This is about making our cities better places to live. To facilitating an enriching and adaptive way of living which is inherently urban but which also connects us to the natural and to each other. It is about embracing diversity, delivering housing affordability, and doing so in a sustainable and regenerative way. It is about embracing what our suburbs are capable of being and developing a model that is highly attractive to the market to ensure that such positive change is scalable to see a paradigm shift in how our city operates.

This proposal for A Neighbourhood Tapestry is a visionary model to achieve this:

- an interconnected landscaped open space network that can be scaled and expanded upon
- breaking the apartment form into smaller elements to reduce visual bulk, provide improved outlook and solar access, and to maximise deployability through being widely adaptable to different site configurations
- a modular spatial framework designed to provide interchangability of dwelling types and other programmes
- an efficient, modular construction approach that uses repetition and standardisation to drive down cost and optimise construction timelines and is able to take full advantage of the advantages of prefabrication,
- a regenerative approach to sustainable design with an aim for zero carbon or better, and using a performative landscape to cool our urban environment, to slow, filter, and store rainwater for re-use, and responding to our biophilic connection with nature
- creating the basis for inclusive and diverse communities with multi-generational living facilitated by accessible shared space and flexible, high quality homes with access to a variety of shared services and facilities, potentially including immediately on site
- an exemplar apartment model that is well suited to a number of models for procurement and development to enable the model to be widely deployed through many and diverse hands
- a set of design strategies that drive affordability outcomes to lower the entry point to the housing market, making high quality housing affordable for more people.
A NEIGHBOURHOOD TAPESTRY

HALF BASEMENT SCHEME - ENGAGING THE COMMUNITY

HALF BASEMENT SCHEME - COMING HOME

AT GRADE SCHEME - ACTIVATING THE STREET

AT GRADE SCHEME - COMMUNAL OPEN SPACE
Meeting a Need
The central proposition behind the Future Homes competition is that if we are to sustainably grow as a city, we need an alternative to the binary of ‘sprawl’ or ‘tall’. We need to look to our extensive suburbs where the majority of our citizens choose to live. We need to look at this not only through the lens of urban intensification but urban ‘enrichment’ - the unlocking of possibilities, the enabling of diverse life and opportunity that may not currently be present or readily accessible within our current suburban context.

Exploding the Block
By breaking the block into smaller elements, a finer grain of built form is able to be achieved, with the following outcomes for the neighbourhood including, densitised visual bulk, views across the site and views to sky are opened up between the buildings, overhanging issues is reduced as individual dwellings are offered multiple aspects of outlooks, overshadowing issues are more easily preventable as built form can be more easily shifted around to respond to specific conditions.

Porosity and the Space Between
By taking the often windowless central hallway typical of the apartment form and inserting it into an open space network, people are able to instead move through a shared landscaped space to arrive home. By shifting the focus from solely the built form to the ‘space between’, an urban environment is able to be created where we are connected to each other and to nature. This is a place for many generations to co-exist and thrive, whether you are actually moving through, sitting somewhere, or looking out over the space from your balcony. In this open and natural setting, we make eye contact, we acknowledge our shared connections, our humanity.

Dwellings as Kit of parts - adaptability through modularity
The apartments in this proposal are designed on a 300mm planning grid with 100mm internal wall zones and consistent room sizing. The proportions of the dwellings enable them to be interchangeable as well as to be laid out in various configurations across a site in response to specific conditions. This maximises deployability across suburban sites.

Flexible Homes for Life
There are a number of strategies to provide adaptability over time. Dual key dwellings are an excellent way to provide for multi-generational living. They can also facilitate expansion / contraction of occupants, or provide for live / work flexibility. C/room internal operable walls and convertible furniture are also other strategies that enable spaces to be reconfigured.

Responsiveness and replication
By breaking the apartment form into smaller units, this approach is better able to respond and adapt to different sites (orientation, proportions, size) and their contexts (bulk height, scale, mass, local planning constraints). This adaptability, via a kit of parts approach, translates into greater deployability - largely due to a greater physical flexibility, but also through being well suited to a number of procurement and tenure strategies.

Sustainable Design & Integrating the Natural
The scheme has been optimised for modular pre-fabricated construction and CLT is seen as a positive option in terms of embodied energy and carbon sequestration - although this is not mandated in terms of limiting market take-up of the model. The design incorporates passive design principles utilising thermal mass. The envelope is planned with sufficient depth for excellent insulation, and multi aspect dwellings provide excellent cross ventilation. Solar panels and solar hot water are envisaged for the upper roofs, possibly as building integrated systems.

Half Basement Scheme - The Pedestrianised Ground Plane
In order to create a free flowing and fully accessible ground plane, the required car parking has been placed within a half basement, with the following advantages:

- Pedestrianised open space network (no vehicular clash) designed to create an optimal public realm, rather than being determined by vehicle access design requirements.
- Less expensive than a full basement with a depth of approx 1.7m requiring less excavation, open sides reduce costs of retention (projection above ground 1.1m), and open air avoids need for mechanical ventilation.
- Does not count typically as a storey in the Planning Scheme when calculating maximum number of storeys but frees up the ground floor to be more intensively utilised without any space being dedicated to vehicular circulation or parking. This enhances the viability of a project by enabling more developable area at ground level.
- Requires a shorter, shallower ramp with less visual impact on the suburban streetscape.
- Day light and naturally ventilated with open sides and sunken gardens or bermed landscape at sides.
- This creates a better environment, raising the quality of arrival and avoids the cost and energy consumption of mechanical ventilation.
- Can be easily converted into other accommodation including more dwellings, workspace, communal space, gym and other facilities.

