

# Northcote Town Square Redevelopment Project Presentation



Students Reinventing Cities

**Group Composition:**

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## 1.0 OUTWARD FACING AND INVITING

### 1.1 Invitational Areas

Open street design and active frontages will be present at all entrance points along Lake and College Road and Cadness Street, creating inviting public spaces. The town-square will feature three iconic green buildings, defining the space. Promoted by large open catchments that draw people in from several key entrance points. All paved entrances are inspired by Northcote culture and are distinctive; promoting and inviting pedestrianisation and active transportation modes. Entrance's will reward those who embrace greener transportation modes by allowing quick and direct access to the square from the most favorable pedestrian paths including Lake Road. Furthermore, the open design of the town square directly from Lake Road enables pedestrians to access the space seamlessly without concern of high-speed vehicles.

### 1.2 Mixed-Use Development

The several integrated laneways (See master plan) that instinctively lead to the town square are inviting for pedestrians due to the direct influence of landscape design and mixed land uses. The priority action of mixed-use and transit-oriented development invites people into the space to meet their needs rather than travel elsewhere. Mixed-use development has been proven to increase activation, promote local business and reduce greenhouse gas emissions due to the reduction of transport related emissions. Which are created when residential, commercial, industry and entertainment are not within a fair walking and cycling proximity (Coupland, 1997).

### 1.3 Functional Pedestrian Design

The out-ward facing design of the greenspace in Northcote will make great use of purposeful landscaping and functional construction including stairs and elevated, deep planted platforms. This focused design of these elements will encourage passive observation of the area by both residents and businesses alike. The integral green spaces are inviting and accessible be people of all age demographics, supported by gentle gradients and landscaped stairs down to the edge of the reclaimed creek. The situational laneways within the development have been carefully considered to lead the pedestrian to the town center. The laneway at the bus depot provides a direct inviting connection with deep planting and landscaping which generates a natural feel amongst a hustling space.

