

Site Analysis: University of Auckland City Campus: 100 Sector

Arson Rashidmardani

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Background:

Introduction:

The 100 sector is an integral part of the University of Auckland city campus. The site is enclosed by Alfred Street, Princess Street, Symonds Street and Waterloo Quadrant. The site is a popular destination due to significant academic buildings such as the General Library and acts as a major thoroughfare. Furthermore, historic buildings bring significant heritage and cultural value to the site.

However, previous development pressures have led to disjointedness within the sector and numerous underutilised public spaces.

Objective:

This study aims to analyse the 100 Sector of the University of Auckland's city campus to understand the site's historical, regional, and environmental context. Findings from the site plan will help determine the sector's strengths and weaknesses and provide guidelines for future synergistic development.

Methods:

- Application of pre-established theories
- Analysis of Maps
- Observational Studies



Figure 1: (Auckland Council, 2016d) Annotations by author

Historical Process: Morphological Periods of Development

Morphological analysis organises the urban form into periods of Development. Morphological periods demonstrate the needs of society at that time (Conzen, 1969).

(1840-1890)

The Albert Barrack wall started construction in 1846 to protect against anti-British establishment Māori, and relied significantly on Māori labour to be built. It today acts as a reminder of the fraught relationship between Pākehā and Māori (Albert Barracks Wall, n.d.).

Old Government House was built in 1856 to replace a previous burned-down residence for the Governor of New Zealand, at the time Auckland was the capital (Government House (Former), n.d.). The architect wished for a stone facade, however, Governor Hobson believed the building would be temporary. Therefore, the neo-classical building has a wooden facade cut to look like stone. Ownership was transferred to the University of Auckland in 1969 (University of Auckland Business School, n.d.).

Old Choral Hall was built in 1872. The neo-classical structure was erected on former Government House grounds (Old Choral Hall, University of Auckland, n.d.). A baroque extension surrounding the original structure was completed in 1919. Ownership was transferred to the University of Auckland in 1907 (University of Auckland Business School, n.d.).

In 1882, Alfred Nathan House was built for prominent businessman Nathan Alfred Nathan (University of Auckland Business School, n.d.). The building currently on the site was constructed in 1906. University acquisition occurred in 1958. A fourth storey was added in 1966, and the rear was extended in 1971 (Mailhot et al., 2016). More recently, the building was restored, strengthened and saw a further extension to the rear in 2017 (Architectus New Zealand, 2021).



Figure 2a
Source: Author, 2023



Figure 2b
Source: Author, 2023



Figure 2c
Source: Author, 2023



Figure 2d
Source: Author, 2023



Figure 2e
Source: Author, 2023



Figure 2f
Source: Author, 2023



Figure 2g
Source: Author, 2023

Historical process: Morphological Periods of Development

(1910-1940)

The Clock Tower, designed by Roy Lippincott, was built in 1926. The gothic design was controversial due to not being sufficiently English (University of Auckland Business School, n.d.). The Clock Tower's unique interpretation of the Gothic style is widely beloved today (Old Arts Building University of Auckland, n.d.). The Biology Building, also designed by Roy Lippincott, finished construction in 1939 (Sinclair, 1983).



Figure 2j
Source: Author, 2023

(1940-1980)

The post-war period saw intense development within the site due to fast-rising student rolls (Key Developments 1883-2000s - the University of Auckland, n.d.). Maclaurin Chapel was built in 1964 and gifted to the University of Auckland by Sir William Goodfellow to commemorate the son he lost in World War II (University of Auckland Business School, n.d.).



Figure 2h
Source: Author, 2023

The General Library was completed in 1968 (Brief History of Te Tumu Herenga | Libraries and Learning Services | the University of Auckland - Libraries and Learning Services, n.d.). The modernist building provided students with much better amenities than previously (Libraries and Learning Services, 2019).



Figure 2k
Source: Author, 2023



Figure 2i
Source: Author, 2023

The modernist Thomas Building, made of concrete and glass, was constructed in 1968 (Thomas Building Extension, n.d.). In 2011 a large extension comprised of a new curved four-story building was completed (AIPDESIGNZ - Projects - Thomas Building - Auckland University, n.d.).

