

the 3 tenets

TENET 1  
A 6.0m x 6.0m NORTH FACING COURTYARD FOR EACH DWELLING.

The courtyard is a simple walled square, with enough room for a tree, or some vegetable beds, or a bench seat in the sun. The walls are 1600mm high for privacy and a sense of containment. For dwellings above ground level, there is provision for a roof garden. Same wall height of 1600, but as for all courtyards, it must have a north facing aspect.

TENET 2  
EACH DWELLING TO RECEIVE 3 HOURS MID-WINTER SOLAR INGRESS.

The living room of each dwelling opens onto its courtyard. It doesn't matter in mid-winter if the courtyard is in shade, but the attached dwelling must have unobstructed access to mid-winter sun. Summer shade is controlled with projected awnings, but winter sun to each dwelling is mandatory. Dwellings above ground level still have north-facing windows, but roof gardens are accessed to the east or west. Upper storey roof gardens must not be stacked up over ground floor courtyards. Upper storey balconies must not blanket out the solar ingress to a dwelling beneath it.

TENET 3  
EACH DWELLING TO HAVE A DISTINCT & SEPARATE ENTRY.

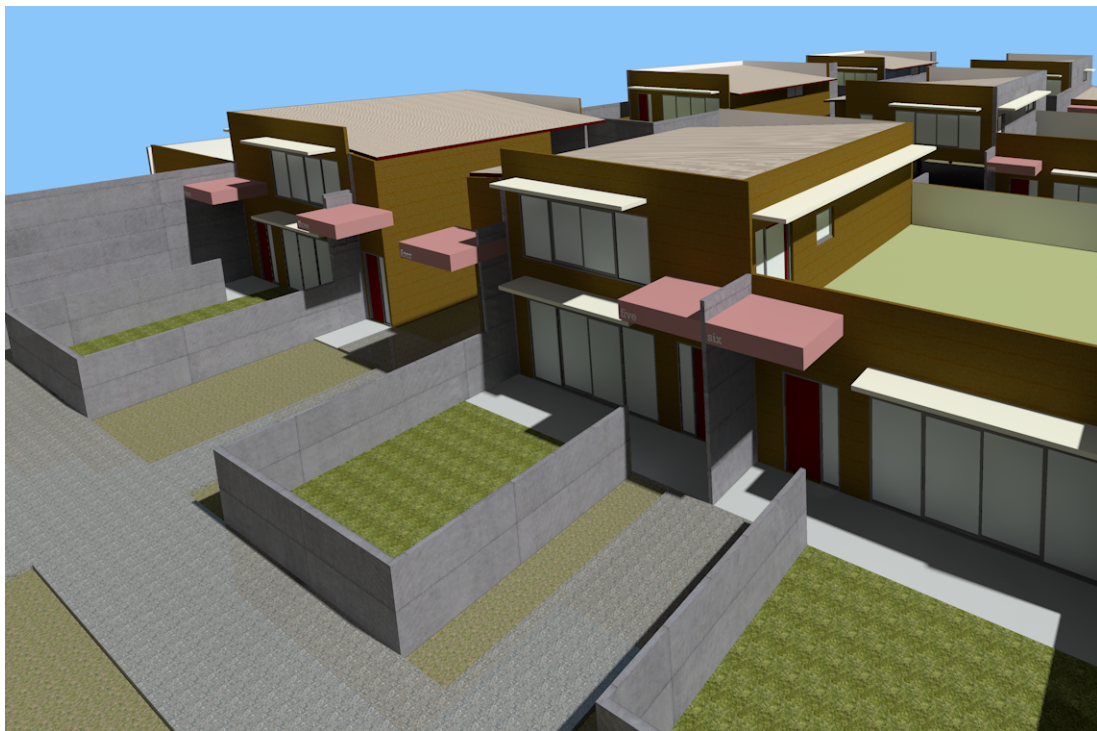
In a multi-dwelling setting of repetitious forms, the front door must provide a resident with a lot of humanist values. Values of ownership and difference and individuality, and with this a heightened sense of arrival, can all be derived from a nice front door.

APPLYING THE TENETS TO DESIGN;  
THE HOPSCOTCH GRID

To a 6m. x 6m. courtyard grid, add a 1.5m. perimeter for the house space behind. The house is 9m x 9m. It becomes a hopscotch pattern laid over the site. Site density is only as great as the number of courtyard homes that can readily fit within. Further into the process, site density is also factored by other constraints, but initial layouts can be explored this way.