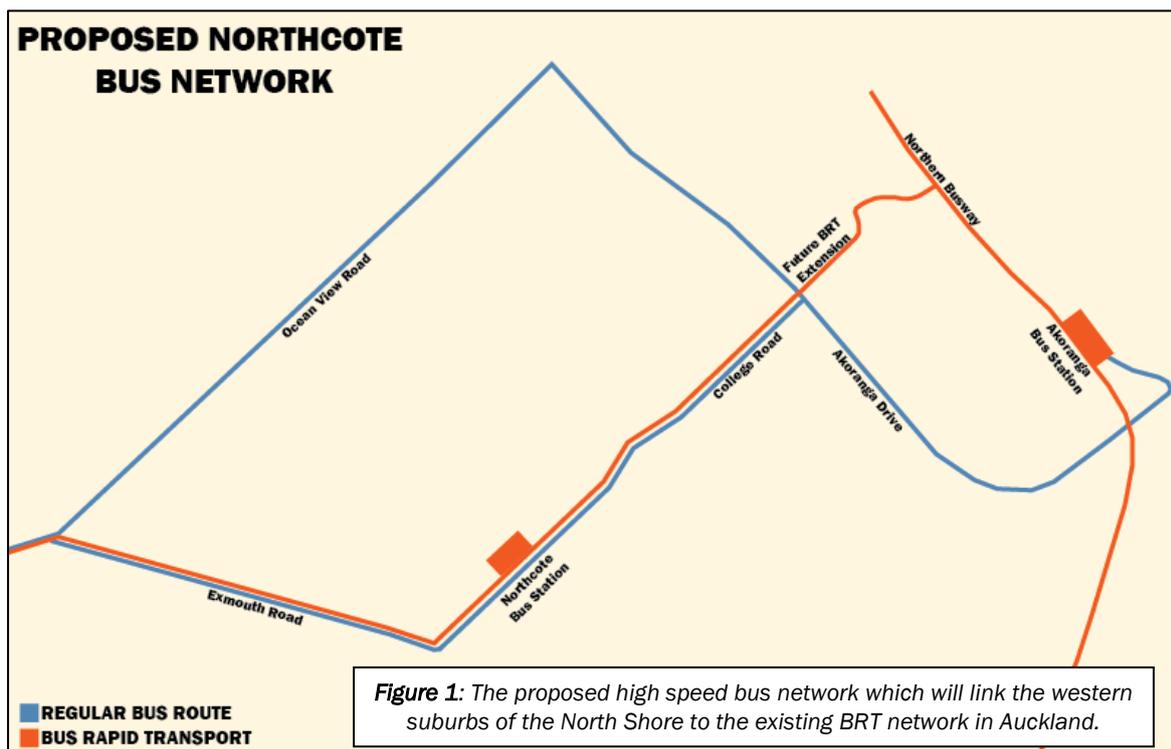
## 2.0 A LEGIBLE STREET NETWORK

### 2.1 From Lake Road to College Road

The North Shore currently suffers from a significant public transport issue with many of the increasingly dense suburbs being poorly serviced by bus transport, with a clear lack of dedicated lanes to increase network reliability (Lowrie, 2019). The distinctive separation of bus and private vehicles is a crucial component of providing a reliable public transportation that is a viable alternative to public transport modes (Muñoz et Al ,2016). A shift in the primary entrance for private vehicles and bus transit from Lake Road to College Road will undoubtedly lead to a reduction in to the traffic on Lake Road and will allow greater pedestrianisation and linkages with the nearby Greenscades Park. This will also reach goals of reducing carbon emissions by prioritising active transport modes. Currently, Lake Road is the main accessibility point for vehicles travelling to Northcote. This has created a particularly hostile edge for pedestrians as it breaks connection with the residential areas surrounding the reserve and wider, Northcote.

## 2.2 College Road Bus Network

College road presents as a unique opportunity to better link Northcote with the Akoranga bus station. This is the BRT station that services the North Shore and Auckland City. Linking these two transport hubs provides an opportunity to align with the Auckland Transport 2021-2031 Regional Land Transport Plan and their goal of providing “fast, frequent, rapid transport, separated from generalised traffic” (Auckland Transport, 2021). This network also provides the possibility of future connection, through the extensive of the BRT network which could connect via a tunnel under SH1 from College Road to the existing Northern busway (see Figure 1). Northcote Village could serve as a station within this new network which would service the Western suburbs of the North Shore (Item 6). As such, supplying a reliable and rapid transport network which is more appealing and dependable than a private vehicle. This is recognised as one of the action areas within the Auckland Climate Plan.



## 2.3 Pedestrianisation of Lake Road

Mentioned previously, Northcote has a particularly hostile pedestrian design, and there would need to be a change in the nature of materials to further frame this as a pedestrianised space. Doing so will provide greater links to Greenscades Reserve which is suffering from prominent underutilisation. A complimentary change of road materials, landscape median and elevation of pedestrianised areas on Lake Road will effectively communicate to road users that this is now a pedestrian zone and demands speed reduction to avoid incidents. This choice is preferable as opposed to a green pedestrian bridge due to the larger construction costs and higher carbon outputs associated with a bridge. But, if feasible, this bridge would also act as an interesting alternative and complement the pedestrian street network by linking the reserve and new development. This choice would be better suited if it is more preferable to stakeholders to keep the current speed and capacity on Lake Road.

## 2.4 Internal Roads and Laneways

A major priority point within the development itself is highly pedestrianised laneways that enable the movement of active transport users, to support the goals of a 15-minute city. The new integrated bike plans are to be physically separated from pedestrians and vehicles as this is shown

to reduce injury and increase usage (Bauman et Al, 2012). In an aim to not isolate road users, several roads will service the residential developments, with many of the parking facilities located underground in order to preserve the above ground area for better land use. The supermarket development will promote a one-way private vehicle entrance utilising College Road. This will then feed through to a one-way Kilham Avenue, that promotes a left turn only sign at Lake Road, past the pedestrianised area.

The solutions discussed above meet several key transport focus areas within Te Tāruke-ā-Tāwhiri (Auckland's Climate Plan) to reduce the emissions generated by light private vehicles. By increasing safety of walking networks, encouraging micro-mobility and designing public transport that is more appealing than private transportation. These goals are achieved through the deliberate design of Northcote as a town which is best accessed by other transport modes. This is enabled through the use of the new laneway network, bus terminal and separated bike lanes.

### **3.0 GREEN AND SUSTAINABLE DESIGN**

Sustainable, green design is an essential element of city planning. Auckland has many current and future plans to mitigate against the impacts of climate change (Auckland Council, 2016). These plans in coordination with the overarching criteria for success underline the factors that are essential when considering sustainability within design. Northcote is currently facing issues of disconnection, definition and cohesion. In order to improve the sustainability of the Northcote town centre and surrounds, numerous design elements will need to be implemented.

