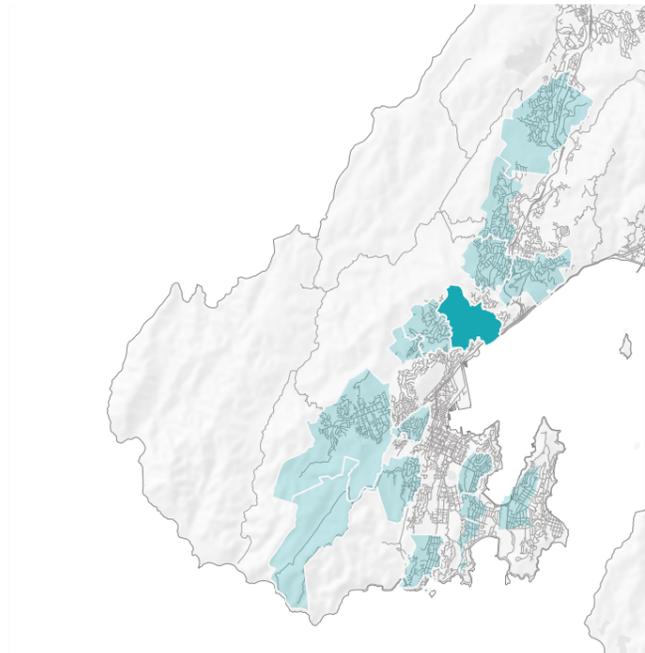


KHANDALLAH



Khandallah, having several meanings - “hills and valleys”, “home of god”, or “resting place of god”, was named by an Indian army officer. The name was derived from a homestead which was called Khandallah.



Figure 8 8857 Khandallah huts ca 1927



Figure 9



CHARACTER SUMMARY

Khandallah is a suburb located at the foothills of the greenbelt on the north-west and bounded by the Wellington Urban Motorway and the harbour to the south east. It is located 8km north of the city centre and is well connected by rail, in fact there are three stations located in the precinct. The village centre is tucked away off the main arterial, anchored by a supermarket and a number of boutique shops. The residential streets are windy and lined with mature trees which provides a good buffer between the public and private realm.



SITE VISIT NOTES

LANDSCAPE

Khandallah is an elevated valley with steep topography to the west, and the greenbelt beyond, and undulating topography to the east. The suburb is characterised by dense and mature vegetation associated with the surrounding views and within the large established gardens of the suburb.

The street pattern and topography create an inward looking suburb. There is no open space associated with the town centre, or immediate proximity, and limited planting within the streetscape. Connections to the wider open space network are distant and not immediately available.

URBAN DESIGN

The centre in Khandallah is classified as a district centre that provides a combination of retail and day to day convenience needs. It is anchored by a supermarket, several small boutique retail offerings as well as a local community centre and library. It is a high street based village centre with shop top housing above (up to 3 storeys) with on street parking on both sides and pedestrian crossings (zebra and raised tables).

The vehicle movement through the centre is slow. This is a result of a number of factors that create side friction; location off the main arterial, narrow carriageway widths, a speed limit of 30km/h, and a number of raised tables and crossing points. Whilst the neighbouring street patterns are windy and narrow, the suburb is walkable and there appears to be relatively easy access to and around the centre.

Khandallah has the highest uptake of public transport with access to Box Hill, Simla Crescent and Khandallah railway stations. These stations are located outside of the centre; the closest is Box Hill Station which is less than 5mins walk. The capacity of the park and rides at the station is a constraint. The suburb is also serviced by a number of standard and off-peak bus services in to the city centre.

ARCHITECTURE

Khandallah has a few landmark buildings scattered across its area with one of its more well-known, visually obvious ones being Athfield House, an example of multi-unit housing. Khandallah's housing is mainly detached and dates from 1920's onwards with diverse ages and styles side by side, ranging from 1-3 storeys.

There are several examples of multi-unit housing including terrace housing and small apartment buildings. These include both much older examples as well as newer ones indicating a long relationship with low height high density housing. Set off from the main thoroughfare, the centre has a slow, low key and lively local village centre reflected in the architecture by a variety of ages (including the brand new multi-use development) styles and sizes.

The 2008 Boffa Miskell report shows that about 60% of parcels in Ngaio and Khandallah (including Kaiwharawhara) measure between 400 and 800 m², with the remaining categories (less than 200m², 200-400 m², 800-1,000 m², and over 1,000m²) each accounting for about 10% of lot sizes. These two suburbs have the highest proportion of lots over 1,000m² in comparison with Island Bay and Kelburn. Only about a quarter of lots have site coverage ratios higher than 35%, and homes are predominately 1-storey, with only about 5% rising over two.

