

Wairau Valley Site Analysis

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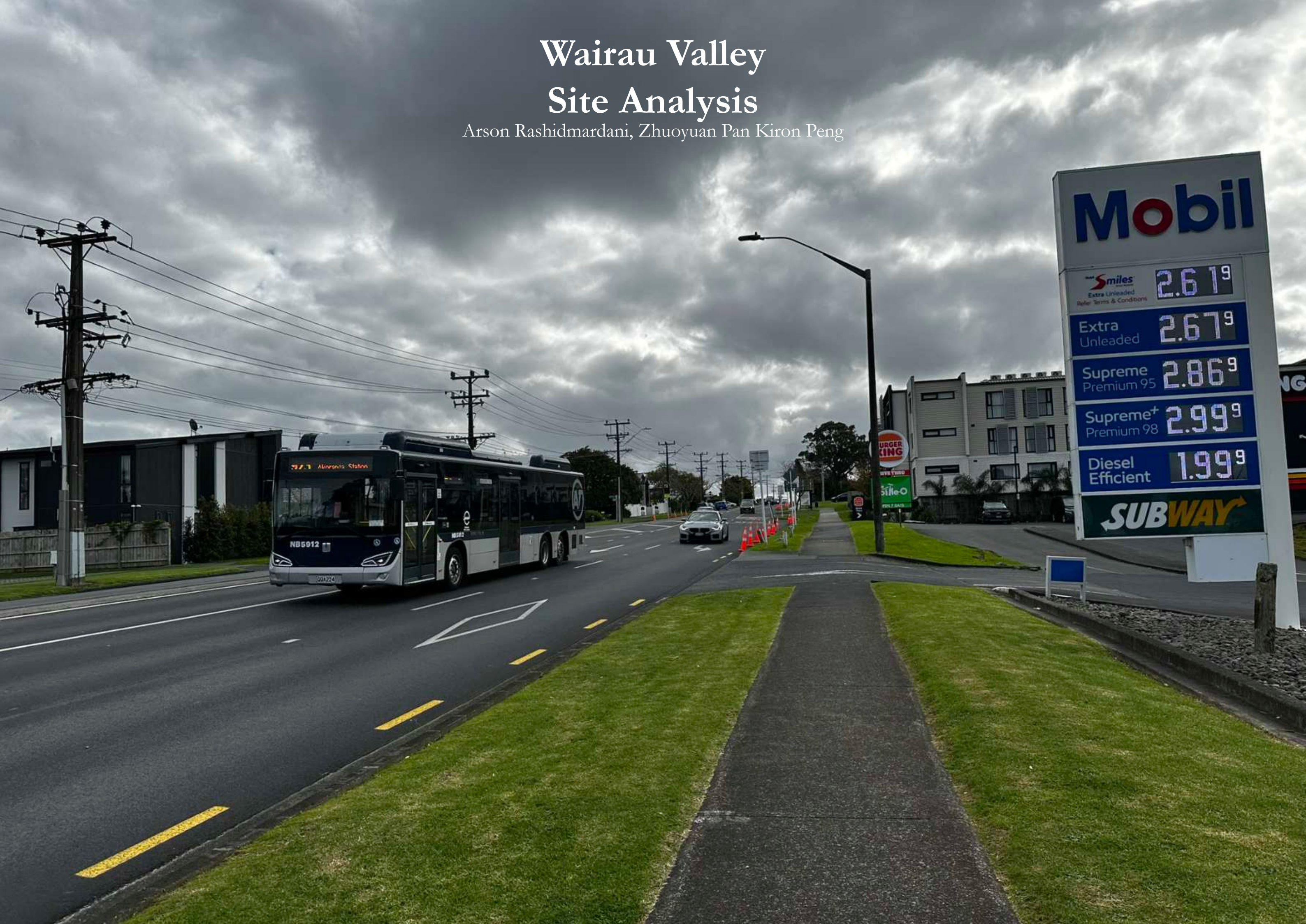


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History

Wairau Valley has a deep history of flooding, meaning many waters. Maori utilised the fresh water of Lake Pukeke and flax nearby its banks; however, the heavy clay of the site was not conducive to farming Kumara.¹

Early European settlement came in 1845 with the establishment of farms. The creation of the Takapuna Tram and Ferry allowed for subdivision in 1910, followed by intensive urbanisation in the 1960s following the opening of the Auckland Harbour Bridge.²

Smales Farm Station was an early public transport hub, servicing horse-drawn carriages since the 1890s.³

¹ (Auckland Council, 2011)
² (Auckland Council, 2011)
³ (Auckland Council, 2011)

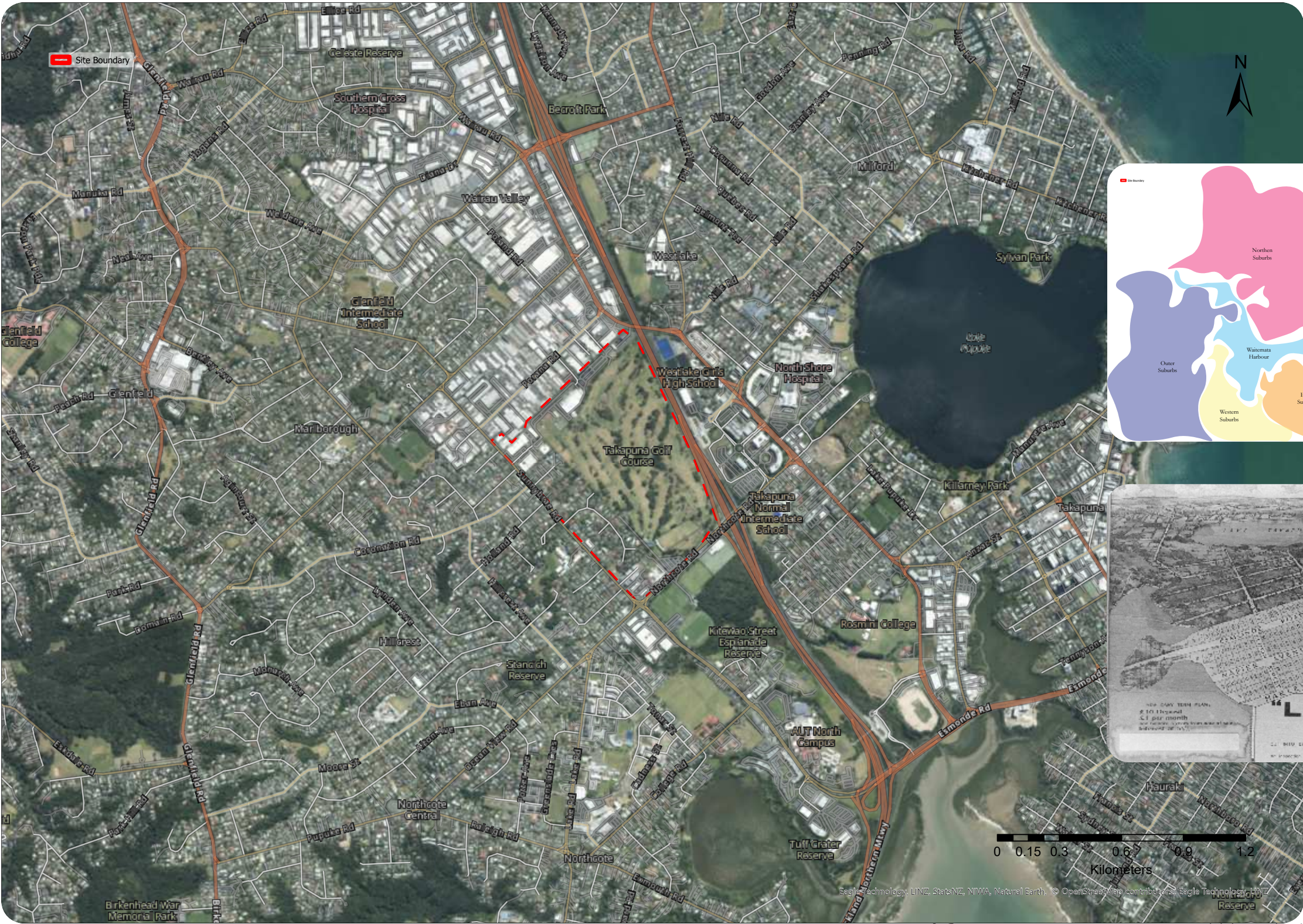


Figure 3: Local Context Map Note: By Arson Rashidmardani



Figure 1: Wider Context Map Note: By Arson Rashidmardani



Figure 2: Historical Photograph Note: (Auckland Libraries Heritage Collections T0790, 1919)

AF Thomas Park

AF Thomas Park was first developed as a golf course in 1931, known as the North Shore Golf Club. Following the requirement of land reclamation due to the creation of the Auckland Harbour Bridge and the motorway, the North Shore Golf Club was re-located to Albany, and AF Thomas Park became a council-owned golf course.