#### **3.1 Building Materials**

In order to promote sustainable design during the initial stages, the materials used in construction and development will be both sustainable and innovative. The idea of construction is to re-use and re-purpose as many of the existing buildings as possible; this aims to reduce the impact of operational and embodied emissions. This project will utilise laminated wood (where possible) in place of concrete and steel – this replacement reduces carbon emissions and allows buildings to be constructed faster, with lower labour costs and less waste and is aesthetically pleasing (Roberts 2020). It also more successful during earthquakes, although, not as common in Auckland, are still an important component to consider in the grand scheme of New Zealand. Bamboo, brick, recycled plastic materials, solar paneling, and reclaimed wood will also be activated throughout (Buckley 2020).

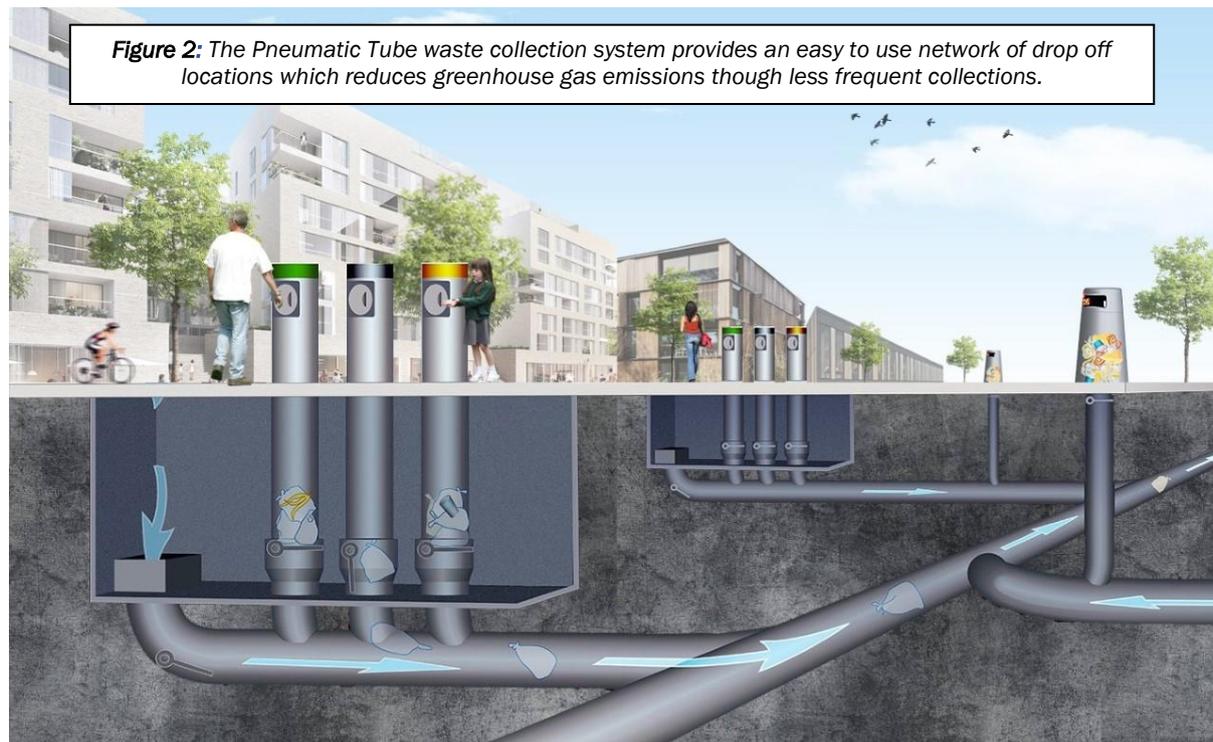
Important to note: Clay will be re-used from the excavation works that are required to reclaim the stream. This clay-based soil can be used as a material to construct some of the bricks that will be used throughout the development of the town square structures.

The buildings that lay on the edges of Northcote town square will support exterior elements of green design and trees to seamlessly integrate with the green spine that extends from Greenscade reserve to Cadness reserve. Furthermore, where the elevation allows it, grass stairs will be incorporated into the design features.

#### **3.2 The Pneumatic Tube Network**

The Pneumatic Tube Waste Network is an underground waste transportation system, designed in the 1980's and is utilised heavily by sustainable nations including Sweden, Barcelona, Norway and Denmark (Rivero 2020). The chutes connect to an underground network of pneumatic tubes to transport garbage to centralised collection points. The introduction of this wastage network curbs carbon emissions and the traffic and pollution caused by garbage trucks (estimated up to 80%), and the infrastructure beautifies city streets, much more significantly than garbage bins. Furthermore, this system can be transformed to a "pay as you go" which also further adds an incentive to sort waste. Future plans incorporate a phone application where users can track data and see how much money they save by cutting back on waste (Rivero 2020). This management system promotes zero waste, outlined as a circular resource technique and has many

accompanying environmental, economic and social advantages and will definitely benefit Northcote.



