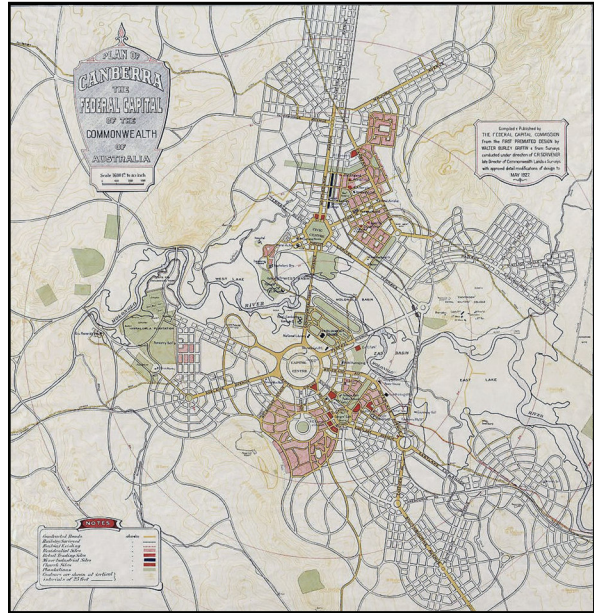


A.A.M. - Affordable Accessible Modular Living



Plan from 1912 (from nla.gov.au).

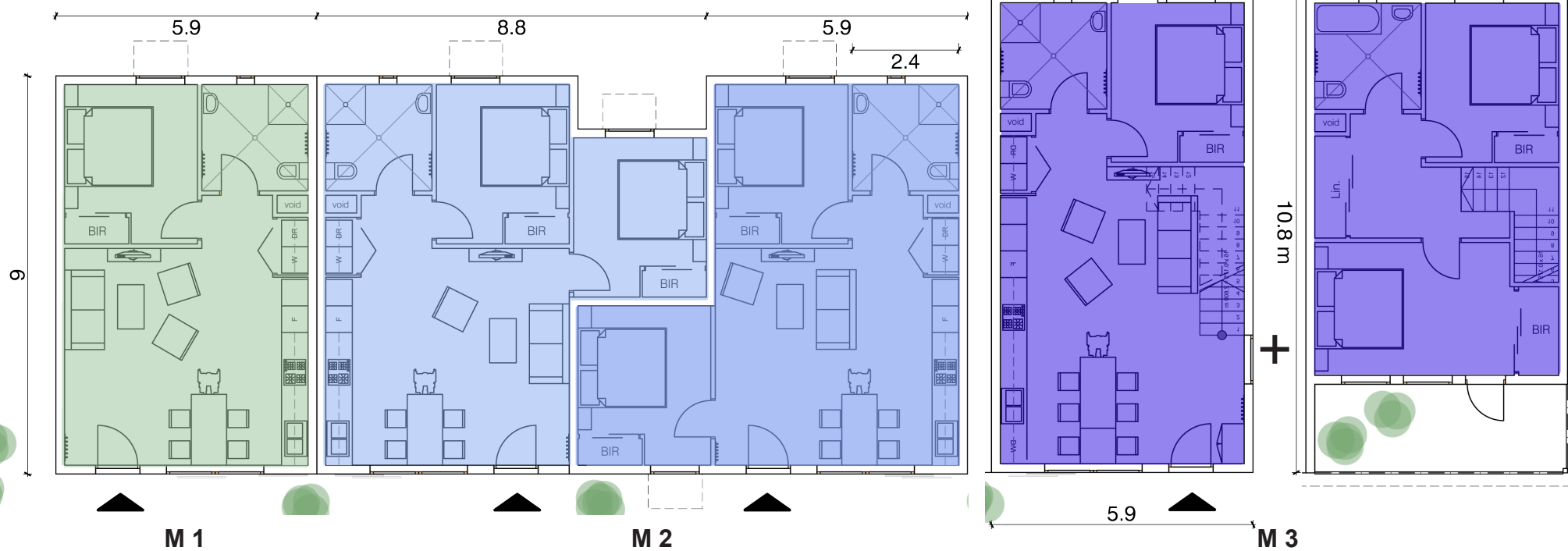
Canberra is a planned city, resulting from an international architecture competition won by Walter Burley Griffin. Influenced by the Arts and Crafts movement inspired architectural ideals of the time, Burley Griffin envisaged Canberra to be a low density garden city.