Though the historic wetland has since been reclaimed, and little biodiversity exists within the site, the ample green space of the park contributes significantly to the reduced risk of the Urban Heat Island Effect, compared to areas to the west with less green land cover.

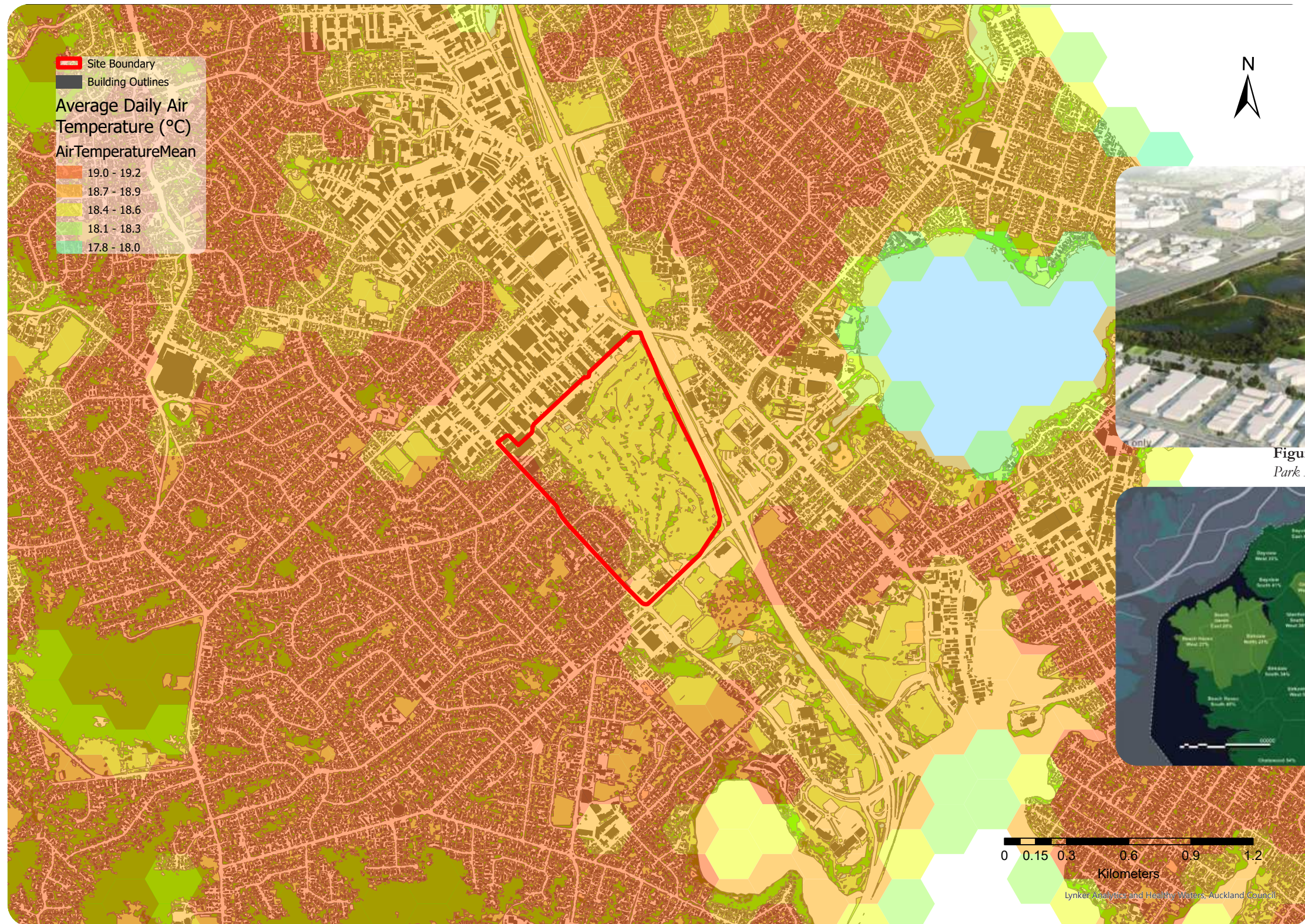


Figure 4: Concept Image of AF Thomas Park Note: (Auckland Council, 2025)



Figure 5: Tree Canopy Cover Note: (Auckland Council & Kaipātiki Local Board, 2021)

Figure 6: Urban Heat Island Risk Map Note: By Arson Rashidmardani

Though the golf course is technically accessible to the public, site visits confirm that most residents do not utilise the park for anything other than golfing. Moreover, the fences surrounding the park severely restrict access and mobility throughout the precinct.

A council-led plan will see the park redeveloped into a wetland and dry detention pond, addressing the severe flooding risk associated with the Wairau Valley, and providing more biodiversity and cooling to the surrounding area.

Demographics

The precinct exhibits relatively high property prices, compared to other Auckland Local Board areas. The majority of properties are not owner occupied, with a high proportion of renters. There is a distinct lack of one bedroom units available in the precinct.

The suburb exhibits high diversity in ethnicity. The largest population groups are Europeans, followed by Asians, there is a small population of Maori or Pasifika individuals. The diverse ethnicities and age ranges of the community pose extreme challenges in navigating individuals needs and cultural desires and preceptions.

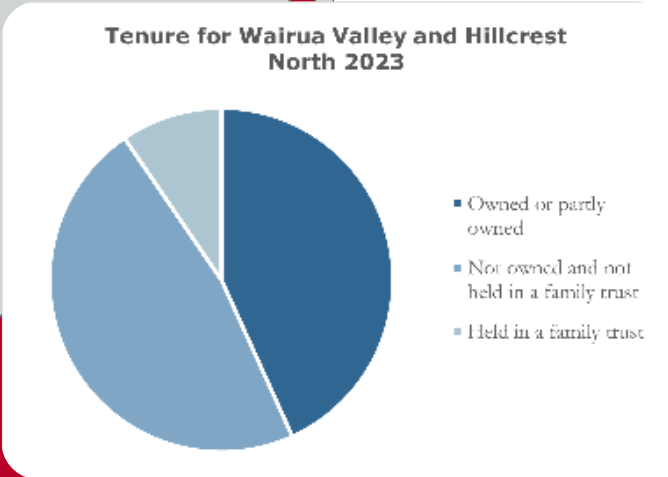
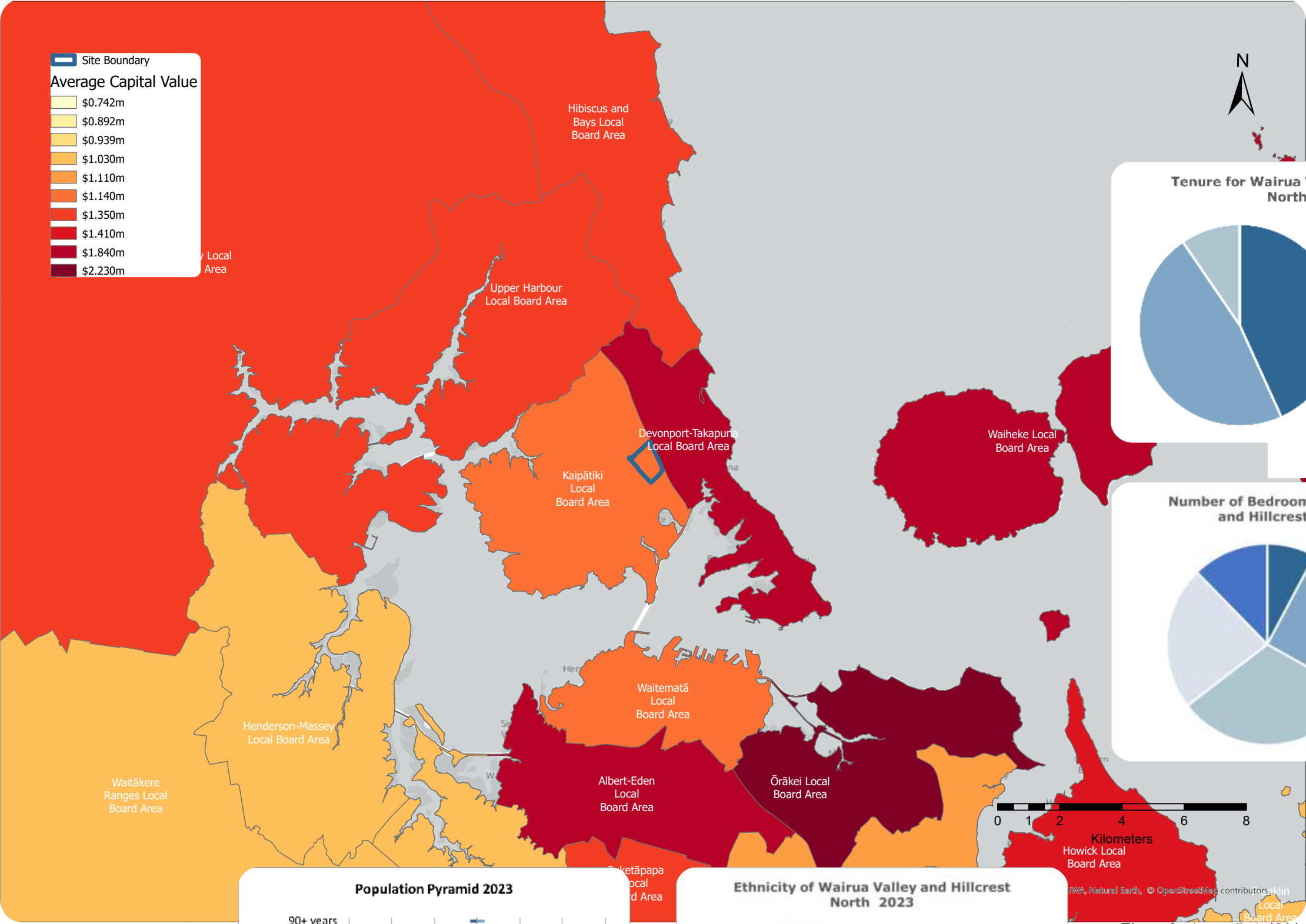