### 3.3 Greenscade Reserve

Currently, Greenscade reserve is very underutilised due to its disconnection from the town centre. This lack-of-connectivity is heavily attributed to Lake Road acting as a physical barrier. The pedestrianisation of Lake Road will provide an essential link to Greenscade reserve and encourage community usage, fostering social relationships. In addition, the pedestrianisation of Lake Road in partnership with the integration of a cycle network throughout the town centre will enhance safety and allow parents to trust their younger children to access the park ([Item 5](#)). This promotes a healthier and more active lifestyle in younger generations – planting the seed for the Auckland’s future. Accessible open green spaces that are within a 15-minute walk or bike ride from home are essential elements of green design solutions and support individual, personalised climate action.

### 3.4 Community Garden

The goal of designing a community gardens is to form a unique open space that is self-managed by the community to contribute to sustainable development goals. This will be located in the newly formed Town Square ([Item 4](#)) in the middle of Northcote as there are many surrounding residential buildings, giving many residents access within a walkable distance. Successful community gardens provide a safe place to gather, explore and learn. Environmentally it encourages practices such as gardening, recycling, composting and water recycling, to foster understanding of the natural environment and the importance of sustainability (South Coffs Community Garden Inc 2021). This garden will also be designed for cultural diversity to correlate with ideas of a food culture destination and the demographic makeup of Northcote Central being 38% New Zealand/European, 32% Asian, 21% Pacific and 14% Maori (StatsNZ 2018). Included will be plants and cultural traditions from various groups to create a sense of place, belonging and connection – ensuring that everyone is appreciated and heard. Thus, these community gardens are an urban green space that promotes and improves human and ecosystem health and wellbeing, inspires social interaction and increases Northcote’s ability to be climate resilient and sustainable.

### 3.5 Active Transport

Active transport routes are an essential part of successful sustainable design. Currently 56.8% of residents drive a private vehicle to work, compared to 19% of people who use the bus and 1% who cycle (StatsNZ 2018). Increasing the connectivity and effectiveness of public and active transport will increase access to work, housing, services and recreation. The integration of increase pedestrianisation, a dedicated cycle way and bus terminal with on-site cycle parking creates connection to Auckland City, reduces reliance on private vehicles, decreases carbon emissions and encourages physical activity.

### 3.6 Green Features

By seamlessly integrating green features into the design throughout, it creates a linkage that establishes the importance of sustainable design for the project as a whole. Creating more pedestrianisation, extending bus networks, enhancing cycle pathways, introducing solar panel lighting and allowing air flow are all essential elements of green design. These features set benchmarks and respond to clean and green principles that will improve quality of life and the health of the surrounding environment.

Integrating these ideas, from initial clean construction practices to green features within the overarching design from the town square to the community gardens, increases Northcote's climate awareness and resilience. It also contributes to the overarching context of Auckland to reduce GHG's by 50% by 2030 and achieving net-zero emissions by 2050 (Auckland Council, 2020).

## 4.0 A SUNNY AND SHELTERED TOWN SQUARE

### 4.1 Sun and Shade

Functionally, it is critical for a town center to create a space that is comfortable for all, during seasonal weather changes. By creating a space that allows sun and shade, it promotes to the user that they decide where they feel most comfortable, without the designer, deciding for them. Directly in the center of the square, there is a proposed circular pergola and several smaller undercover areas formulating around. These pergolas are created using timber slats that promote small amounts of sun to seep into the area, whilst still providing adequate shade. The use of timber is environmentally friendly, mitigates breeze and promotes sun during winter and allows for wind circulation in summer. The design of Northcote square includes many trees that are littered around the area, permitting a natural shading technique. These trees differ in size and spread, allowing them to produce differing shade extensions throughout. They also block wind in winter, providing a natural sense of warmth. Trees are essential to the development as sustainable design and carbon reduction features, but also ensure there will be differing elements of sun and shade throughout the year, irregardless of situation in the square or season.

