertical board and batten
- Iron cladding

Feature elements will include:

- Stonework
- Modern features such as stacked block, feature materials (ie copper or corten steel panels – in appropriate locations)
- Feature glazing

Colours

A colour palette will be developed that encompasses the key element found in Arrowtown and other surrounding development.

Personalisation

As outlined on previous pages, even with a relatively limited number of typologies, the articulation of facade and variety of roof forms, inclusion of porches and verandahs, and the elements listed to the left will enable a high degree of personalisation without 'striving for effect'.



International example



Devon Street, Arrowtown