HERITAGE

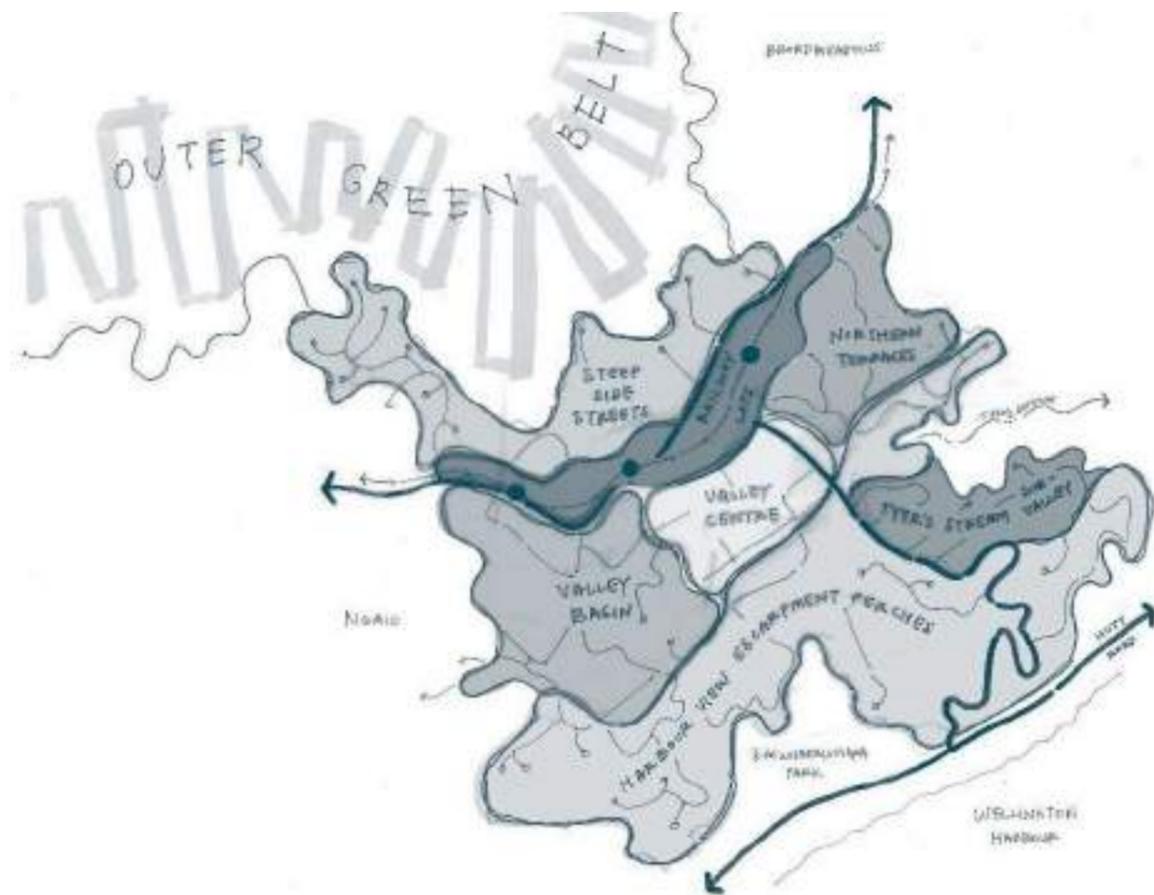
Khandallah is located on the Old Porirua Rd, and spreads gently across the rolling ground. It was settled from 1860 by residents who had connections with India, leading to the name of the suburb, and many streets. Khandallah remained mainly farmland until the 1920s, when access to Wellington, and the demand for buildable land resulted in subdivision and a quick increase in population.

The buildings are surrounded by established greenery, and typically the housing shows considered design, and quality materials. There are notable large houses, in styles such as English Cottage, that suit the large green sections.

The listed, and potential heritage buildings are predominantly residential buildings, and are isolated, rather than in character groups.



CHARACTER ASSESSMENT



Khandallah rises between the Ngaio and Ngauranga Gorges, looking over the Wellington Harbour at the foothills of Mt Kaukau. The Outer Green Belt defines a clear border to the western extents of the suburb, while reserves along the Wellington Harbour Escarpment (including Kaiwharawhara and Cashmere Parks) form a narrower natural border of bush-clad cliff slopes. A green network spreads throughout the rest of the suburb, connecting the Escarpment and the Outer Green Belt with a mosaic of public and private planting, thanks to the large road reserves and low site coverage ratios. The actual public open space network and pedestrian linkages are comparatively limited mostly aligning with the perimeter of the suburb.

Much of south-eastern Khandallah has a harbour-facing aspect, with many properties boasting impressive views towards the

city and perhaps contributing to the suburb's reputation as one of the most affluent areas of Wellington. The rest of Khandallah is somewhat inward looking – though still boasting multi-million-dollar properties – with the Town Centre at the heart of the bowl-like landform sitting at the top of the Korimako Stream watershed.

Driving from the Central City, the main access route to Khandallah is Onslow Road, which switchbacks up the Escarpment and is bordered by steep road cuts and retaining walls, offering glimpses of the harbour at breaks in the coastal shrub that coats the cliffsides. Onslow Road becomes Cashmere Avenue near the top of the Escarpment as the road intersects with Mandalay Terrace.

VALLEY CENTRE

Following Cashmere Avenue toward central Khandallah, one must follow secondary roads to reach the Town Centre as it is offset from the primary arterials of Cashmere Avenue and Khandallah Road. The Town Centre begins with one-way Ganges Road, lined with angled parking on either side. A few stunted street trees border the paved footpaths in constrained squares of exposed soil.

Just beyond the modernist local library, the century-old Town Hall sits prominently along this main drag, with a generous front balcony providing an awning over the 2-metre wide footpath. The 2-storey Town Hall is neighbored on its east side by a new 3-storey metal-clad commercial building, housing an art gallery, a physio's office, and a dairy. On the south side of Ganges Road, the centre is lined with classic New Zealand commercial strip architecture, with few buildings rising over one storey and most providing deep awnings over the footpath. Beyond this main cluster the Town Centre also hosts a supermarket.

At the northern end of Ganges Road, a multi-unit development exists opposite the Town Centre as Melbourne-style terrace houses with 3m setbacks and no trees.

Everest Street intersects with the southern end of Ganges Road and is comfortably sized with a strong green character created by private garden planting containing some impressive mature trees. Low fences and walls line a few of the properties along Everest Street, although garages, driveway entrances, and gardens of dense planting are the more conspicuous street-facing yard treatments.