Figure 7: Property Tenure
Note: (Stats NZ, 2024b)

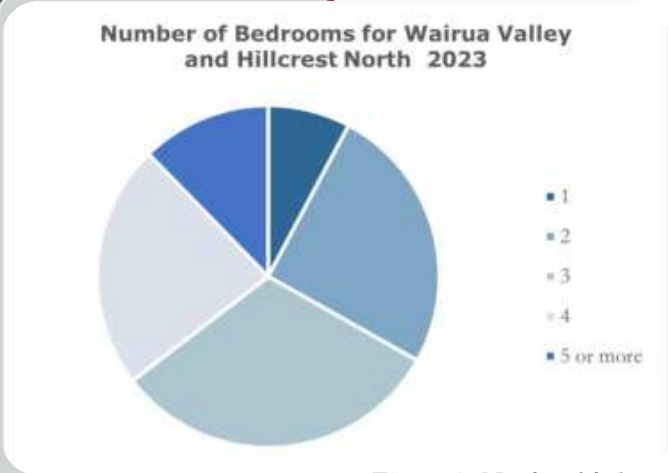


Figure 8: Number of bedrooms
Note: (Stats NZ, 2024b)

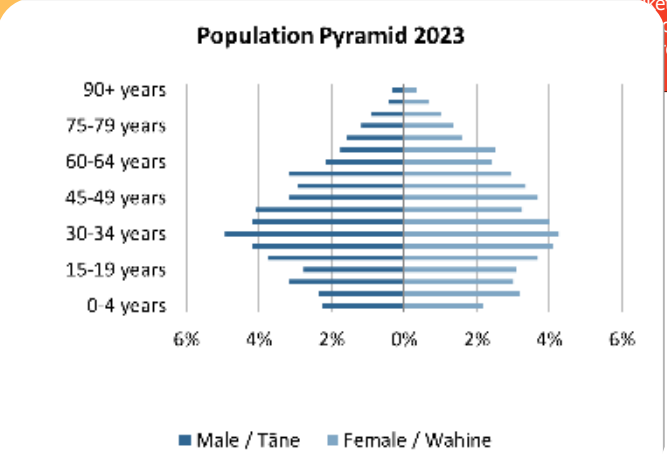


Figure 10: Population Pyramid
Note: (Stats NZ, 2024a)

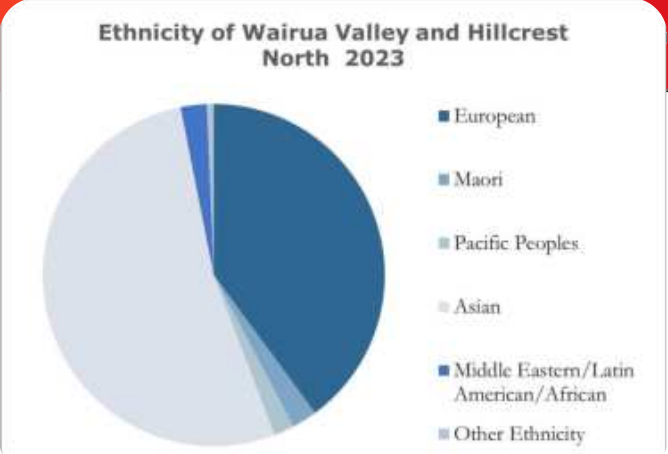


Figure 11: Ethnicity
Note: (Stats NZ, 2024a)

Figure 9: Average Capital Value
Note: By Arson Rashidmardani

Urban Grain

Most of the site consists of fine-grained, standalone single-family residential buildings, as seen in Figure 10.

The north of the site is considered a coarser grain, accompanied by a multi-storey light industry and commercial uses.

A couple of examples of an emerging typology are 3-storey townhouses as seen in Figure 11.

The southern tip of the site contains auto-centric uses such as a gas station, a drive-through fast food restaurant, and a two-storey motel that fronts onto Northcote Road.

Various community uses include multi-storey golf buildings, a multi-storey stadium, and single-storey buildings taken up by community groups such as a bowling club.

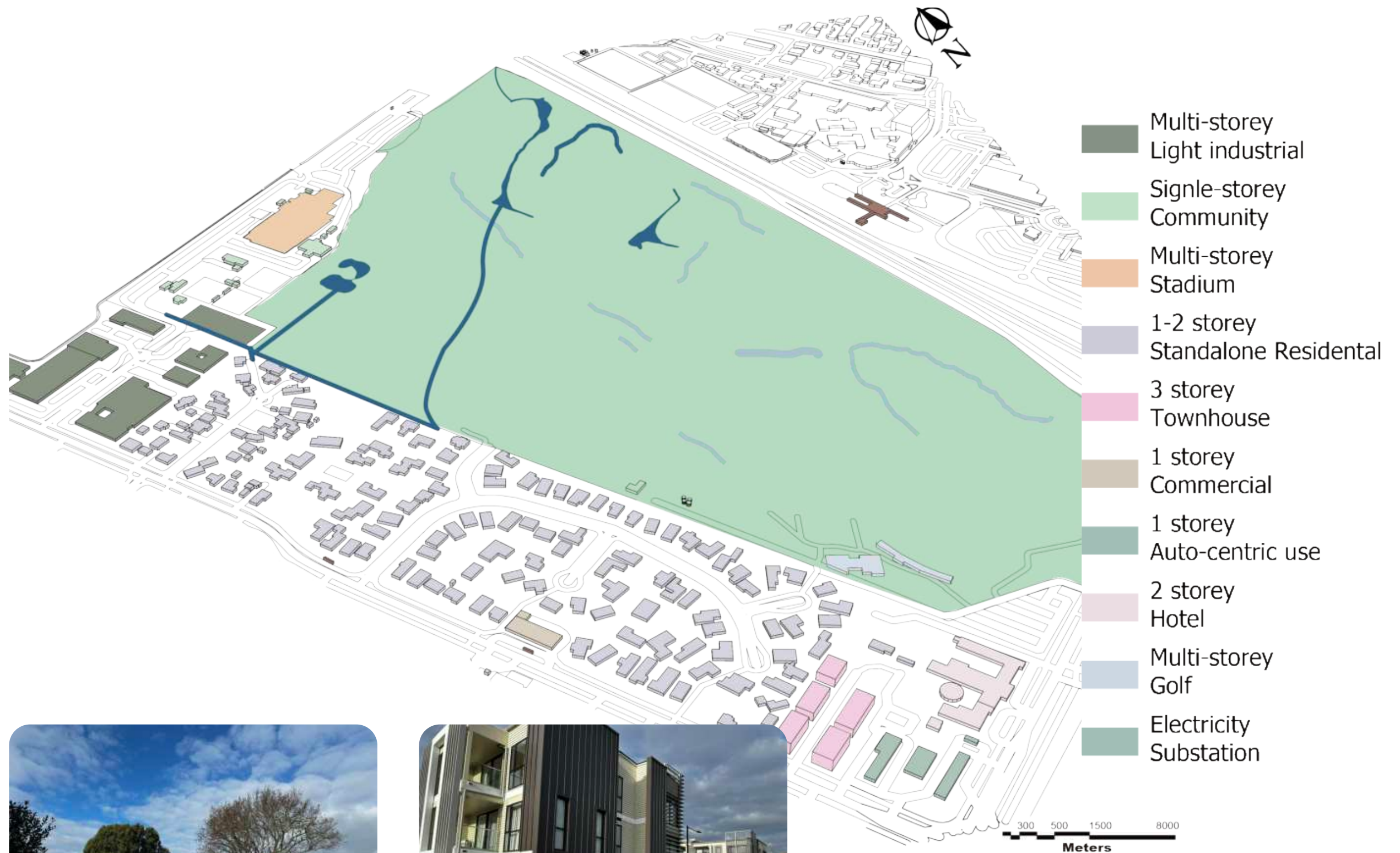


Figure 12: Building Typology
Note: By Arson Rashidmardani



Figure 13: Standalone residential typology
Note: By Arson Rashidmardani



Figure 14: Townhouse typology
Note: By Arson Rashidmardani

Flooding

The Wairau Valley is a receiving environment for the Hibiscus Coast Receiving Environment, one of the largest in the country.