### 4.2 Centralised Community Space

The town square plays a critical role in engagement with the surrounding community. As such, proper wayfinding techniques and adequate community movement pathways are essential elements to ensure the square is envisioned as a recognisable landmark. As such, the Northcote Town Square is located in the heart of the development precinct and is directly connected to surroundings by many buildings and at least seven pathways, all of which led the user to the square either intentionally or not. Although the space is accessible by many routes, it is essential that it is designed as a place, not just a space. There are many differing themes and uses throughout that transforms Northcote Square from a space into a perceived "place" (Ellery & Ellery, 2019). Including a café located directly in the centre, drawing people in and promoting first-hand experience. There are also many seating options and walkable open spaces. These open spaces may act as lots for local vendors to occupy and promote opportunities for local events that truly incorporate and engage the community. Also incorporated are community gardens scattered throughout the yard ([Item 1](#)). These gardens act as a form of urban agriculture, endorse cultural

education and diversity and promote local food production. This space fosters social interaction whilst also benefiting the local vendors and café with fresh produce. Producing and promoting self-sufficient and locally sourced resources are a major part of sustainability.

### 4.3 Water Elements and Natural Spaces

Within the square, the restored greenway corridor in the North of the development extends to the edges of the town square and through to Greenscade Reserve. This allows the hard structural elements of the square to be juxtaposed by the soft and calming aspects of these green elements. This adds to the attraction of the town square because it creates an aesthetically pleasing landscape which has been shown to support a person's physical and mental well-being (Abraham et Al, 2010) The water element within the town square stems from the restored water channel that runs through greenway into Greenscade Reserve. This water element further compliments the calming nature and assists in cooling the space from the rising urban heat. These green aspects and water elements are imperative components of sustainable design and promote climate action.

## 5.0 A MULTI-PURPOSE COMMUNITY HUB BUILDING

The Northcote community hub will be a central focus point for residents to access a various range of services, programs and activities based on the core values present in the community. Inclusive of a, library, meeting space and an educational building. This central space is important for local communities and acts as a venue for leisure and provides chances for self-expression and to educate further on climate and cultural heritage (Perkumiene & Danute, 2013). This hub will be located in the community use section in [\(Item 2\)](#). The location is central, noticeable and meets secondary criteria that the hub is within walking distance of retail and eateries (Art Fund, 2020). This hub will aim to play a vital role in strengthening community well-being, vibrancy and cohesion.

With a population of 2496, Northcote is a very small suburb, therefore, gathering community opinion that informs features of the hub will be an engaging experience that infuses sense of place and inclusivity. For a small community, Northcote has a wide demographic makeup, as such it is important the community hub promotes and supports citizens of all ages. The building will be split into three dominant areas - a library, meeting place and an educational facility.

### 5.1 The Library

The library is an essential part of the hub – it will help to revitalise the neighbourhood, offering an attractive, functional, community-based space. It is a space that preserves history and provides cultural links between Māori and Ngāti Whātua o Kaipara. The collection of resources at the library can grow based on specific community needs, ranging from fiction and non-fiction, children's books and past and present. The library will be a wide-open space to promote inclusivity, but also have clear separation of children's areas, quiet sections and study spaces to account for the differing age demographics.

### 5.2 The Meeting Place

The meeting place is a wide-open space in the hub that can be used for community meetings, and social events. Community meetings can be used to increase awareness of an issue or promote a proposal and as an ongoing means of public engagement (Kandil, 2017). This infrastructure plays a vital role in bringing together the people of Northcote, forming friendships and supporting social networks. These are essential elements in the maintenance of strong communities.

### 5.3 An Educational Research Facility

One of the main features of the hub will present as an educational research facility and interactive experience in collaboration with the Department of Conservation that promotes active education on climate change understanding and research. This will be catered to both adults and children to educate on global warming and climate goals in Auckland, whilst inspiring the future generations

to make a difference in their city. This hub will include educational resources on climate change, the Auckland Climate Plan and what Northcote town square has done to meet present climate change goals. This will include reference to the Pneumatic Tube, passive housing and active transportation and how these measures aid Northcote to fulfil its part in reducing emissions and meeting climate goals.

This ideology of sustainability and climate action will be further extended into education of local flora and fauna and the importance of biodiverse ecosystems and ecosystems in the area of Northcote. The idea is to inspire the community through education and ensure sustainable living is not just present in the design, but important to the community as well. Involving the community in the process fosters emotional connection and emphasises feelings of sense of place (Ellery & Ellery, 2019).