The block bounded by Ganges Road, Everest Street, Cashmere Avenue, Agra Crescent, and Izard Road is notably sizable – driveways off these roads typically access more than one property, with up to five houses stacking up behind one property frontage along Izard Road.

VALLEY BASIN

Secondary access to Khandallah is through Ngaio via Ngaio Gorge Road / Ottawa Road, which becomes Khandallah Road after passing through the Ngaio Village Centre. A "Welcome to Khandallah" sign greets entrants to the suburb as the road passes Ngatoto Street and the 1920s-era Automatic Telephone Exchange building, the current headquarters for the Onslow Historical Society.

Turning into Ngatoto Street or Lucknow Terrace from Khandallah Road, one enters a relatively flat area that largely organises around Nairnville Recreation Centre. Houses in this area are mostly large 2-storey homes at street level with private driveways and gardens of varying styles and maintenance levels. Architectural styles, building setbacks, and front yard treatments vary greatly street by street and even within single road corridors, although a unifying feature of the public and private realms within this area are views towards the transmission-mast-topped Mt Kaukau presiding over the Outer Green Belt.

RAILWAY LOTS

The rail line runs between Box Hill and Agra Crescent, with lots sloping down from the street frontages toward the railway – often creating the illusion of 2-storey houses reading as 1 from street level. Wooden fences line most



of Agra Crescent and Box Hill, with planting from private gardens giving both roads the feeling of green corridors. In contrast to Agra Crescent, where most properties are accessed by sloping driveways, Box Hill is dotted with garages abutting the footpath.

NORTHERN TERRACES

Rangoon Street begins at a T-junction with Burma Road near the northern extents of Khandallah before overpassing the densely green railway corridor and climbing the eastern slope of the valley. The streets here are separated by significant changes in grade and are dotted by detached garages – built into the hillslope on the northern banks and, on the opposite side of the road, hanging over the southern banks. Native trees and exotic agapanthus cling to steep road cuts and overhang the narrow carriageways connecting 1 and 2 storey detached houses mostly build post-1960s.

HARBOUR VIEW ESCARPMENT PERCHES

The eastern ridgeline of the Khandallah valley reaches surprisingly far back from the Harbour Escarpment, extending up beyond Tyer's Stream Valley, where homes even along Imran Terrace boast impressive views toward the harbour.

Footpaths along these narrow windy roads often cling to one side or disappear altogether; garages, car decks, and cantilevered driveways are prominent and continual features of these streetscapes. One quintessential example of this typology is Nicholson Road, which provides long harbour views over Kaiwharawhara Park's coastal bush of ngaio, coprosma and pine.

The harbour-facing slopes of Khandallah display a diverse array of contemporary and traditional homes existing alongside each other. The homes range from stolid and conservative to quirky and colourful, and can sprawl down their sloping sections in surprising formations oriented to maximize views and solar access, seemingly non-deferential to street direction or the angles of neighbouring buildings. The most iconic example of this is Athfield House, a landmark feature of the Wellington Harbour and a village of its own hidden from the interior of Khandallah.

TYER'S STREAM SUB-VALLEY

Within the swathe of harbour-facing houses, a more inward-looking pocket appears along Mandalay and Raumtai Terraces of mostly 1940s and 50s houses. Setbacks through here average around 7 metres, with separation distances mostly hovering around a slim 2 or 3 metres. Architectural and garden styles vary greatly through here, though wooden fences do feature along most of Mandalay Terrace before a grouping of car decks signal the steepening topography at the road's northern end.

STEEP SIDE STREETS

The western slopes of Khandallah form a much more circumscribed zone, hemmed in by the slopes of the Outer Green Belt above and the railway corridor below. Lush gardens thrive in this sheltered environment, lining streets that dead-end, sometimes into to trailheads for walks up to Mt Kaukau.

Brick and cedar-clad 1980s homes line Satara Crescent behind flower-filled front gardens, grass lawns, and intermittent timber fencing. Privacy fences and hedging conceal roomy, contemporary houses mixed in with early twentieth century homes along Simla Crescent. Kim Street, Kohima Drive, Jalna Avenue, and Baroda Street are all steep, thin roads that wind up the western valley for 300 metres or less before dead-ending, often into private driveways. These short streets host houses that hide amongst the topography and dense vegetation.



POSSIBLE MITIGATION APPROACH

Khandallah is made up of predominantly five suburb characters and all are consistently green in nature; the western Valley slopes, the inner facing valley floor, the main street, the coastal edge and gateway corridor.

The tree clad western valley slopes have a significant amount of bush cover from Khandallah reserve at the base of Mount Kaukau all the way to the summit. These bush covered slopes form a significant visual back drop for the community. The residential areas at the base of Mount Kaukau and the other slopes of Khandallah have a high portion of tree cover forming a significant green visual back drop to the suburb.

The base of the Khandallah valley (around the Box Hill, Cashmere Ave, Everest Streets Ganges Road area) has significant mature trees on private property and road easements and with the exception of Ganges Road in the retail area. This green Valley floor forms a green foreground for many residents looking across the valley floor to the valley slopes beyond.

The Khandallah main street is a coherent commercial street predominantly on Ganges Road and is made up of a series of small single-storey shops on the western edge and two storey on the eastern side.

The residential coastal edge that faces the harbour and is out of view of Mount Kaukau is predominantly made of steep coastal edges, narrow street and a high degree of green landscape with expansive view of the harbour. This landscape is not seen from the majority of Khandallah.

There is a gateway landscape experience in Khandallah that the community experience from both the north and the south that comprises of dominantly green residential landscapes and trees often with expansive views to Mount Kaukau.