Urbanisation has led to reduced riparian buffers, increased runoff due to impervious surfaces, and created a dam effect observed at AF Thomas Park.

Steep slopes to the west direct runoff through overland flow paths towards the low lying AF Thomas Park, worsening flooding in the area.

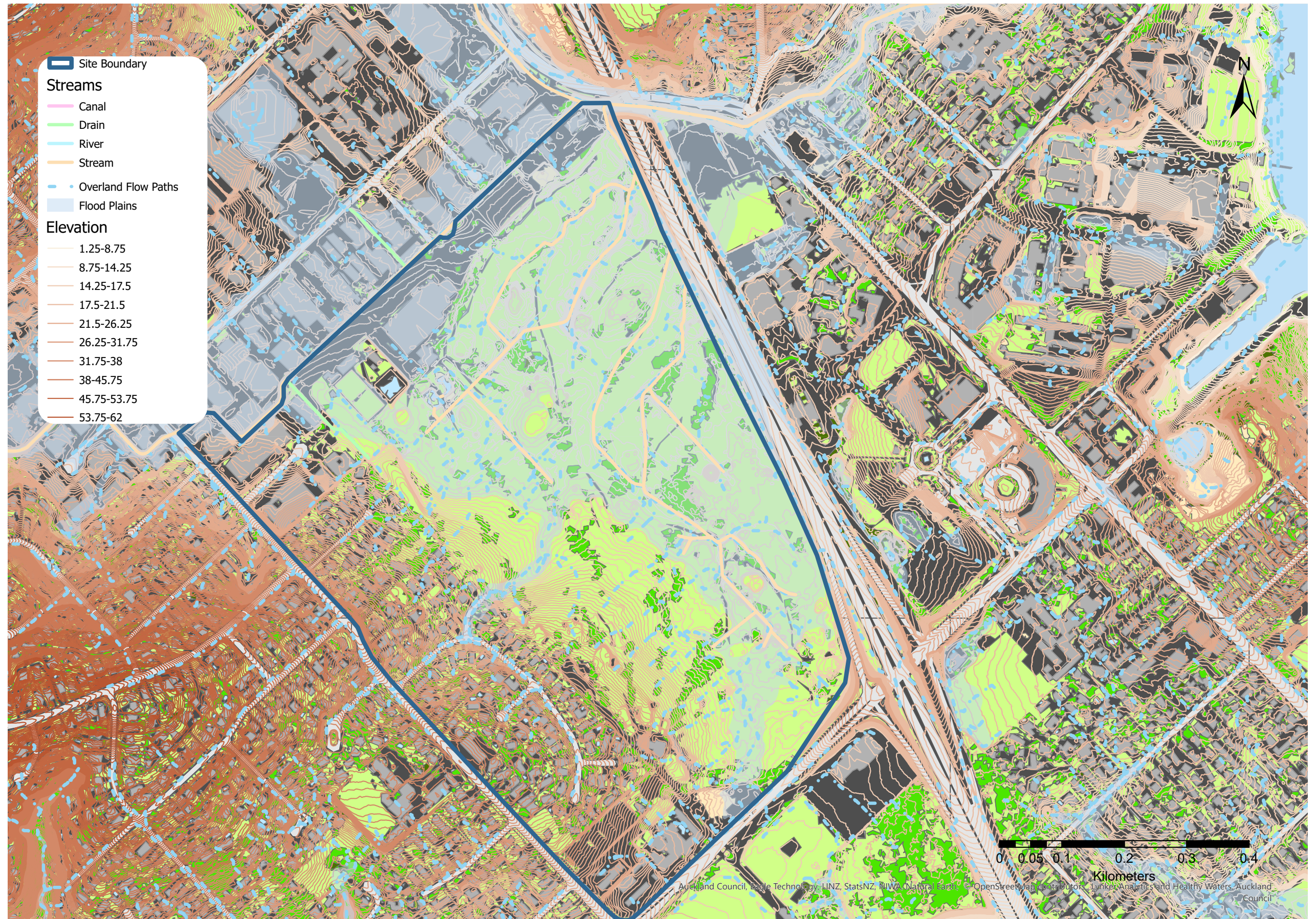


Figure 15: Impervious Surfaces, Land Cover, Contours, Floodplains & Overland flow paths
Note: By Arson Rashidmardani

Infrastructure

The area is zoned as an Active Sport and Recreation open space, which has fostered an informal community culture. Bus stops on both the eastern and western side, provide a connection to Albany and Auckland City. Bus stops in the area lack effective connectivity to major public transport hubs, limiting overall network integration. The area's water system consists of natural ponding and ponds, with issues of direct pollution discharge. After rainfall, water washes pollutants and oil residues from the road surface into natural waterways through roadside drains.



Figure 16: Site Visit Collage
Note: By Zhuoyuan Pan

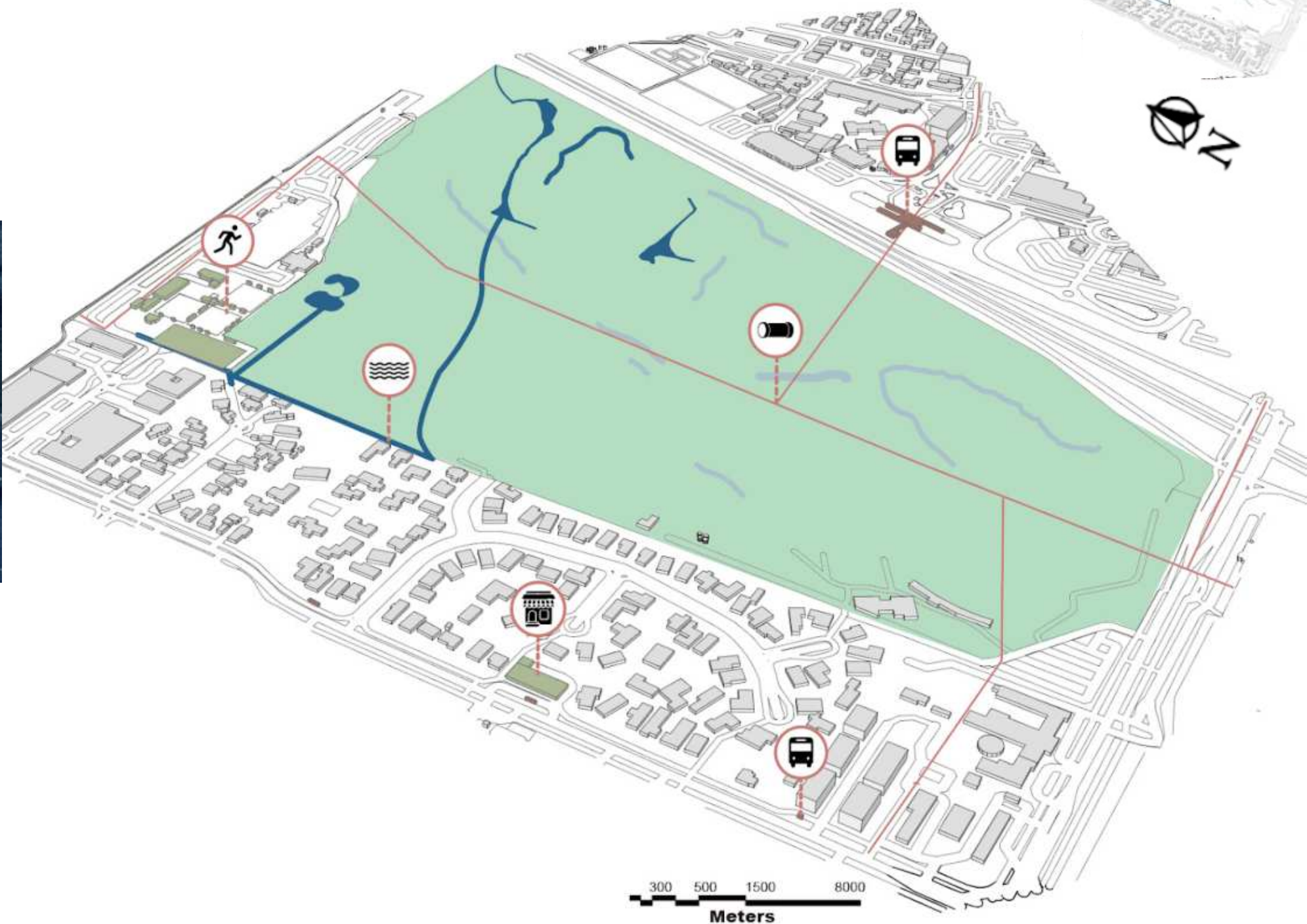


Figure 17: Infrastructure Map
Note: By Zhuoyuan Pan

Employment & Future growth scenario

Manufacturing remains the dominant industry in the study area, followed by retail and professional services. The presence of smaller service sectors indicates a gradual shift toward a more diversified, mixed local economy.