#### 5.4 Design Materials of the Community Hub

The design of the community hub will shadow the sustainability goals present throughout the town square. This includes structural elements of cross laminated wood and brick for the exterior and timber for the interior. It will feature large open windows that promote natural light and endorses views to the greenery and nature surrounding the exterior. This is an inviting and non-excludable detail. A dominant feature of the interior design of these spaces (specifically the educational centre) will include rotational displays and exhibits, acting as a recognisable feature that sets it apart from other centres. Northcote is well-known for their built heritage, as such elements of this must play into the design of the hub to maintain local context (Auckland Council, 2021). An important exterior design component is the integration of Maori carvings to frame the community hub entrance podium. These design components of the exterior promote inclusivity, culture and sustainable design which foreshadows the mixed-uses of the interior.

### 6.0 FACILITATES MULTI-MODAL TRANSPORT

#### 6.1 Bus Terminal

The new bus terminal at Northcote will provide a vital link to the public transport network in Auckland City. The estimated 2000 new homes from the development will place an increased strain on the transport networks if there is not vital consideration of this, prior to the development of the village. The redevelopment presents a unique opportunity to embrace public transport and reduce the reliance on private vehicles leading to a reduction in carbon emissions. The bus terminal will also include end of trip facilities enabling those that live further outside of the village to lock their bikes, shower and then catch the bus into work similar to the facility in King George Square in Brisbane (KGSCycleCentre, 2009, 0:05). These initiatives facilitate the micro-mobility and provide the necessary infrastructure to help these transportation modes flourish. This ties in with the Te Tāruke-ā-Tāwhiri Climate plan and aligns with T2 and T3 to make public transport more appealing and increase access to bicycles by supplying dedicated infrastructure that supports its use.



**Figure 3:** The Northcote bus station will provide a high frequency public transport option for those who live and work in the area.

#### 6.2 Cycle and Pedestrian Network

The cycleway network within and around the village will increase the accessibility of the development and support the functionality of surrounding residential areas. It will also provide important safety aspects associated to the removal of private vehicles in some areas for of cyclists. Where this is not possible - the use of separated cycleways will facilitate the safe

movement of these travelers. The development will feature ample cycle parking throughout and support the integration of infrastructure to accommodate storage and security of bikes when not in use.

The green spine that extends throughout Northcote Village, Greenscade and Cadness reserve will include separated bikeways from pedestrian users. This will produce an added transport and leisure bike network which will be used by the wider Northcote community outside of the development.

Pedestrian movement is the priority and focus within the town. All the priority development areas can be reached with ease facilitated by the many lane ways throughout. The green spine and its pathways also supply an extensive recreational network which can be enjoyed by residents and visitors to Northcote. This contributes to the idea of highly walkable and urban areas and 15-minute cities which is a key focus.

### 6.3 Road Network

Several of the roads within the development will facilitate and accommodate for private transportation modes. On street parking will be provided on one side of the roads which service the residential developments and cadness reserve providing short term (15-minute) parking. This will cater for those who still wish to use private transport but are likely contributing economically to the region i.e., deliveries, quick food stops and errand runs (Milosavljevic et Al, 2019). The development will shift the current prioritisation of private transport which Northcote facilitates, to one that rewards the active transport user more than the private vehicle user. In the future, this should lead to a more pedestrian and active community with lower carbon emissions.

## 7.0 FLEXIBILITY TO PROVIDE CARPARKING OPTIONS

The property is relatively compact and restrictive regarding the intention of redevelopments that aim to utilise most of the land area. In order to provide flexible car parking options for both customers and residents of the town centre, underground carparking facilities will be offered in specialised locations as to maximise the amount of ground use available for development. This will alleviate any problems for residents and customers finding spaces as there will be an abundance of parking options.

The specialized carparking facilities aim to be the primary connection between the shopping space and the street network and will be located in close proximity to priority parking zones. Residential car-parking will be located underneath units and accessible from the northern point of the village to reduce travel distance for residents, specifically. In comparison, customer parking underneath the supermarket, due to its expansive size, structure and accessibility to the main road. This is an optimal location as it will maximise the amount of parking spaces to support the town center.

Regarding the desired number of spaces for sufficient carparking facilities, residential buildings will support two carparks per unit. Whereas, the customer parking will support 250 spaces (12% of the population), in total, promoting focus on alternative transport modes.

Although the re-development will likely increase visitor-ship for Northcote and improve its functionality as a travel destination, carparking is not of the highest priority. Whilst the development will aim to maximise parking where possible, if there is too much promotion of this, it somewhat counteracts the highest priority areas including sustainable goals and increased active and public transport.