When considering possible mitigation options, we have suggested mitigation based on the gateway experience, the main street, the valley floor and then one category for all surround slopes including inner and coastal slopes. Standard medium density polices, and guidelines would apply to all Khandallah residential areas with the exception of any name in this report below.

THE GATEWAY INTO KHANDALLAH-BURMA, BOX HILL, COCKAYNE AND KHANDALLAH ROADS.

The high percent of plant cover on both sides of the road into Khandallah forms an import green gateway for the community. The planting that forms this gateway is located on both public land (rail and road easements) and private land.

To protect this gateway character future medium density proposed along this route requires a setback from the property boundary similar to the existing single dwelling setbacks. No parking space should be in the setback with exception of the driveway to enter the garage. A maximum number of street letdown per development should be based on boundary frontage length to limit the amount of hardstand in front of properties.

Street trees where possible along this route should be planted to mitigate the possible visual impact of future medium density. All mature trees within the property boundary that fronts this route should be retained. If there are no mature trees existing in this setback there should be a requirement to plant trees appropriate to the length of the development. All planted trees should meet a minimum height and calliper standard to ensure significant visual mitigation within 5 years. The tree species must be capable of growing to a minimum two storey height within the Wellington's environment.

Main street between Agra Ave and Dekka street.

Replanting street trees in significant planters that will allow growth is suggested on both sides of the Ganges main street to offset the visual impact of possible future medium density and to create a continuous treescape for the community. Consider a maximum building height of two storeys and setbacks that are in keeping with the existing buildings for this commercial street frontage including a continuous Veranda.

Any medium density that has a commercial ground floor must have an active second storey with minimum glazing standards set for facades facing this route.



**Creating a mid-Valley Green Frame- the Box Hill,
Cashmere Ave, Everest Streets Ganges Road**

Plant additional street trees on these wide streets easements to help mitigate the visual impact of future medium density. This will also create a central valley core of treescape that will help to offset any loss of mature street on private property due to medium density housing developments. These street trees will also help ensure the green nature of Khandallah as viewed from the surrounding valley slopes. There are some significant street trees especially the groups of mature trees that should be protected within the road easement.

All mature trees within the property boundary that fronts this route should be retained. If there are no mature trees existing in this setback there should be a requirement to plant trees appropriate to the length of the development. All planted trees should meet a minimum height and calliper standard to ensure significant visual mitigation within 5 years. The tree species must be capable of growing to a minimum two storey height within the Wellington's environment.

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Khandallah Valley Slopes

All mature trees within the property boundary that fronts this route should be retained. If there are no mature trees existing in this setback there should be a requirement to plant trees appropriate to the length of the development. All planted trees should meet a minimum height and calliper standard to ensure significant visual mitigation within 5 years. The tree species must be capable of growing to a minimum two storey height within the Wellington's environment.



KEY FEATURES

Khandallah is centrally divided by the transportation corridor of Khandallah/Boxhill/ Cockayne and Burma roads and the associated railway line which provides good public transport options to the community. The town centre is just east of this transport corridor and is not visible from the main transport corridor. The range of public transport choices is supported by the community's high use of these public transport options.

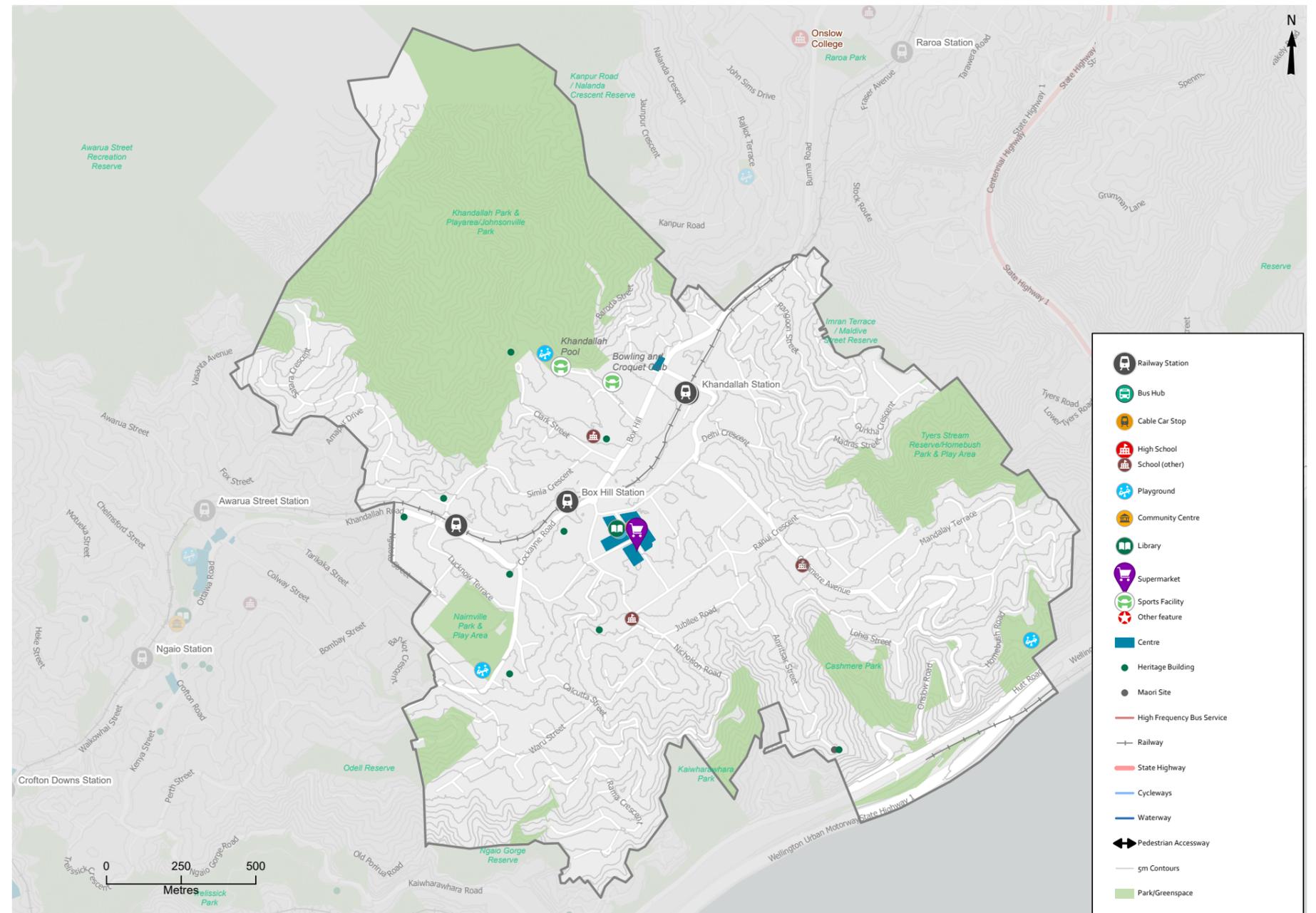
Khandallah has a good main street town centre and supermarket which are a short walk from the train stations.