The Dance Studies Building and Commerce A buildings were constructed in the 1950s and originally thought to be temporary, but they still stand on the site (Personal communication, March 6, 2023).



Figure 2l
Source: Author, 2023

Historical Process: Morphological periods of Development

Figure 2m. Map of the 100 Sector illustrating morphological periods of development. Source: (Auckland Council, 2016a; University of Auckland Business School, n.d.; Government House (Former), n.d.; Old Choral Hall, University of Auckland, n.d.; Mailhot et al., 2016; Architectus New Zealand, 2021; Old Arts Building University of Auckland, n.d.; Sinclair, 1983; Brief History of Te Tumu Herenga | Libraries and Learning Services | the University of Auckland - Libraries and Learning Services, n.d.; Thomas Building Extension, n.d.; AIPDESIGNZ - Projects - Thomas Building - Auckland University, n.d.; Personal communication, March 6, 2023) Adapted by Author.

Legend:

- 1840-1890
- 1910-1940
- 1950-1970
- 1990-2023
- Unknown



Figure 2m

Historical Process: Typological Process

The typological process occurs at the end of the cycle of a building type. New building types that supplant existing ones adapt to the preexisting built form, contend with social conceptions of building types, and act as a catalyst for new building types within the area (Gauthier, 2004). The typological process can be utilised to understand better how the 100 sector has changed. The site has seen developments throughout centuries, and building types, have changed considerably. One of the first examples of the process is the extension of Old Choral Hall. The baroque development surrounding the original building seamlessly ties in. Furthermore, the Biology Building and Thomas Building, though severely different in architectural style, blend using red, and the continuation of horizontal lines. The recent extension of the Thomas Building is another example, with the glass extension blending in with the old concrete structure with its sweeping horizontal lines. The Alfred Nathan Houses' recent expansion is another example, the new modernist rear facade is intentionally designed to not interrupt the historic front facade and tie in with the modernist general library on the back.



Figure 2n

Source: Author, 2023

Alfred Nathan House Front



Figure 2p

Source: Author, 2023

Alfred Nathan House Rear



Figure 2r

Source: Author, 2023

Old Choral Hall Front



Figure 2o

Source: Author, 2023

Biology & Thomas Building



Figure 2q

Source: Author, 2023

Thomas Building



Figure 2s

Source: Author, 2023

Thomas Building & Extension

Land Use & Building Utilisation:

100 Sector contains large undeveloped areas due to their designation as Māori Heritage and Open Space Conservation areas. The use of buildings in the sector range widely. The land use is primarily dominated by open green space and building footprints, with scarce recreation designations.

Figure 3a: Map of the 100 sector illustrating the zoning of the sector. (Auckland Council, 2016a; Auckland Council, 2016b) Adapted by Author.

Figure 3b: Map of the 100 sector's land and building use. (Auckland Council, 2016a) Authors observational studies, April 14, 2023. Adapted by Author.