## 8.0 A FOOD CULTURE DESTINATION

### 8.1 Food Identity

In order to retain the identity of Northcote as a food culture destination several measures will need to be implemented. There presents a large risk of gentrification of the area resulting in increased lease prices for commercial properties. In order to preserve the food diversity that Northcote currently has, arrangements should be made with current lease holders to try and retain their food talent and cuisine. To ensure longevity of these tenants', various subsidies can be offered to incentivise trading during construction and the initial growth of the community.

### 8.2 Pneumatic Tube Waste

The food waste pneumatic tubes provide an opportunity for the community to engage with the disposal of their food waste and the contribution to the community composting hub. The tubes enable the transportation of various types of food waste and recycling materials generated by the surrounding hospitality businesses. The Asian food culture scene is important to Northcote however is quite a waste generating industry.

In addition, a policy that could be implemented to the Northcote redevelopment area would be the compulsory use of green packaging and biodegradable materials, typical single use items like cutlery and containers can be broken down on site and utilise in the community composting hub. This contributes greatly to sustainability within Northcote and climate goals.

### 8.3 Market Style Events

Pop up market style events would provide an opportunity for residents to display their culinary skills and make use of the produce that they have grown in the community gardens. Market style events similar to the night markets at Glenfield with an eco-friendly approach to waste management and collection making use of the pneumatic tubes to effectively manage waste generated from the events. Themed markets are a possibility for the community to try different cuisines from normal and provide the opportunity for meat free events and produce from less intensive agricultural production. These events further initiate and promote community engagement, connection and foster social relationships.

## 9. AN ACTIVE RETAIL AND COMMERCIAL ENVIRONMENT

Drawing from the highly pedestrianised laneways, the active retail and commercial development aims to promote seamless transition on foot throughout the centre; enabling access to store fronts from multiple entrance points. The layout of the pathways is guided by green features which provide natural shading and enhance the comfort for pedestrians and customers making the shopping experience effortless, seamless and enjoyable. The optimal ratio of space between the width of the path and the height of retail and commercial structures reduces the imposing feeling for customers. This improves comfortability and the overall shopping experience. Night-time shopping is supported by solar panel lights, which are powered during the day and utilised in the evening to reduce reliance on finite energy resources produced from the grid.

Air flow corridors are implemented throughout the pathway channels based on the open street design and their key entry points. These features merge together to promote and support the walkability, sustainability and accessibility components of the proposed development.

## 10. APARTMENT LED RESIDENTIAL

Following the Auckland Unitary Plan (Auckland Council, 2016) within a town centre zone, the description allows for buildings between four and eight storeys to be developed. Following the objectives outlined, primarily H10.2. Objectives point (2) – “*Development is of a form, scale and design quality so that centres are reinforced as focal points for the community*”, the apartments will be no taller than six storeys as to complement the project area, rather than dominate it. This is to enhance the primary focus of the town centre being consumer based instead of residential.

### 10.1 Residential Structure

Currently, there is a housing shortage in Auckland (Hunt, 2021) and therefore one of the significant priorities of this development should be to provide affordable and diverse housing types. This will be done through a variety of housing types ranging from the densest six storey tapering out to medium density residential dwellings in the surrounding areas. In order to create balance with mixed-use and the town centre, the architecture of the apartments must be comparable to the commercial and retail structures. To achieve this, a minimalistic, modern design approach will be implemented as to reduce the attention of the apartments away from the town centre, but also raise interest from potential buyers.

**Figure 4:** Mixed use developments integrate, office space, commercial and residential all within the same building.



### 10.2 Sustainable Design

The apartments will showcase a green and sustainable design approach, ensuring to incorporate architecture that conforms to the city climate priorities and addresses Auckland's environmental issues. These buildings will utilise laminated wood, bamboo and recycled plastic materials similar to what is proposed for the town centre. This will create cohesion and connection between the two areas, advocating for clean construction. This aligns with the Auckland Climate Plan Actions E1 and E2 which are to prioritise innovative lower carbon technologies to increase their interest and overall financial viability. Where possible, plantation boxes and solar panels will also be built into the structures in order to promote local flora and minimize energy demand, adding to the overall sustainable design approach.

As the apartments are located on the edges of Northcote Town Square, the exterior green design and surrounding trees will be carefully considered to ensure act as a buffer for the noise from traffic on the main roads, as well as act as natural shade for residents and pedestrians. This concept supports and prioritises both human and ecosystem health which align with the Greening of Kaipātiki and the health and well-being priorities as set in the Kaipātiki Local Board Plan 2020 (Auckland Council, 2020).