The Ripple Effect and Scalability
By having porous and open ended these strategies can also facilitate change beyond any single site. Firstly this framework can be plugged into by further development downstream - promoting organic growth. This could be via other developing parties consolidating neighbouring sites, neighbours self-mobilising, to build upon what has happened, or a completed site could expand into neighbouring sites either via a developing party or the community within a site choosing to expand.

Modular componentry
The buildings across the site are able to be constructed from standardised modular components. This drives cost efficiency and enables prefabrication, quick assembly and construction quality - in turn assisting to deliver durable and affordable high quality dwellings. Modular assembly can also support deconstruction and adjustment over time, supporting long-life, low-cost buildings that are responsive to changing conditions and demands.

Work Live 2
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Sustainable Design & Integrating the Natural
Built form, location, and height have been driven by shaping the landscaped open space network on site - the architecture seen as a carrier for natural elements to colonise at all levels, including deep soil canopy trees, planters, green roofs and communal food production. This is a biophilic response and provides for a performative landscape in terms of seasonal shading, evaporative cooling, and the collection, filtration, and storage of rainwater and potentially grey water. Capacity for extensive on site rainwater / greywater storage is provided at lower ground level - 20,000 litres - with biophilic Wetland.
**SAFETY AND VIABILITY**

The strategy of ‘Exploiting the block’ enhances the arrival experience via a landscaped open space network with a real sense of community about it, as well as creating a sense of human scale by breaking down the bulk form to smaller elements.

The dwellings are provided with multiple aspects which creates significantly better outcomes for the occupants including better views, daylight, privacy, cross ventilation, thermal comfort, and lower energy usage. By integrating the natural into the built form as well as the ‘space between’, the Neighbourhood Tapestry model nurtures our biophilic nature and together these strategies uplift the experience of apartment living.

The construction approach of the Neighbourhood Tapestry model drives costs down through a number of strategies. These include:

- **Form factor**
  - The apartments within the Neighbourhood Tapestry model are typically rectilinear. This reduces the ratio of perimeter to area compared with a more articulated built form and reduces the cost per dwelling.

- **Window to wall ratio**
  - the Neighbourhood Tapestry model has a relatively low window to wall ratio of 20:80 due to dwellings having multiple aspects. This results in a reduced facade cost rate.

**Minimisation of circulation space**

- By externalising circulation through the landscaped open spaces, expenditure on returning internal circulation is minimised, and the arrival experience enhanced with daylighted landscaped space.

**Traditional methods of Construction to Prefab ready**

The Neighbourhood Tapestry mode can be built using concrete, steel or lightweight framing, although the nature of the model and the design of the apartments easily lend themselves to pre-fabrication – be it volumetric or planar.

**CONSTRUCTION METHODOLOGY**

- **Repetition and standardisation**
  - All dwellings are planned on a 300mm grid. The cladding is treated as an interchangeable ‘kit of parts’ on a 600/900/1200/1500/1800/2100/2400 module, deployable across the entire development, including any different program such as co-work / retail. This places downward pressure on supply and assembly of these elements, and streamlines both ordering and fabrication.

- **Plug in and plug out and dilute-up or dilute down**
  - There is the geometric flexibility innate in ‘Exploiting the block’ and using modular elements, but on top of this, the component-based approach is used to enable free tuning of palettes, and for various elements to be swapped in or out. This is a core proposition; the Neighbourhood Tapestry model is a framework which supports a palette of materials and optional elements in order to respond to context and market forces.

- **Deployability at Scale**
  - The Neighbourhood Tapestry model provides a platform for apartment construction to move from being a project to being more of a product – and in doing so, there are significant capital cost reductions that are achievable. A model of housing that can be deployed at scale across Melbourne could represent a significant step change in dwelling affordability.

**FUTURE ADAPTABILITY OF CAR PARKING AREAS**

Patterns of private vehicle ownership look to be declining into the future. The Neighbourhood Tapestry model seeks to take advantage of this trend by making car parking areas convertible to other programme such as additional dwellings, or a workspace, workshop, yoga studio, or other communal facility.

For the half-basement scheme, the incorporation of open sides with landscaped banks safeguards access to daylight, aspect, and fresh air for future dwellings as well as private open space and a natural setting.

The half-basement used in this model also provides significant savings over a full basement due to less excavation, cheaper and simpler retention, and no mechanical ventilation as a result of the open sides.

**LANDSCAPE & BIODIVERSITY**

The planting strategy at ground level and podium gardens is derived from Ecological Vegetation Classes (EVCs) from the Victorian Flora & Fauna Biodiversity Zones. Species have been selected to be well adapted to the micro climatic conditions on the site, as well as being robust and drought tolerant, along with their visual interest. Emphasis is placed on plants that are inherently attractive to birds and insects to promote biodiversity.

**INTEGRATED WATER STRATEGY**

All shared roof surfaces will be linked to a communal rainwater tank and rainwater reticulated to all apartments for WC flushing. A capacity of 26kl has been allowed per dwelling.

Town Houses have a 2kl private rainwater tank capturing water from private roof area, which connected directly back to the dwelling for private use of stored water. Rain gardens along the edge of all driveways & communal spaces at ground level. This will provide a filtration treatment to remove contaminants before being captured in retention tanks.