Figure 3a

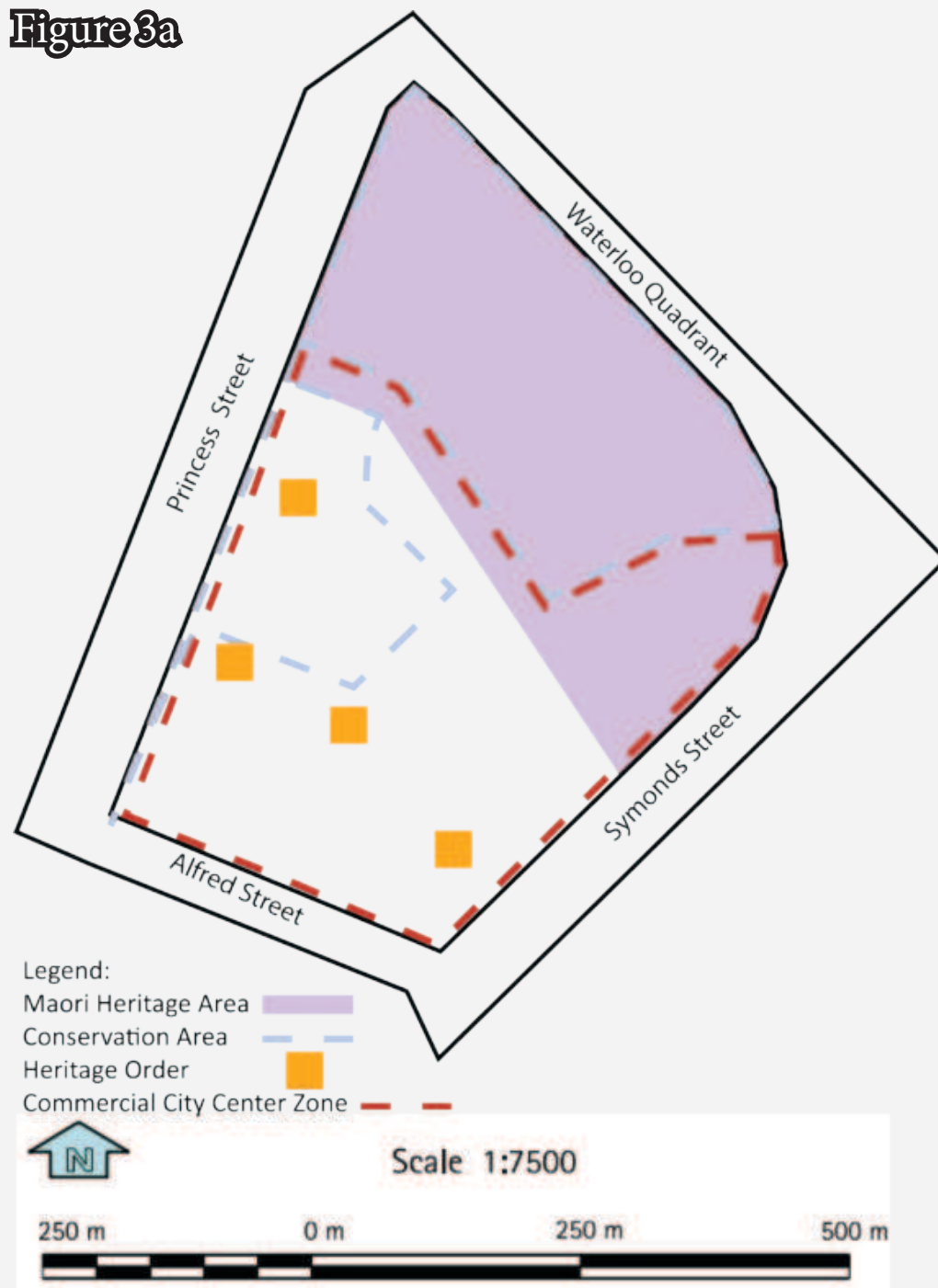
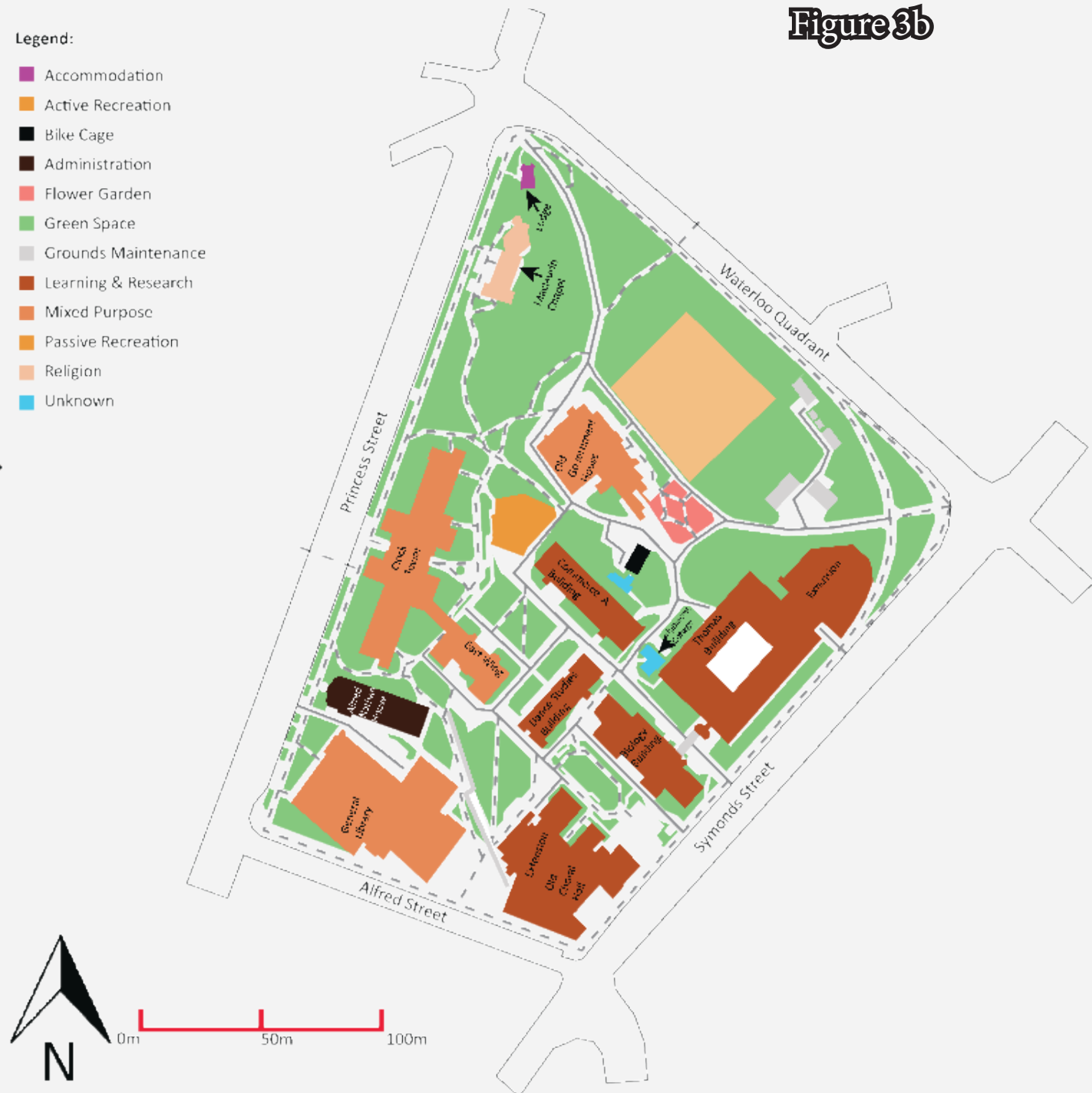


