# A Sustainable Central City

Maximising use of space by incorporating shared economy principles. This proposal incorporates a solution based on urban planning. Traffic control measures have been developed to accommodate for the expected high density population and has been designed to grow as the population does.

Modular design will allow for efficient maintenance, ensuring that the precinct retains its welcoming green aesthetic.

The overarching goal of this design is to create liveable high density spaces which are sustainable and can grow and adapt with urban growth. The final design is an aesthetically pleasing precinct with a deeply thought about traffic flow system. Integration of the systems is throughout the precinct and encourages a healthier, more connected lifestyle.



#### (4) Traffic Control

This proposal involves the development of a linked traffic system. Residents are able to easily transfer from one mode of transport to another almost seamlessly.

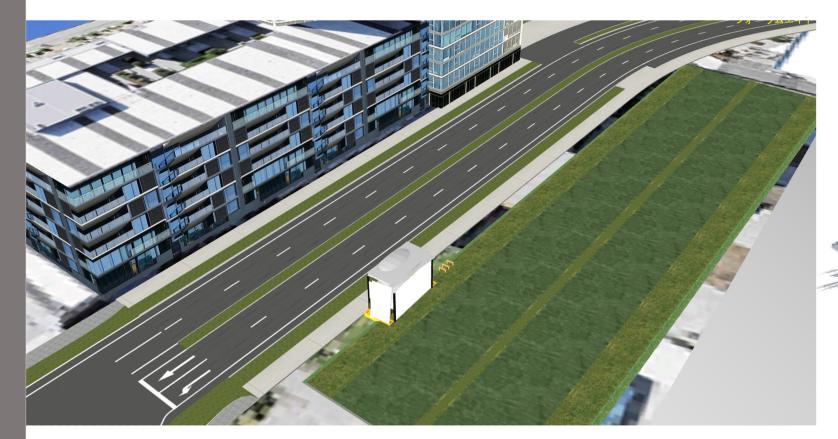
Large roads surround the precinct, allowing for quick movments between the employment and residential areas. Lane sizes have been allocated to divide traffic equally and provide multiple means of reaching destinations.

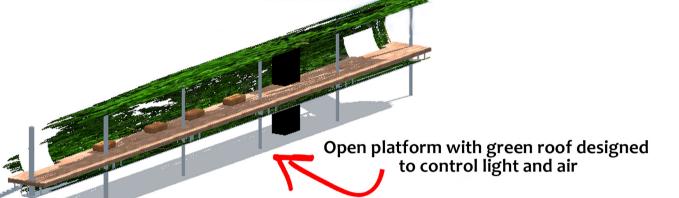
The incorporation of the 30 minute city principle further encourages mixed transportation methods. As community needs are located close by, residents are encouraged to find that walking, cycling or taking public transportation convenient and pleasant.



A bicycle overpass has been placed as shown to connect a divided section within the precinct. This was considered the safest means of bicycle travel through the intersection. Further separation between vehicles and bicycles







In order to extend the tram line across the river and yet allow for the passage of water vehicles, it is proposed that the level of the crossing bridge matches that of the nearby highway/bridge. The tram line will be gradually lifted to the desired height over a system integrated with the rooftops of some buildings. The tram line will run alongside some higher risen buildings, above pedestrian walkways. In this way, there is no inconvenience between the pedestrians, traffic and the tram.

This system provides shade for pedestrians and can add character to highly risen buildings. The foundations of the structure supporting the tram line will be in certain areas (in a similar manner to the neighbourhood centre) and provide open community space.

#### (6) Green Aesthetic

The utilisation of organic materials results in a city with cleaner air. 'Green' designed public structures break up the towers and provide splashes of colour amongst an urban backdrop.

The benefits of green designs have been observed in many cities of the world. It results in areas where residents are content and wanting to remain within.

An area the community is proud of is less likely to be poorly treated by that community.



Embracing multi-purpose design, the benches within precinct plazas act both as rest areas and plant protection.

#### (1) Multi-Purpose Space

Effective utilisation of resources is important in high density living. Shared economy principles have been applied in the development of this proposal. All designs within this proposal have multiple uses. This has been achieved with the consideration of limited space. Multi-level structures have been developed to meet some of the fundamental needs of the people.



#### (3) Modular Design for a 30 Minute City

The standardisation of city components means less time is devoted to the construction of basic items and more time is spent assessing the needs and suitability of components for the general publi:. This means that community needs will be better thought out, and modular design adaptations will be true to the needs of the people.

For example, some of the main roads have been designed with 6m of open space on either side to allow for further development if necessar When not needed, this space acts as a public open space, encoouraging community involvement and improving the aesthetic of the precinct.

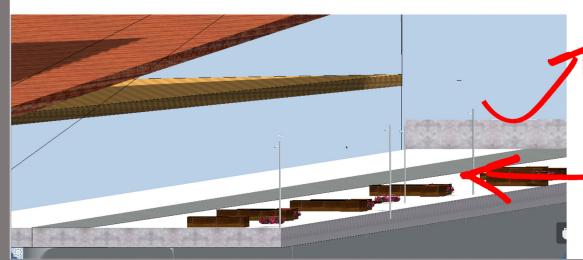
The use of sustainable woods and plants within the bus shelters prolong its expected lifetime.



### (5) Energy Control

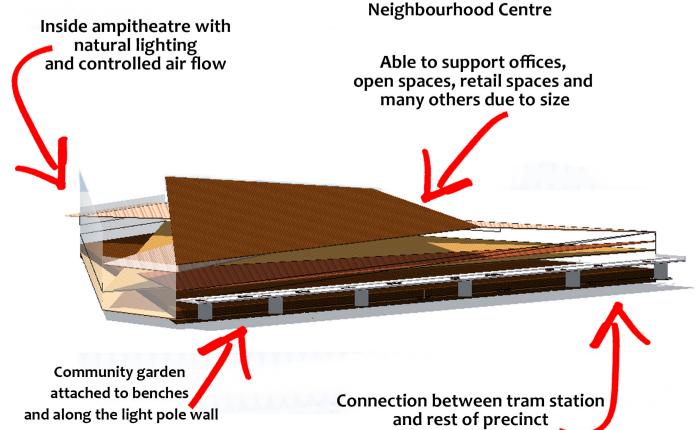
Energy movement has been considered in the design of the precinct. Both the neighboourhood centre and the traim station is an open area and whose shape and materials control the flow of air and amount of light in the area. The neighbourhood centre also incorporated the use of solar panels on the roof and on the light poles. The lights utilise the solar power the run the drainage system for the garden on the walkway.

Pedestrian Walkway from Tram Station to Neighboourhood Center



Solar powered lights (part of the drainage system)

Benches also act as aboveground stormwater drainage pits. The flow of water is controlled through an underground drainage system and is used to water the community garden.



## The establishment of aesthetically pleasing areas encourages residential interaction with the developed environment.

Traffic (including pedestrian, cars and public transport) has been developed to connect. The precinct encourages the use of public amenities for transportation through the systems of cycleways, footpaths and open public spaces. These systems are linked to the neighbourhood centre, a centralised location with infrastructure to support multiple community needs.

The overhead walkway connecting the tram station to the neighbourhood centre is lined with an energy considerate drainage solution which feeds many community gardens. The overhead walkway affords the community connections to nature within a concrete jungle.

The foundations of the overhead walkway form part of the open space arrangements underneath. Circular benches surround these foundations and offer shady open spaces for the community. This aligns with shared economy principles essential for successful urban growth.

#### (2) Community Focused and Driven