Khandallah is also close to Wellington central city for employment and has good cycleway connections into the city.

All this community and city infrastructure provides good options for creating accessible amenity for future density.

The key features that might be the core drivers to encourage density in Khandallah are around the transportation corridor and the town centre, such as:

- Good walkability to three railway stations that allows for good public transport access into Wellington city for employment and leisure.
- A supermarket within the town centre and within 300m of a train station supports a good walkable catchment.
- A strong town centre with diverse offerings such as retail, commercial, library allows residents to work and play within their neighbourhood.
- A high frequency bus route to provide transport options for medium density development.



EVALUATION

AMENITY AND HAZARDS HEAT MAPS

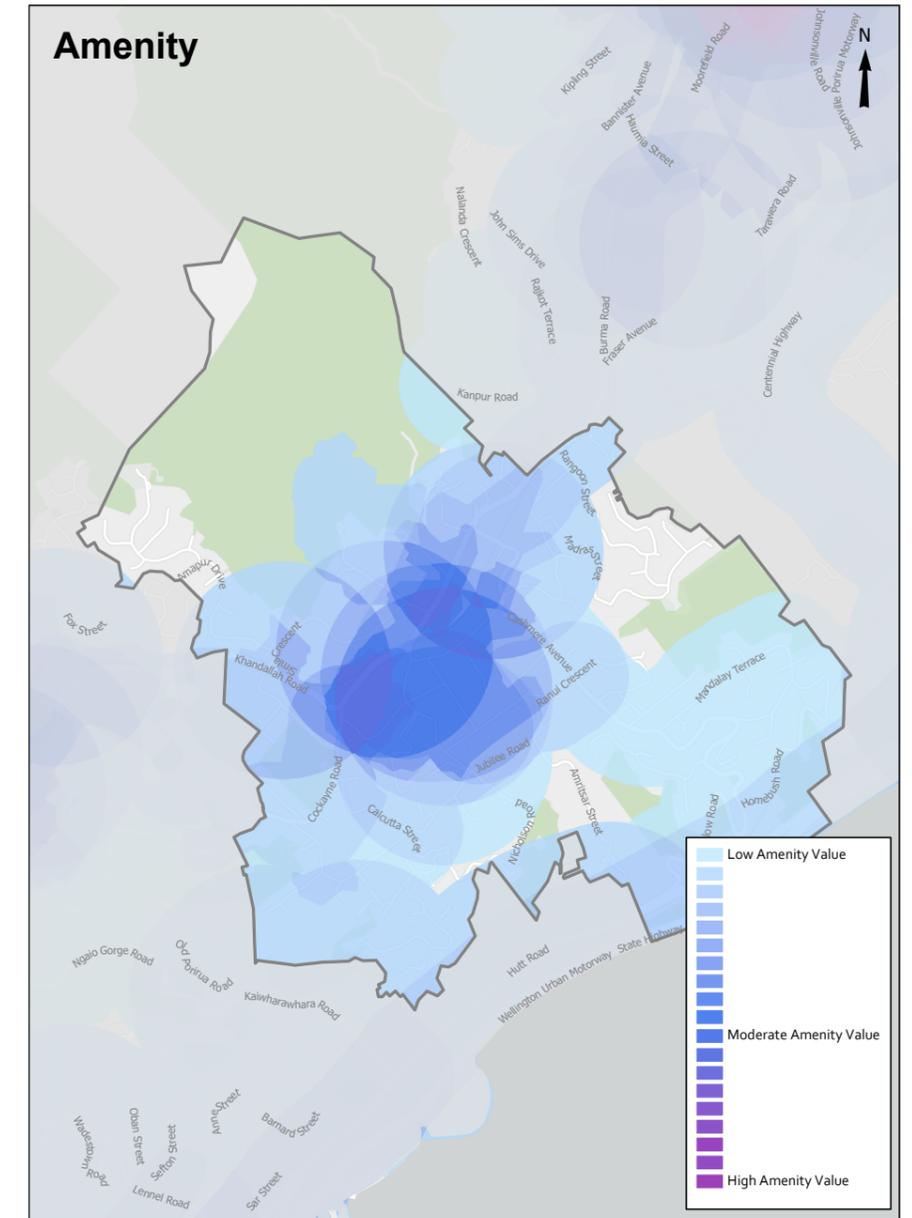
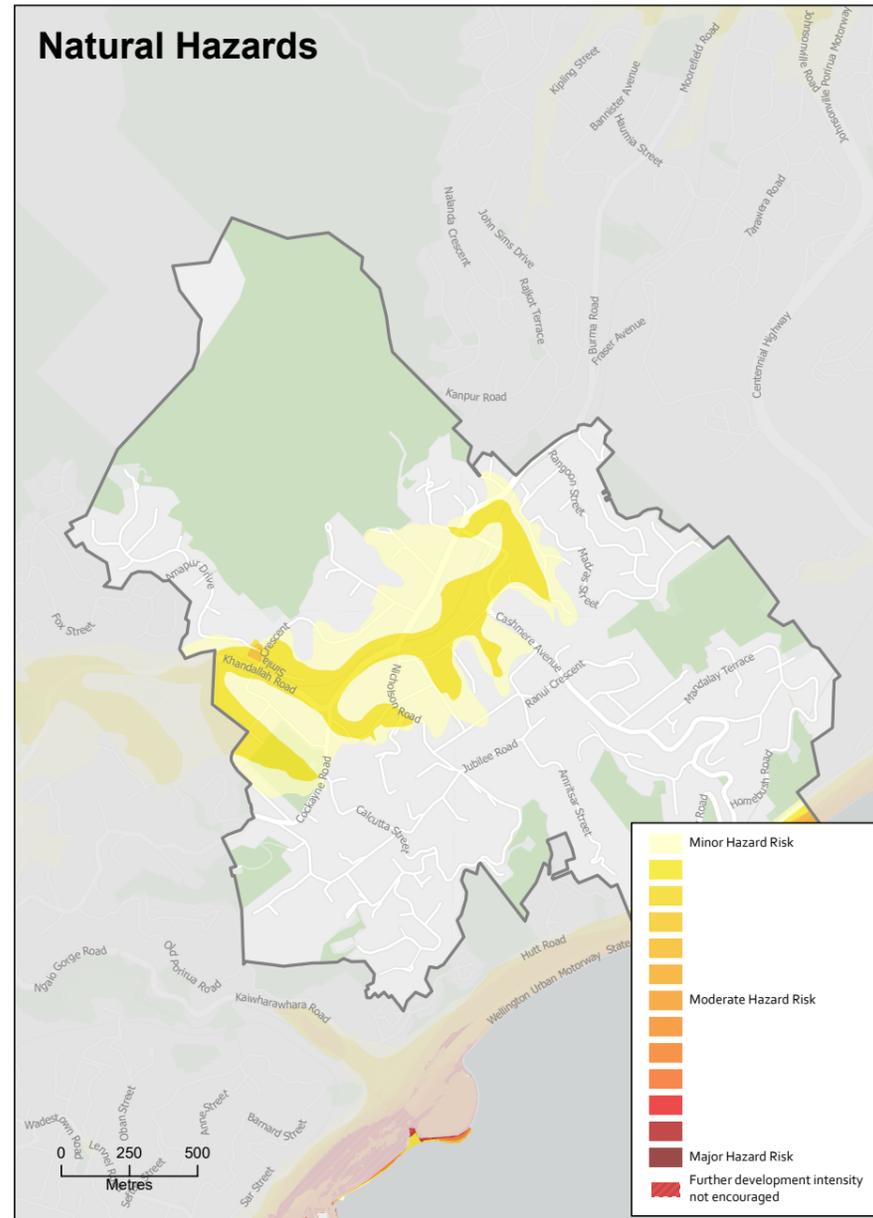
In comparison with many of Wellington's neighbourhoods, Khandallah has few hazards. In most cases these hazards can be mitigated with infrastructure investments at a neighbourhood level and with building standards at an individual residential section level.

The main hazard issues are a reflection of valley floor location and associated liquefaction and earthquake ground shaking. The main issues are

- Earthquake ground shaking risk which can be managed through investment in building standards.
- Liquefaction prone soils, which can be managed with investment in infrastructure and building standards.

The main amenity values (transport, supermarket, main street, library and open space) have been mapped with a 400m walkability circles shows two main patterns;

- A strong focus on the town centre of Khandallah that has a good retail, amenity and civic values.
- A general linear public transport amenity that follows the road and rail corridor and the high frequency bus route.