Current land and employment patterns partially align with regional strategies, including Te magere a rohe e Kaipatiki 2020, Tamaki - Whenua Taurikura, and, Auckland Plan 2050; which set promote mixed use and spatial efficiency. To fully align with Auckland’s long-term development goals more sustainable, compact, and dense living conditions must be created.

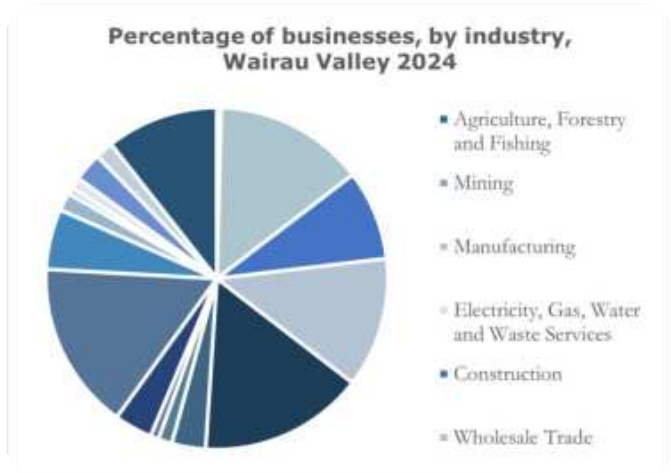


Figure 19: Businesses by industry
Note: By Zhuoyuan Pan



Figure 20: Relevant Strategies
Note: Zhuoyuan Pan

Figure 18: Employment Land Use Map
Note: By Zhuoyuan Pan

Transport Behaviour

The area is served by multiple high-frequency bus routes, including NX1 and NX2 connecting to the city centre and northern suburbs. Local routes such as 966, 923, and 941 provide cross-suburb access to educational, medical, and commercial destinations. Despite this coverage, the complexity and length of some routes may affect travel efficiency.

Most residents commute by driving private vehicles, with public bus usage representing a minor but notable proportion. Active transport options such as walking, jogging, and cycling remain limited, while a small portion of the population works or studies from home.

Main roads near the study area, particularly Northcote Road and SH1, experience high traffic volumes and intermittent blockages during peak hours. Traffic flow is more moderate along internal local roads, reflecting varied accessibility.



Figure 22: Transport Behaviour
Note: By Zhuoyuan Pan

Figure 23: Transport Map
Note: Zhuoyuan Pan

Figure 21: Traffic Condition
Note: By Zhuoyuan Pan

Biodiversity

Most residents in the study area can access nearby natural facilities, including significant ecological areas and open green spaces, within a 15-minute walk.

The 5-minute walk zone primarily covers the core residential areas, while the 10- to 15-minute zones extend towards major green corridors and significant ecological areas.

Permeable surfaces are mainly found around natural facilities and their buffer zones, whereas impermeable surfaces are concentrated along arterial roads and in medium-density built-up areas.

Overall, there is a spatial disparity between ecological accessibility and surface permeability. This disparity may affect stormwater management and the convenience of residents' daily interaction with nature.

The Wairau Valley exhibits a relatively low level of tree canopy cover compared to surrounding districts in the Kaipātiki Local Board area. Wairau Valley contains a highly dense and built-up industrial sector, coupled with the relatively low tree cover of AF Thomas Park, contributing to the low tree canopy cover level.

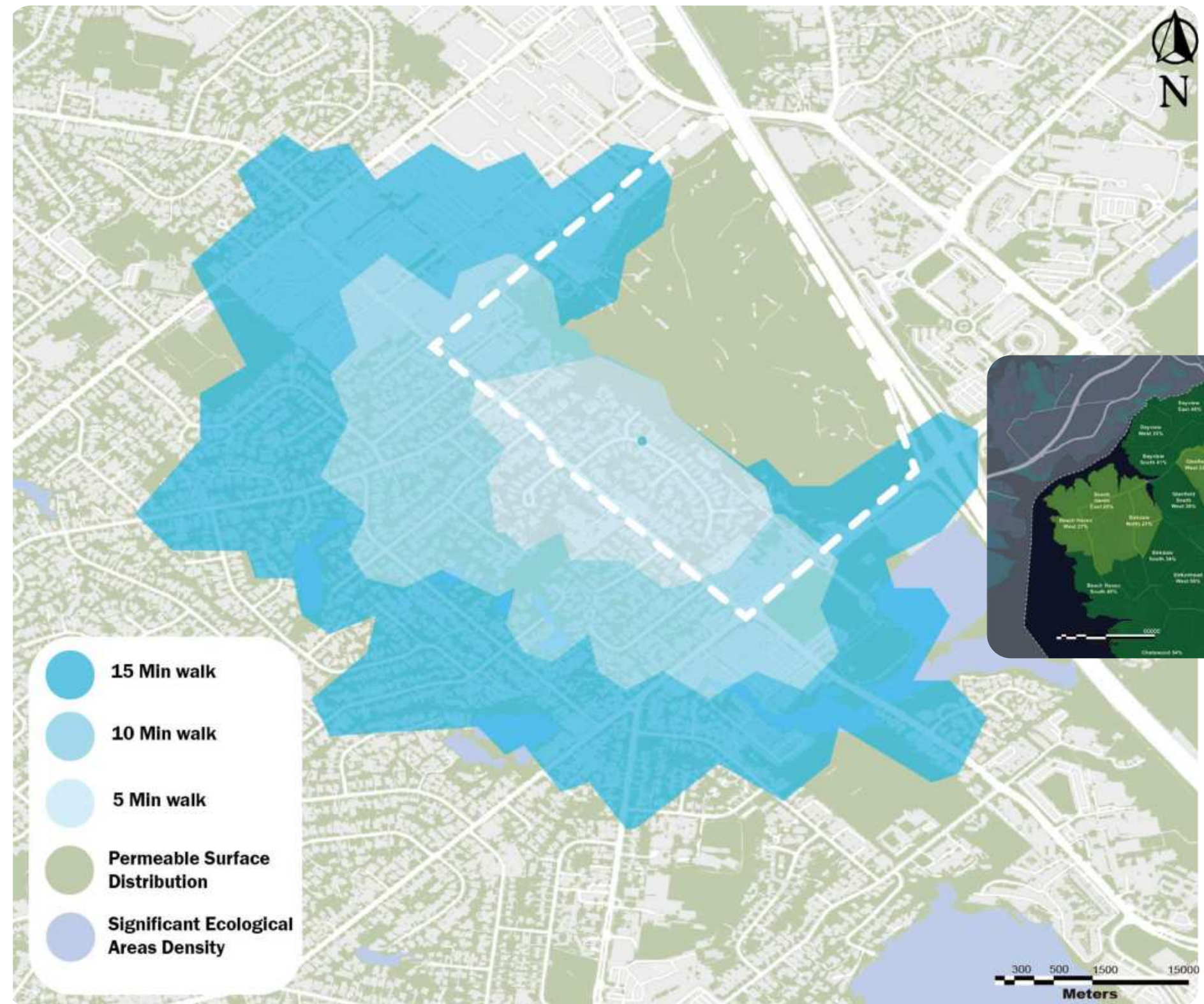


Figure 25: Spatial Analysis of Walking Accessibility and Surface Permeability
Note: By Zhuoyuan Pan



Figure 24: Tree Canopy Cover
Note: (Auckland Council & Kaipātiki Local Board, 2021)

Walking Catchment

The Northern Motrway and AF Thomas Park present massive barriers to movement around the precinct.

Many facilities within the 1.2km buffer are out of reach due to impermeability, including health services, employment, and education.

Improving walkability throughout the site could significantly increase access to amenities and support car-free living.