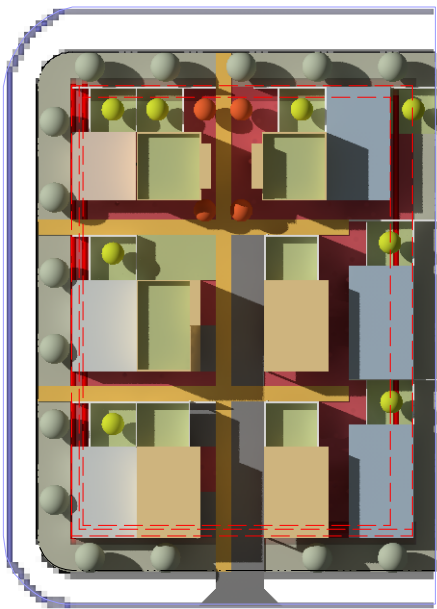
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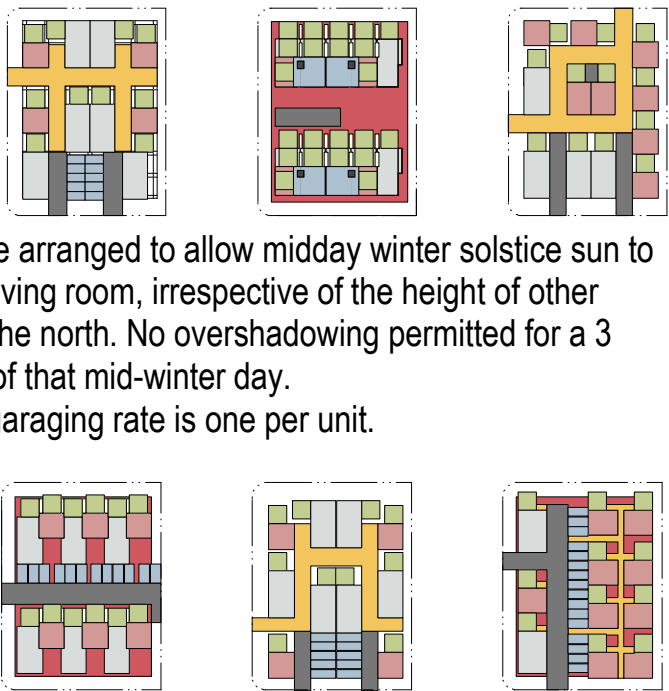


SITING OPTIONS

Applying 1, 2 & 3 bedroom dwellings over the site, each with a courtyard.



Dwellings are arranged to allow midday winter solstice sun to reach each living room, irrespective of the height of other dwellings to the north. No overshadowing permitted for a 3 hour period of that mid-winter day. On-site car garaging rate is one per unit.