EVALUATION

PROPOSED DENSITY

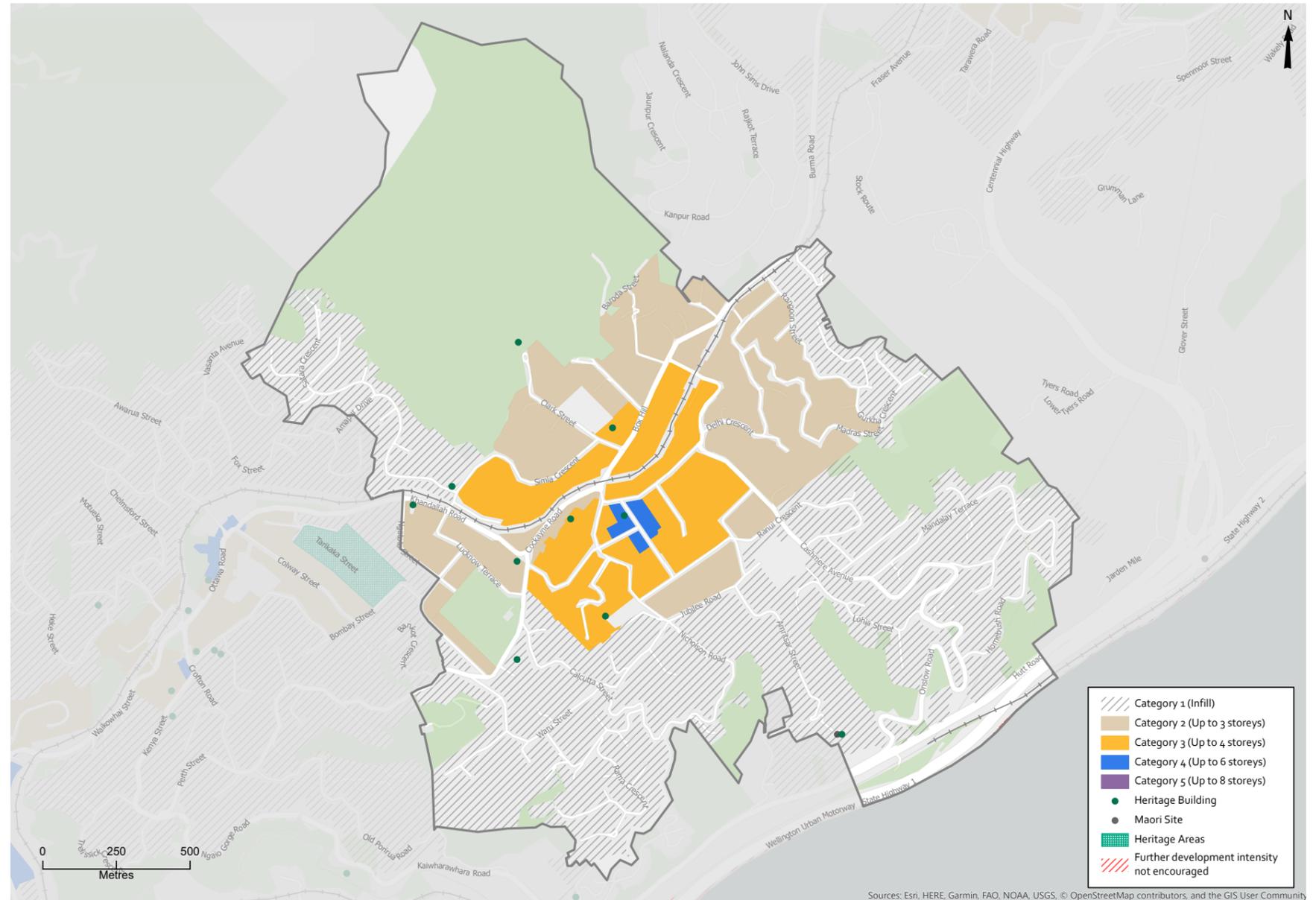
In general, the proposed density follows the values set out by the amenity heat map. The hazards were not considered significant enough to remove potential medium density off the proposed density map.

Category 4 has been placed around the retail, commercial and main street centre to allow for a mix use outcome of retail or commercial on the street level with residential above.

Category 3 tends to be located close to the areas of highest amenity within a walkable range of 400m. Again, these areas have focused on the town centre, railway stations, supermarkets and civic amenity.

DENSITY MAPPING PROCESS

All density categories locations and types for Khandallah were based on analysis of GIS maps, site observations and multi-disciplinary professional collaboration in a two day workshop. This image is of a workshop draft plan used to decide on future density locations. One of the important considerations for Khandallah that influenced the final proposed density mapping was the green gateway landscape and heritage architecture in the main street.

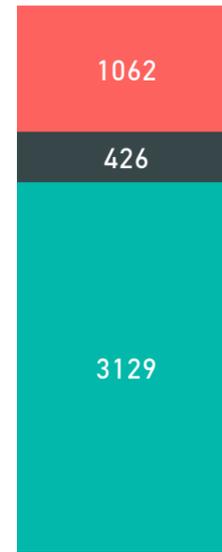


SUBURB SUMMARY

The Khandallah community has a good range of public transport options from a high frequency bus route to three train stations and reasonable cycle access into Wellington central city. The main street has a good retail offering, a library and supermarket. With low infrastructure investment requirements to deliver medium density, Khandallah is a good location for density, which can be seen currently being built in the form of town houses and infill residential development. These factors support medium density.

It is suggested that the following be considered to support medium density zoning:

- A heritage character assessment to assess if there are other heritage areas that should be considered and how that might influence medium density zoning.
- An open space assessment to identify future investment in more land or amenities on existing land.
- An urban tree assessment to assess if tree protection should be considered and how that might influence medium density zoning.

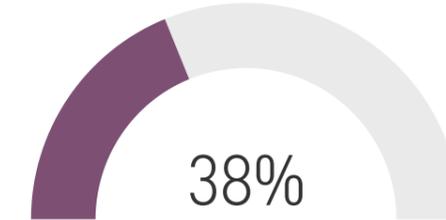


● Existing Dwellings ● Infill Dwellings ● Potential New Dwellings

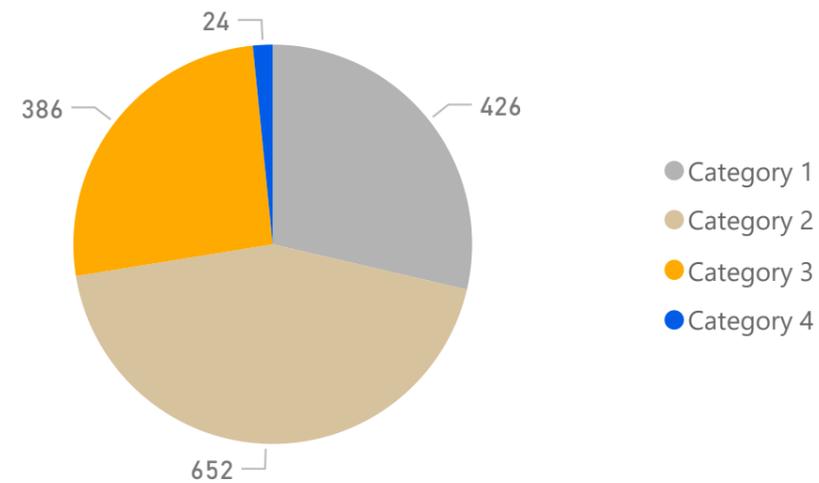
Potential New Dwellings Over Next 30 Years