The residential apartments also incentivise the use of active and public transportation modes including bus and bicycle transport options which are easily accessible due to the proximity of the facilities found in the Town Centre. This enhances the sustainable impacts of the residential development through the reduction in CO2 emissions associated with these other transportation modes.

## APPENDIX



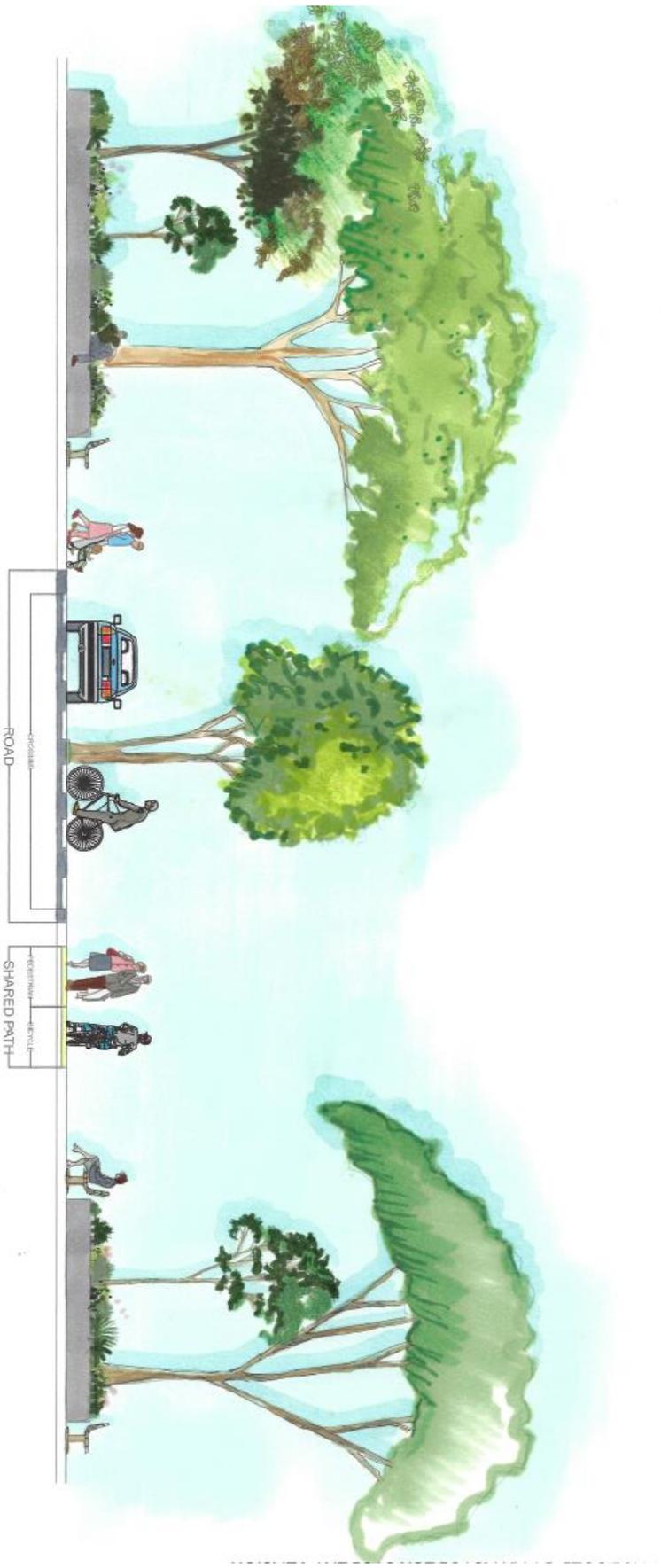
**Item 1:** A drawing of the community garden planters laid out around the town square.



Maori carvings used as exterior materiality integrated into the building design



**Item 2:** A drawing of the proposed community hub in Northcote, inspired heavily by the Devonport library.



**Item 3:** A cross section of the pedestrianised lake road shows how different users interact with the space





**Item 4:** The town square featuring an intergrated café and community garden.



- |                              |                      |
|------------------------------|----------------------|
| 1. Existing Library Building | 6. Skatepark         |
| 2. BBQ Area                  | 7. Greenway          |
| 3. Open Green Space          | 8. Shared Path       |
| 4. Basket Ball Courts        | 9. Ernie Mays Street |
| 5. Playground                | 10. Cadness Place    |

## CADNESS RESERVE

0 5 10 20m

SCALE: 1:400



**Item 5:** The Cadness Reserve redevelopment showcases many of the community leisure facilities which will be utilised by residents and visitors.

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