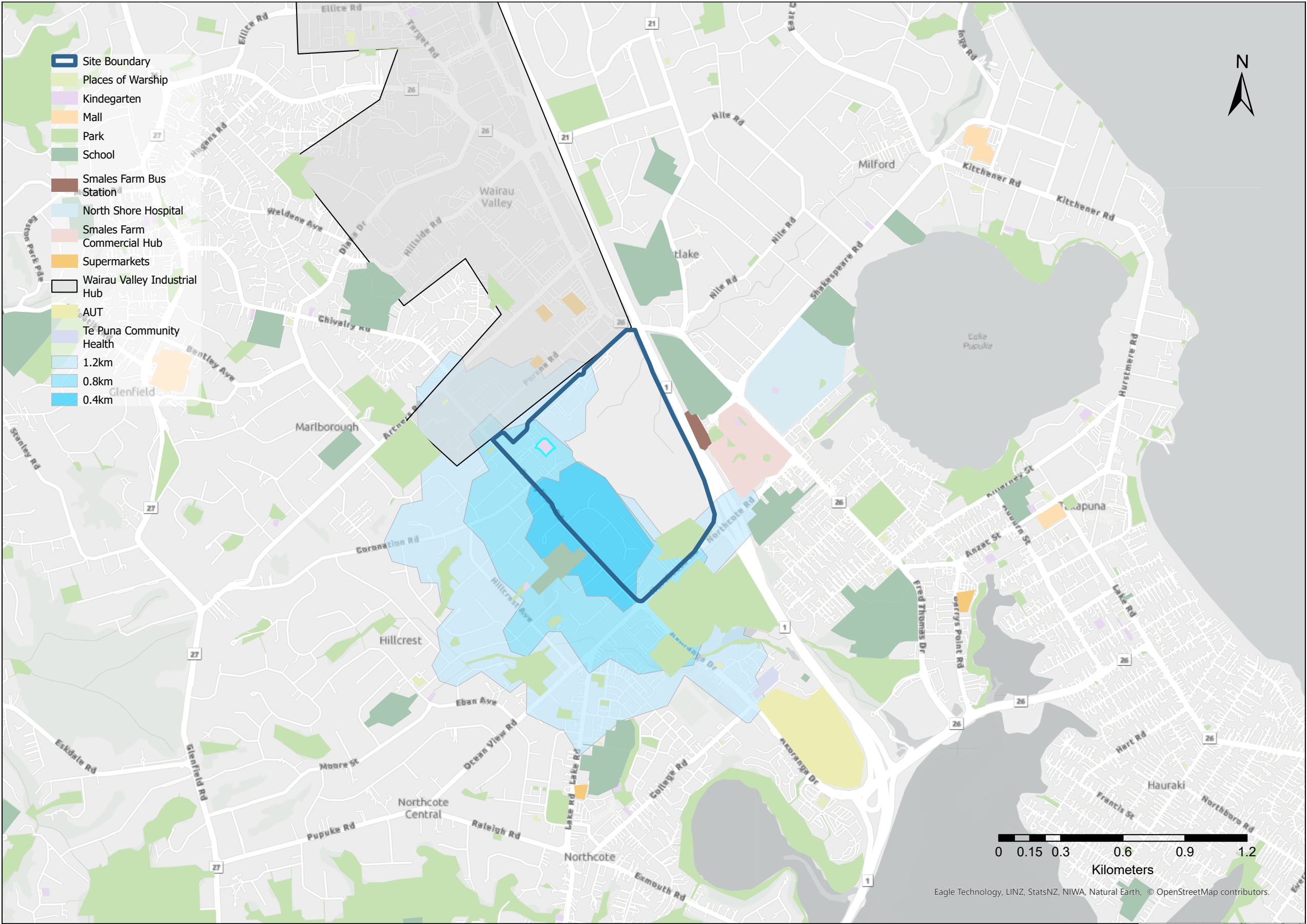


Figure 26: Walking Catchment and out of reach land uses
Note: By Arson Rashidmardani

Transportation Catchment

The sites proximity to the State Highway system ensures that the majority of the city is accessible through the use of private vehicles.

Though the suburb is nearby to the Smales Farm Bus Station, accessing the station takes up to 30 minutes, using walking or busing.

The transit system provides access to employment and education hubs in North and Central Auckland. However, the majority of Manufacturing, Retail Trade, and Wholesale Trade jobs are inaccessible utilising public transportation within a 45 minute commute.

The income and occupation status of residents closely match that of wider regional Auckland.

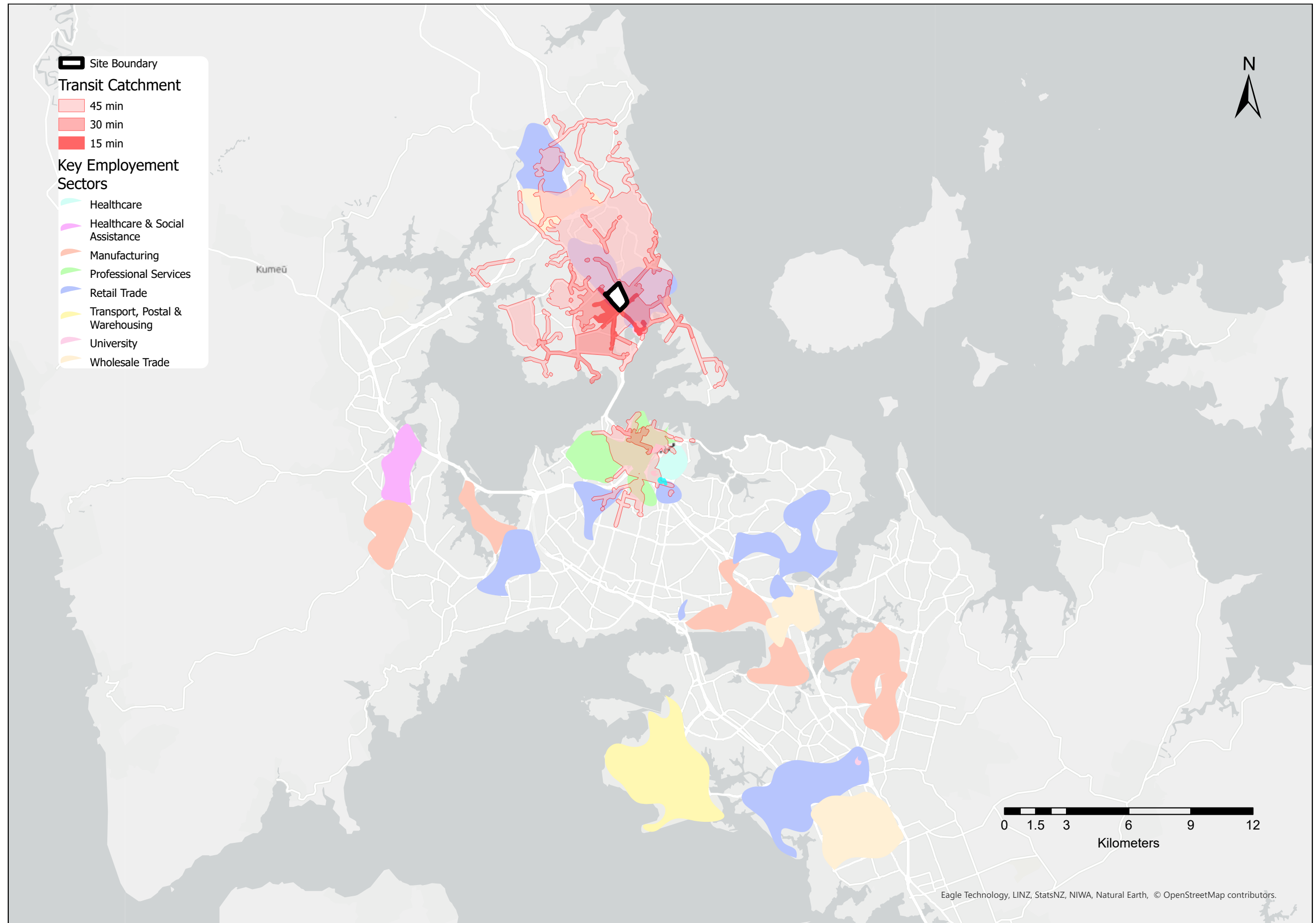


Figure 27: Public Transportation Catchment & Key Employment Sectors
Note: By Arson Rashidmardani

Serial Vision & Lynchian Analysis

This serial vision demonstrates the open nature of the golf course, the inability to access Smales Farm Bus Station, the auto-dominated uses fronting Northcote Road, newly developed townhouses, the pedestrian cut-throughs at the end of cul-de-sacs, and the community groups and uses centred around Eventfinda Stadium.

The Lynchian Analysis shows that the site is made up of several unique districts, with multiple landmarks, sufficiently addressing the need for legibility. However, Smales Farm Bus Station, one of the most significant nodes is cut off from the site due to AF Thomas Park and the Northern Motorway forming edges. The community amenities sector, and neighbourhood commercial district form significant nodes of activity that can be capitalised upon.