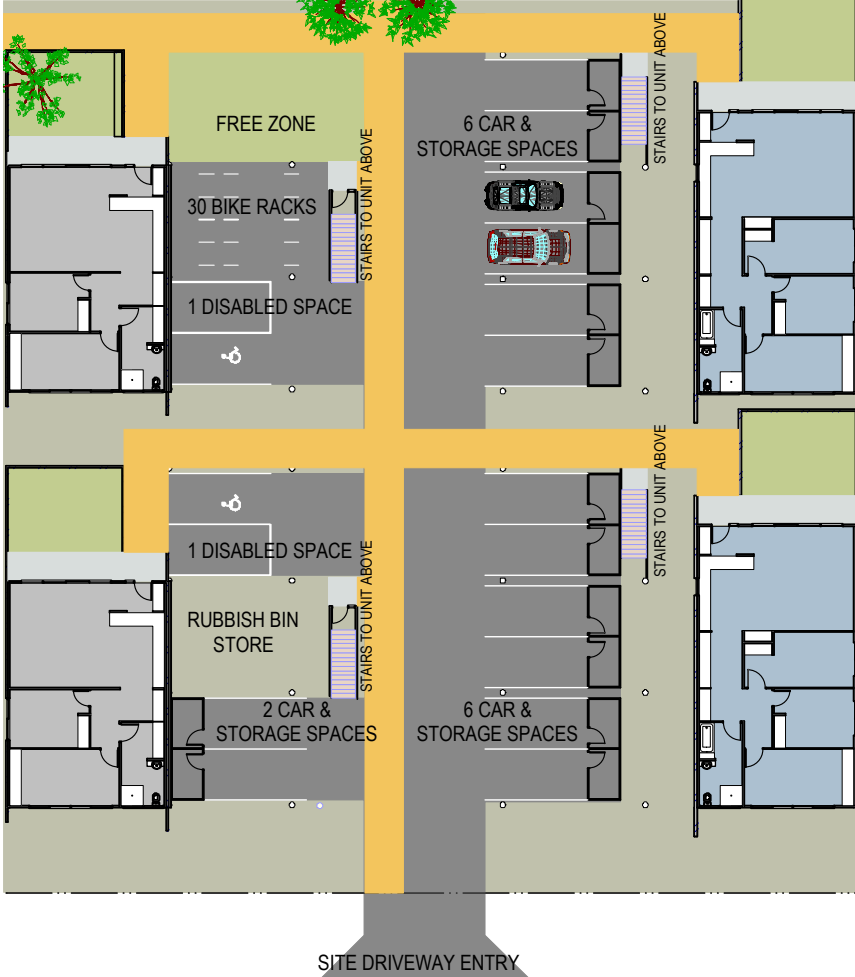


All units have been designed to comply with 'LIVEABLE HOUSING DESIGN GUIDELINES' c.2012\_Gold Level' for comfort, safety & ease of access. Unit lengths are increased by 3 metre increments to include additional bedrooms. Unit widths are identical, separated by fire and sound rated non-continuous wall construction. Plans change for upper level units, which have dedicated single run stairwells additional to the nominated floor area. Floor areas for the 3 types correspond to the 3 Tier Thresholds for net living areas nominated in 'ACT AFFORDABLE HOUSING ACTION PLAN\_PHASE III'



SITE REQUIREMENTS

Additional to the requirement of Tenet 1 (one courtyard per house) and Tenet 2 (no mid-winter overshadowing to Living Rooms of each house) are these further considerations.  
RULE 1. One car accommodation per house, with at least 10% of those dedicated to parking for people with disabilities.  
RULE 2 A centrally located and secure bicycle store, providing at least 1.5 bike racks per household. So as to future proof the scheme, each bike rack has capacity to charge electric bikes.  
RULE 3 A conveniently located garbage store, with each households green and yellow topped bins out of sight at all times except for kerbside collection.  
RULE 4 Provision of a neutral 'free' zone somewhere on site, whether it be for a communal BBQ area, a recreational square or lawn, or a clothes-drying yard.



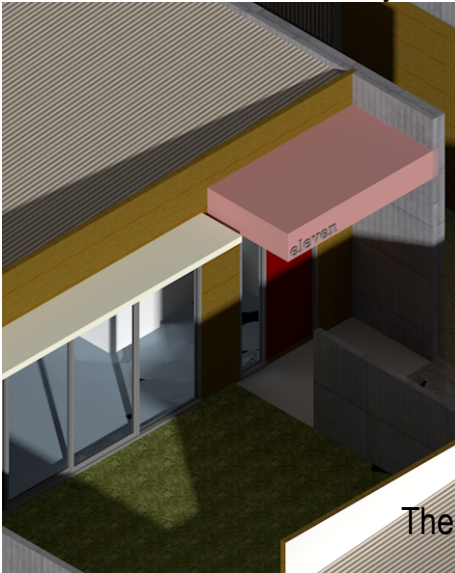
PLANNING REGULATION INHIBITIONS  
The 3 Tenet dictum overrides Territory Plan plot ratio requirements. If Tenets 1 & 2 as well as the above Rules are satisfied, there need be no other plot ratio restrictions. Building envelopes and boundary setbacks as set out in the Multi-Unit Code have been adhered to. This ensures repeat site plots on in-fill and greenfield sites without over-shadowing.



ALL 14 UNITS HAVE MIDDAY MID-WINTER SOLAR INGRESS TO LIVING ROOM WINDOWS

CONSTRUCTION TECHNOLOGIES

The party walls between units and the courtyard walls are site poured tilt-up concrete slab panels, using low carbon content cement as it becomes more readily available. Transverse walls are all pre-fab lightweight stud frame construction, battened off and clad in dark tinted Ecoply timber wall cladding. Roof cladding is low slope 5° custom orb metal roofing on pre-fab roof trusses pitched off 2700 high internal ceilings. The services and fixtures repetition inherent in the 3 plan similarities leads to savings in the assemblage and building of the parts. Like the bare concrete courtyard walls outside, finishes internally to be clean



BUILDING COSTS INDICATION  
The proposal has 14 dwellings on the site.  
3 of 3 bedroom units.  
5 of 2 bedroom units.  
6 of 1 bedroom units.  
Total Net Living Area is 1,373m2.  
Plot Ratio is 38%.  
The estimated building costs are as follows;  
3 bedroom unit \$500,000.  
2 bedroom unit \$430,000.  
1 bedroom unit \$360,000.  
The total selling price of 14 units is \$5.81 million.

SUMMARY;  
THE THREE TENETS & THE ONE NEW TYPOLOGY

THE ONE NEW TYPOLOGY  
The result of these tenets is the new typology, the Hopscotch Grid. It can be laid over any site to determine building density. Rotate the grid in an arc from 10°NNE to 15°NNW. The grid can be laid out over greenfield sites as a typology determining road layout, orientation and block size. The grid can be laid over potential redevelopment infill sites to gauge maximum density.

TENET NO 2  
EACH DWELLING TO RECEIVE 3 HOURS MID-WINTER SOLAR INGRESS.



TENET NO 3  
EACH DWELLING TO HAVE A DISTINCT & SEPARATE ENTRY.