Figure 3b



Transport:

The 100 Sector is a transport hub within the city campus. Pedestrian paths, shared paths, and an underpass facilitate travel to different sectors of the university. The sector is well connected to public transport connections. Bus lines circle the site, and the nearby train lines at Britomart Station provide further travel opportunities: Authors observational studies, April 14, 2023.

Opportunities for improvement:

The Albert Park Tunnel lies beneath the sector and could be reopened and connect to the under-construction Aotea Train Station (Auckland Council, 2020; Pilkington, S., 2007). Furthermore, a proposed station for the learning quarter on the Auckland Light Rail City Centre to Māngere line would increase the accessibility and capacity of nearby transport connections (Auckland Light Rail, n.d.).

The many shared paths make for uncomfortable pedestrian spaces and dangerous cycling paths. Shared paths could be renovated into pedestrian malls to make for more comfortable pedestrian spaces whilst preserving vehicular accessibility: Authors observational studies, April 14, 2023.

Figure 4: Map of transportation within the 100 Sector (Auckland Council, 2016a; Pilkington, S., 2007) Authors observational studies, April 14, 2023. Adapted by Author.



Environment-Behavior Analysis: Courtyards

Human scale is a vital consideration for courtyard spaces, to remain human scale the width should range between 12 meters to 25 meters (Alexander et al., 1977). Furthermore, the walls should not exceed a height to width ratio of 1:3 (Gu, K., 2023). Most courtyard spaces within the site fail to meet this standard, and remain underutilised. Most courtyard spaces contain few amenities, mainly benches. The few tables available attract more users. Furthermore, existing amenities are sometimes poorly maintained, as seen in Figure 5a, leading to underutilisation and uncomfortable spaces. Furthermore, the usage of spaces is very weather dependent due to no weatherproofing.