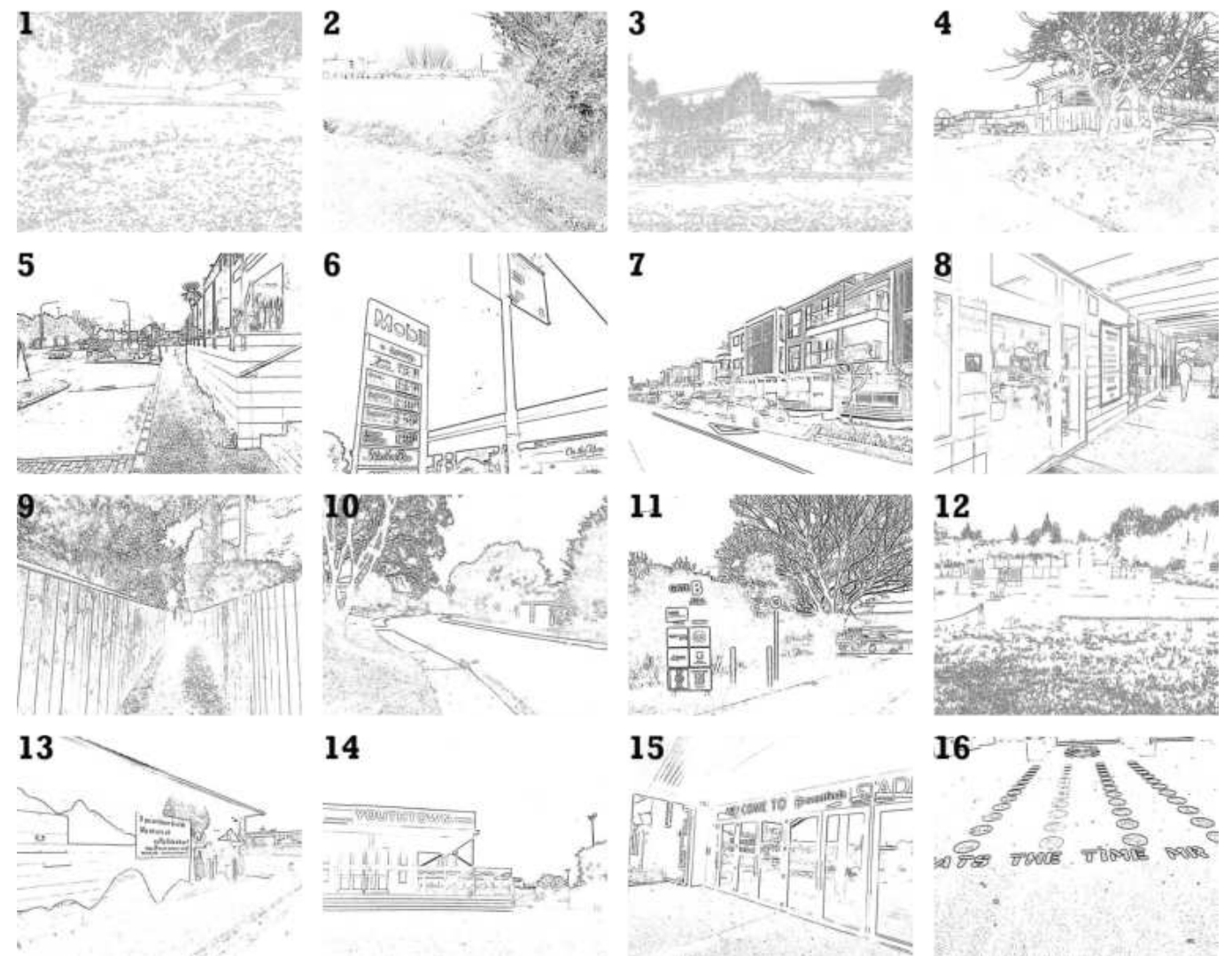


Figure 28: Serial Vision Photos Note: By Arson Rashidmardani



Figure 29: Lynchian Analysis Note: By Arson Rashidmardani

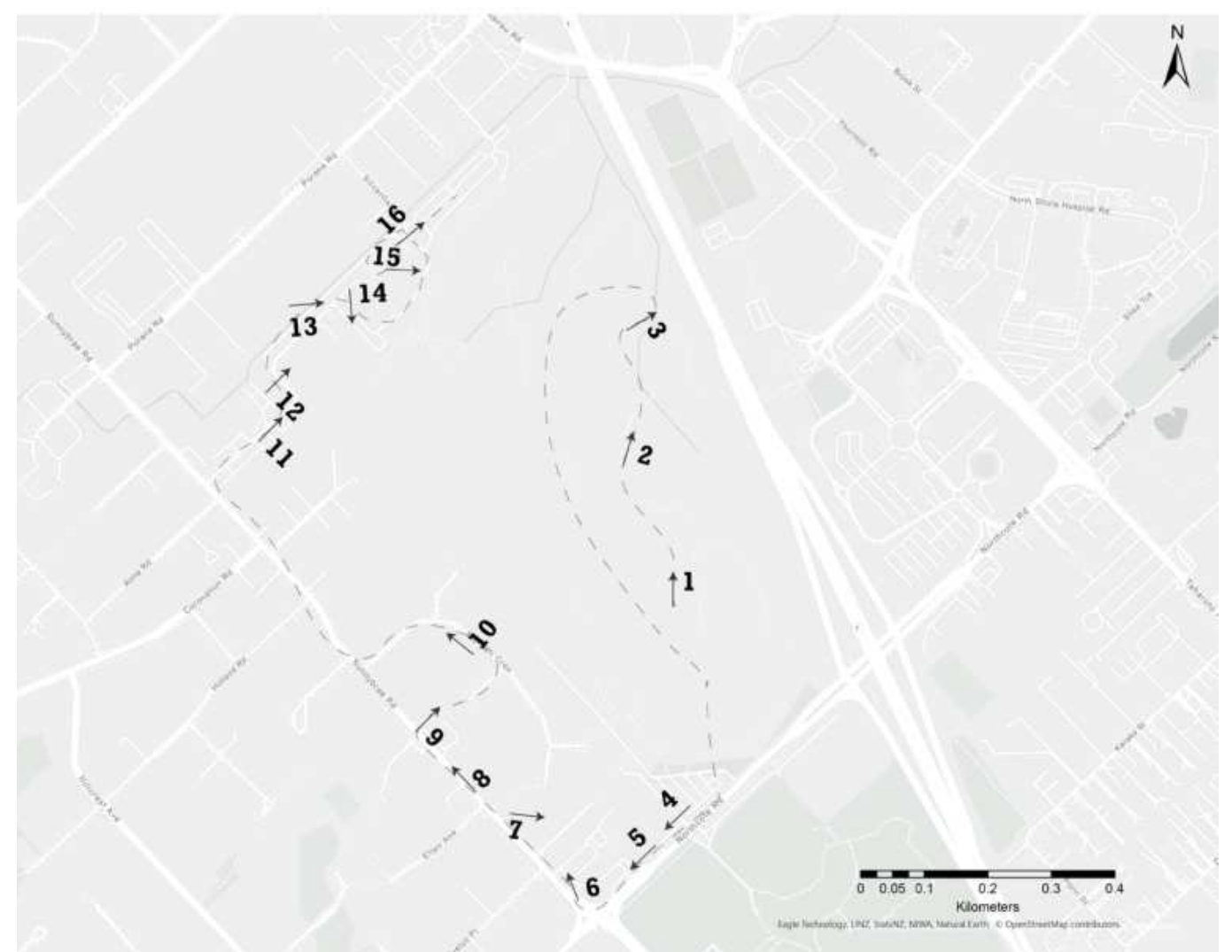


Figure 30: Serial Vision Map Note: By Arson Rashidmardani

Tissue Analysis

This tissue analysis is based on Stonefields, Auckland. Stonefields is a recent quarry redevelopment that has been upheld as a case study for developing medium-density suburbs in New Zealand.

This tissue study integrates portions of fine-grain stand-alone homes alongside coarser-grain 4-storey apartment blocks.

The variance in building typologies allows for better integration of higher-density developments into a predominantly low-density suburb.

The edges of the development are less dense, peaking into denser apartments in the centre of the development.

This tissue study also integrates a movement network, allowing for better mobility throughout the suburb by creating a gridded network, alongside a frontage road along the boundary of the golf course.

The Akoranga Station Precinct provides an example of a pedestrian overbridge, crossing the mobility gap that the Northern Motorway presents.

The case study is located close to the Smales Farm Bus Station, and was developed for around fifteen million New Zealand Dollars in 2007¹.

A pedestrian overbridge, combined with a frontage road alongside the golf course and pathways throughout the green space, provides an opportunity to provide rapid transit access within a walkable catchment of the medium-density development.

¹ (NZ Strong, n.d.)



Figure 30: Akoranga Precinct
Note: (NZ Strong, n.d.)