In the 21st century however, Canberra is facing a number of challenges such as segregation, social isolation and poor quality housing.

As the population increases and grows older, the incidence of disability also increases. People with disabilities are more likely to be economically disadvantaged and socially excluded since few cities are constructed with universal mobility in mind.

Therefore it is imperative to cost-effectively build accessible housing fully integrated into high quality public spaces thereby engendering a socially accessible environment for everyone.

The module



Base Module: M1
(1 bedroom, 1 bathroom)
To aid deployment in different plot contexts and densities we have designed a versatile, 1 bedroom 1 bathroom, base module that can be systematically transformed into larger configurations. Varying versions of the module can be combined and stacked in different formations enabling the creation of multi-residential buildings and/or semi-detached houses.

In designing the 5.9m x 9.0m (53.1sqm) base module the focus has been on creating a space-efficient, functional home that is accessible for all. Therefore the bathroom is large enough to accommodate wheelchair users. M1 (the base module) contains one generous bedroom, one large bathroom and an open plan kitchen, meals, living area.

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Module: M2
(2 bedrooms, 1 bathroom)
Two-bedroom dwellings are created by adding a bedroom to the original module making the home 63.6 sqm in total.

Where appropriate windows are solar shaded by manually operated screens. By animating the façade, the ever-changing arrangement of screens forms an interesting, cost-effective design feature. Large sliding screens close to the entrances also offer privacy when residents prefer it. Other screens are operated internally using a rope and pulley system.

Module: M3
(3 bedrooms, 2 bathrooms)
Three-bedroom dwellings are created by stretching the original module by 1.8m (making a footprint of 5.9m x 10.8m) and adding another floor containing two bedrooms and a second bathroom. This home is 115.6 sqm in total.

All the bathrooms are the same size (2.4m x 2.4m) making prefabrication ideal.

Affordability

The base module, along with its larger M1 and M2 versions, can be used repetitively, or mirrored or rotated, in various contexts and configurations making it versatile, cost-effective and very adaptable to infill projects. All modules can be clad in different materials depending on site context, builder preferences and budget requirements.

- space efficient
- limited number of design elements
- bathrooms prefabricated
- low-maintenance materials; metal roofs and panelised (eg, compressed sheet, metal, plywood) facades

- stackable in various ways with different facade materials in different locations
- access from external corridors
- combined vertical access route (stairwell and elevator co-located)

Scenario 1, high density



Two multi-residential buildings with large external walkways reached from centrally placed stairs/elevator circulation route. Communal bbq-area and seating on every level (adjacent stairs) where residents can socialize or relax and enjoy the sun and views. Large external walkways become balconied social areas, similar to streets in the sky, where residents can get to know neighbours. External screens, covering walkway-facing windows, provide privacy when desired.

10 x 3-bedroom houses, 20 x 2-bedroom units and 12 x 1-bedroom units (42 homes in total). 32 parking spaces are provided, including accessible spaces. Two large water tanks and a large lockable bike shed are also provided along with solar panels for electricity and heating water. Between buildings there is a large social area with playground, bbq-areas and big planter boxes. All entrances face the social area, further increasing the sense of community in this vertical village.

Scenario 2, low density



In the low density scenario the only buildings higher than one storey are the semi-attached 3-bedroom houses. The smaller units are located in the 3 one storey buildings. This formation is ideal for traditional residential areas since it is a modern version of the garden city. Again, all entrances face the common area, between the buildings, creating a space where residents can socialize with neighbours. In this space there is also a playground, communal bbq-areas and

big planter boxes for residents to grow vegetables and flowers. Greenery and pervious surfaces further enhances the sense of a modern garden city.

10 x 3-bedroom houses, 6 x 2-bedroom units and 5 x 1-bedroom units (21 homes in total); one parking space per dwelling. Water tanks and solar panels are standard inclusions making these homes more eco-friendly.



view over the court yard.



view over the west facade.



view over the court yard.



view from the north-east corner.