The relative popularity of courtyard spaces within the sector is more dependent on proximity to activity nodes. Spaces closest to the General Library, a prominent activity node, attract the most users.

Activities within the site include socialising (courtyards one and two), studying (courtyards three and six, due to the presence of tables), reading (courtyard 5) and eating occurring in most spaces, however most prominently in courtyard space 6. Some students also exercise, using the fitness trail, as seen in Figure 5b.

Figure 5b: Map of the 100 sector illustrating the position of courtyard spaces and the fitness trail. (Auckland Council, 2016a) Adapted by author. Authors observational studies, April 14, 2023.



Figure 5a
Source: Author, 2023



Figure 5b

Environment-Behavior Analysis: Activity Nodes & Promenades

Activity nodes are areas designed to concentrate pedestrian movement (Alexander et al., 1977). Albert Barrack Wall segregates the space and only one path crosses it. Coupled with the density of students within the General Library, this creates a significant activity node. There are a variety of other activity nodes where students and staff enter the sector and leave for other sectors. Another significant activity node is the pedestrian crossing on Princess Street, allowing access to Albert Park for recreation or travel further into the city. Promenades are pathways that help form or strengthen activity nodes by facilitating pedestrians (Alexander et al., 1977). The promenades within the 100 sector radiate out of the General Library activity node and facilitate pedestrian movement to other activity nodes. However, the promenades of the site primarily consist of shared paths, which are uncomfortable for pedestrians. Desire paths are paths pedestrians have taken despite pre-existing paths, as the path is either more direct or feels more comfortable (Tomes, 2022). In the open greenery next to Maclaurin Chapel, a desired path exists going to the front of Old Government House. There are many pre-existing paths to facilitate this movement. However, these paths are poorly maintained, heavily shaded, have significant grades, and have blind corners which amalgamate in an uncomfortable space, as seen in Figures 5c and 5d. Figure 5e: Map of the 100 Sector illustrating the position of activity nodes, promenades and desire path. (Auckland Council, 2016a) Adapted by author. Authors observational studies, April 14, 2023.

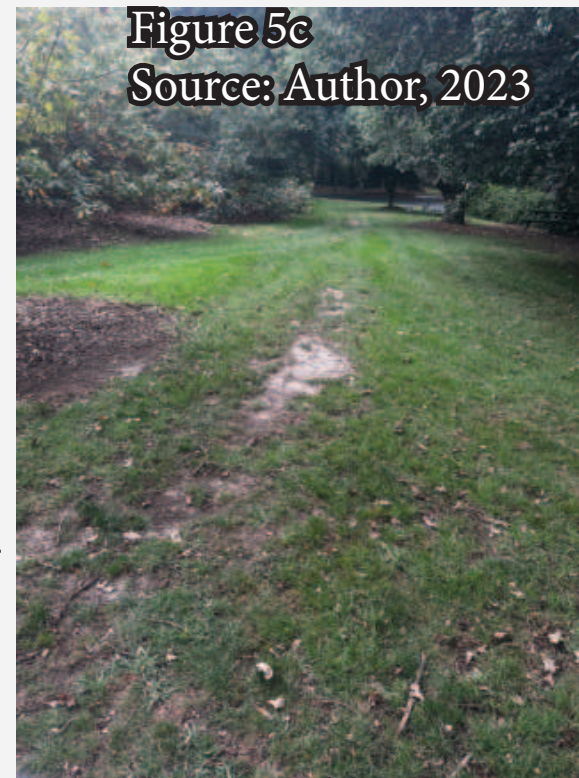


Figure 5c
Source: Author, 2023



Figure 5d
Source: Author, 2023



Nature Environment Analysis: Landforms & Plant Cover

The slopes of a site significantly affect the appropriate uses of the site; land with slopes between 1 to 4 per cent are usable for all intense activities; however, slopes between 4 to 10 per cent are more suitable for informal movement, and slopes above 10 per cent require significant climbing effort (Lynch, 1971). Most of the 100 sectors, specifically the southern end, have a 1 to 4 per cent slope and are suitable for all developments, as seen in Figure 6a. Most unfavourable slopes fall within the open space conservation area.