Figure 31: Tissue Study
Note: By Arson Rashidmardani

Strengths & Challenges

Strengths

- Proximity to educational facilities (AUT & Westlakes, Sunnybrae, Takapuna)
- Proximity to medical facilities (Te Puna, North Shore Hospital)
- Lots of recreational opportunities (football, golf, bowling, archery)
- High mobility using private vehicles
- Decent public transport access
- Decent green space access
- Located close by to employment opportunities
- Though small, the commercial centre provides for residents immediate needs

Challenges

- The community division caused by SH1 and the balance issue between highways and communities (social justice)
- The community exhibits significant ethnic and cultural diversity. Planning and redevelopment efforts should account for and balance the cultural values of different groups.
- Balancing market demands with desire for affordability and sustainability

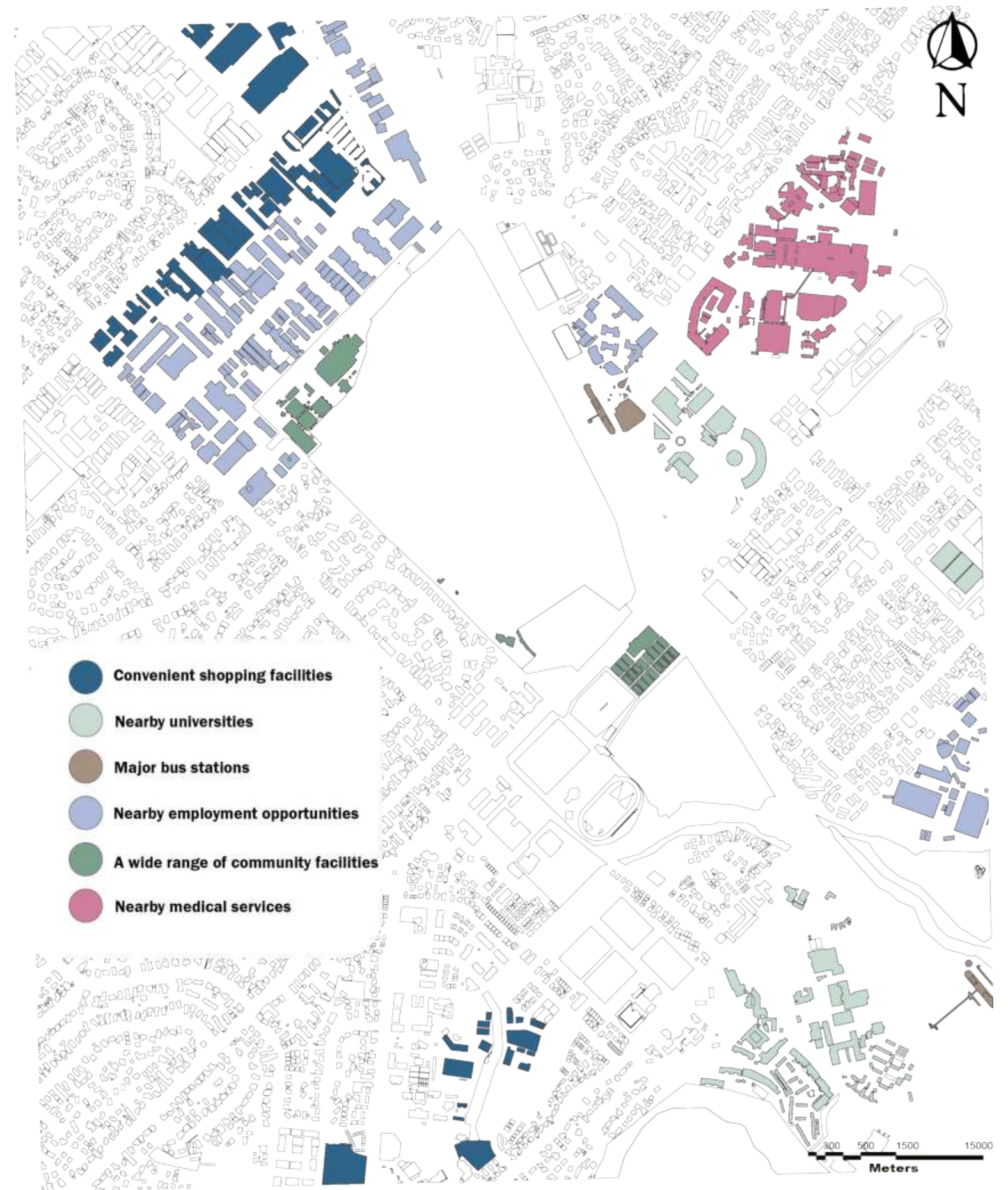


Figure 32: *Strengths & Challenges*
Note: By Zhuoyuan Pan

Weaknesses & Opportunities

Weaknesses

- No clear access to children's playground
- Not very walkable or safe to cyclists
- Whilst Smales Farm provides high quality and frequent bus services, accessing Smales Farm Bus Station itself can take a long time, reducing mobility by public transport.
- Lack of permeability due to the Northern Motorway
- Though the golf course is a large open space, many residents do not use it for recreation, it does not provide high tree canopy cover, or biodiversity.
- High rental costs
- Non-dominant cultural identity or sense of place
- The problem of natural water body pollution caused by the impermeability of hardened road surfaces (environment)
- The cities have a low level of concealment, and the canopy layer is sparse, making it difficult for birds to find suitable habitats

Opportunities

- High rental costs
- Create a pedestrian overbridge connecting Smales Farm to Wairau Valley
- Renovate AF Thomas Park into a more equitable green space, providing amenities to all types of residents.
- Introduce mixed-use, and denser development to address high rental costs in the area.
- Utilise Mobil station area as a new landmark and open space
- Improve street connectivity

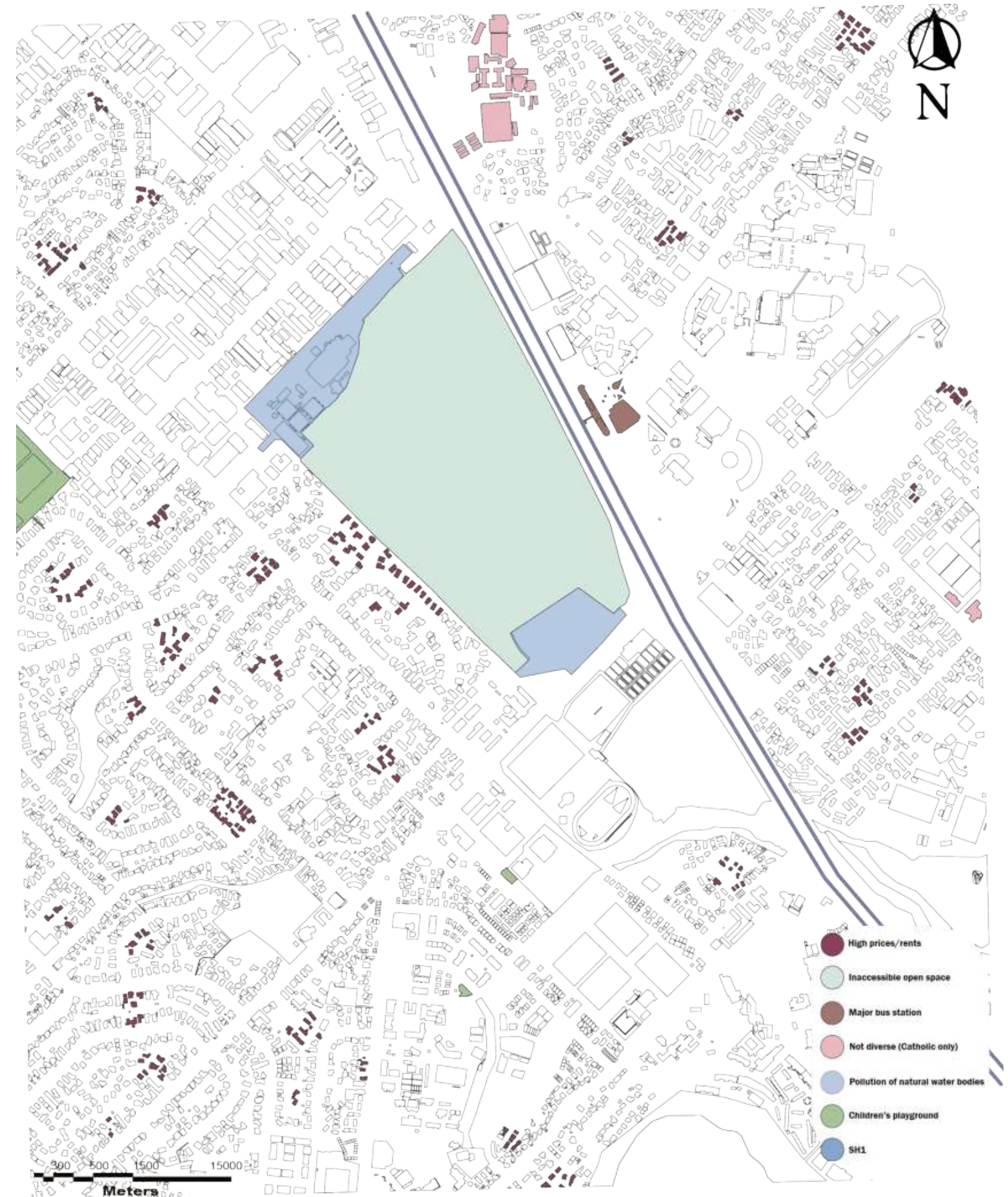


Figure 33: Weaknesses & Opportunities
Note: By Zhuoyuan Pan

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