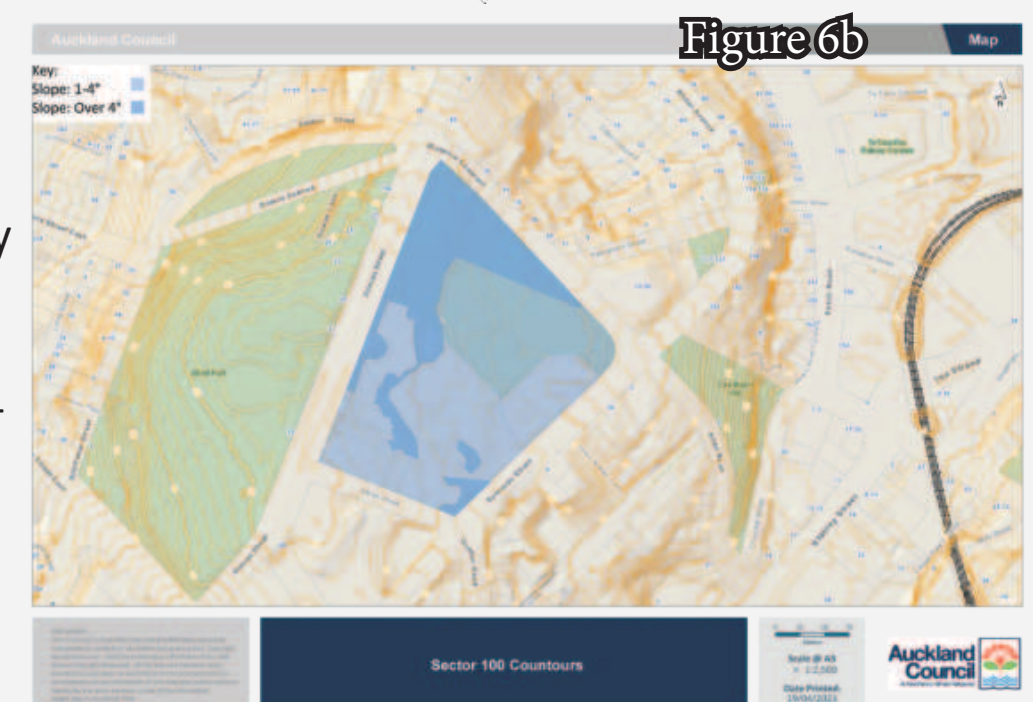
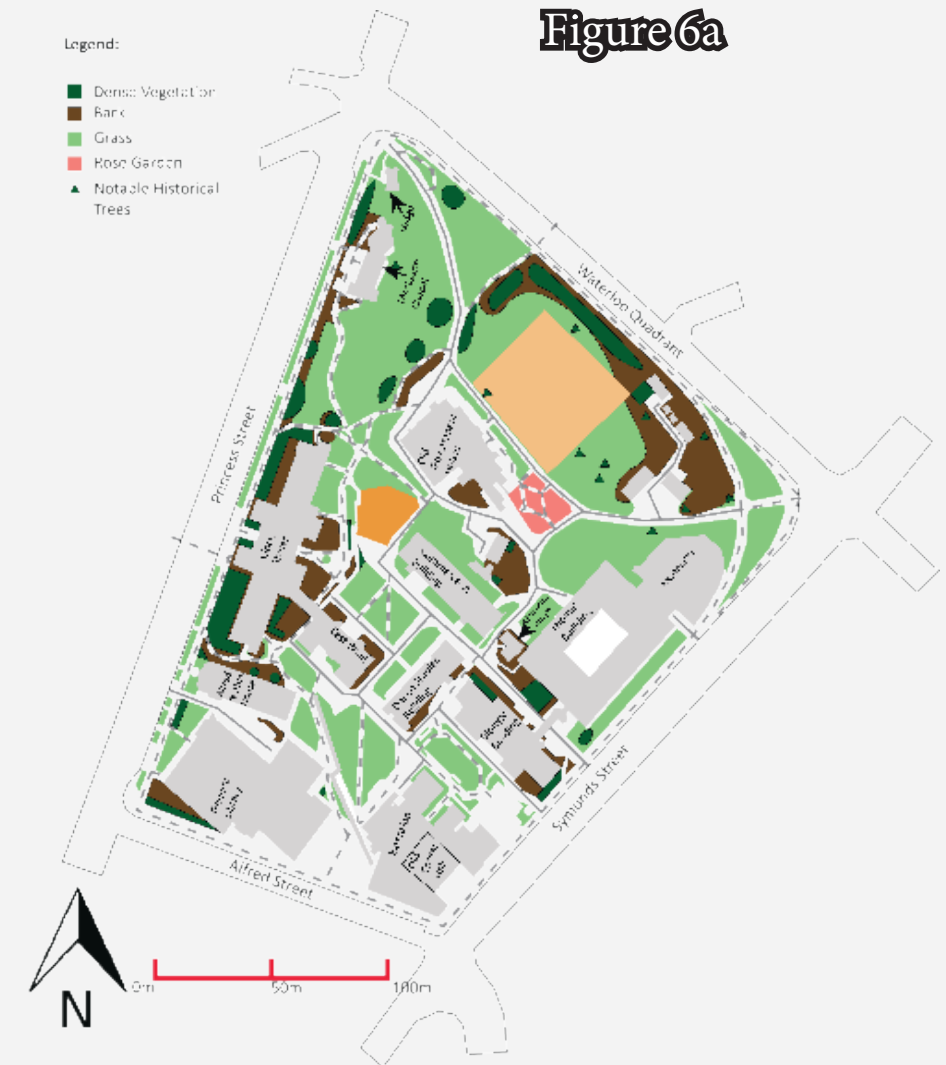
The plant cover of an existing area can illustrate the environmental conditions of an area (Lynch, 1960). 100 sector contains many notable historical trees within the northeast sector, which must be protected. Many of these trees are Oaks, planted between 1842-1844 (University of Auckland, 2013). The many oaks surrounding Old Government Lawn indicate that the area is dry and mild (Lynch, 1960).

The northern sector consists of sizeable uninterrupted greenery, dense plant cover and exotic species. The Rose Garden, also in proximity, was established in the 1950s and provides considerable biodiversity to the sector (University of Auckland., 2018).

The greenery within the southern sector of the site is less sizable and more interrupted, with fewer areas of dense vegetation and more native species, resulting in less biodiversity (University of Auckland, 2018).

Figure 6a: Map of the 100 sector illustrating the position of dense vegetation, gardens, notable historical trees, grass and bark ground cover. (Auckland Council, 2016a) Adapted by author. Authors observational studies, April 14, 2023.

Figure 6b: Topographical map of the 100 sector. (Auckland Council, 2016c) Adapted by author.



Discussion & Conclusion

Through observational studies, application of pre-established theories and the use of maps, it has become clear that though the 100 sector has a strong spirit of place. Work must be undertaken to address the downfalls.

Strengths of the site:

- Highly accessible to pedestrians and by public transport.
- Strong heritage, cultural, architectural character.
- Most of the non-conservation area is relatively flat and suitable for all developments.

Weaknesses of the site:

- Large sections of the sector are under conservation and restrict development potential.
- Many essential paths are shared paths and are uncomfortable for pedestrians.
- Some paths have a blind corner, are heavily shaded, and are poorly maintained.
- Open spaces are underutilised.
- There are few amenities available, with little variety, and sometimes poorly maintained.
- Dance Studies and Commerce A building lack architectural character and disrupt the character of the site.
- The placement of Dance Studies and Commerce A building make navigation trickier.

Guidelines for future development:

- Utilising Albert Park tunnels for future Aotea Train Station connection.
- Providing a wider variety of amenities in open spaces.
- Weatherproofing open spaces.
- Redevelopment of Commerce A and Dance Studies building.
- Further maintenance of amenities and paths.
- Redevelop shared paths into pedestrian malls.
- Maintenance of the strong cultural and heritage value of the site.

Conclusion:

The 100 sector has strong potential, which is yet to be realised. Future development needs to consider the heritage and cultural value and preserve it for future generations. Some areas of weakness, specifically the shared paths, underutilised green spaces, and out-of-place Dance Studies and Economics A buildings, need to be considered for future redevelopment. Redeveloping areas within the site would ensure that the 100 sector in the heart of the city campus can be better utilised by students for recreation and academic purposes and foster a greater appreciation for the heritage value of the site.

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