Land Suitable to Support Growth (Categories 2-5)

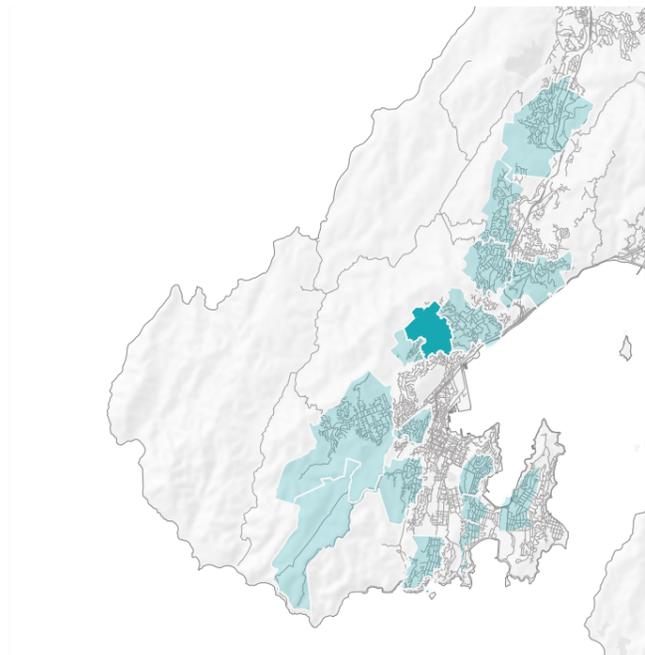


Estimated New Dwellings by Category



The estimation of theoretical dwellings shown here are an indication only. Note that an 'uptake factor' has been applied to these numbers to more accurately reflect that not every available site will be developed. For the methodology surrounding this please refer to the front section of this report.

NGAIO



With the first house built in 1843, Ngaio was known variously as the Old Porirua Road District, Upper Kaiwhara, or Trelissic, but commonly became known as Crofton. Settlement in Ngaio was boosted by the construction of the railway through the area.



Figure 10

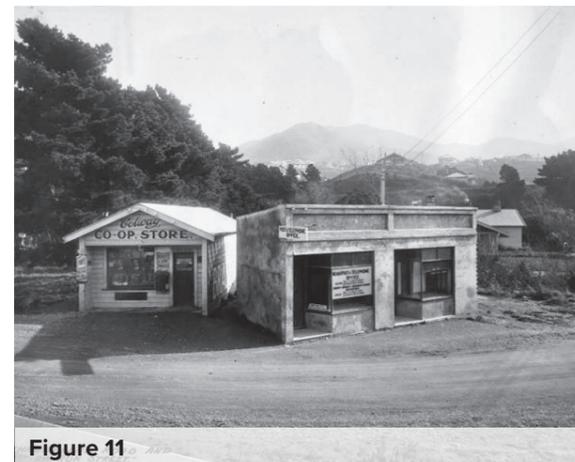


Figure 11

CHARACTER SUMMARY

Ngaio is a small suburb located approximately 7km north of the city centre, with relatively easy access to the city centre via rail and cycle along Ngaio Gorge Road. The streets are sloped and buffered by mature planting, they wind around the valley with no visual cues to the centres. There are suburb centres in Ngaio, both small in scale and characterised by a line of shops along Ottawa Road. The main centre sits within the lowest point in the topography and is prone to flooding. Ngaio is well known for its collection of railway cottages of heritage value.



SITE VISIT NOTES

LANDSCAPE

Ngaio is located within a valley inland from the harbour, with a gradual slope to the east and steeper slope to the west. There is a strong green character and high density of vegetation associated with treed ridgeline and hills to the west and mature private gardens and established trees within the suburb.

The northern walkway runs through Ngaio and is associated with the road and rail corridor which threads through the base of the valley.

URBAN DESIGN

There are suburb centres in Ngaio offering small scale convenience based retail for day to day needs. The larger is located on the Ottawa Road within a few minutes walk to the Awarua Street rail station and the smaller on Crofton Road within a few minutes of Ngaio rail station. Wayfinding and access to the rail stations from the suburb centres is difficult, particularly Awarua Street station which can only be accessed by foot.

Both centres are strip style centres with a singular retail edge; the shops are located on one side of the street and residential on the other. There are several community facilities such as the library, community centre, park and schools located nearby. Both centres are located along arterial roads with high movement function and limited pedestrian cross movement. The windy streets and blind corners limit the ease of access to and around the centres.

Ngaio is supported by great public transport; rail stations and standard and off peak bus services to the city centre. Ngaio Gorge Road is a popular route for both vehicles and cyclists into the city centre.

ARCHITECTURE

Ngaio has a few landmark buildings around its area. Housing styles and ages appear to be relatively diverse with examples from 1920's or so onwards mixed together.

A particular notable cluster of housing are the Railway houses on Tarikaka Street. Housing is predominantly detached, both single and double storeyed, with only very few examples of multi-unit housing observed.

The centre is unusually spread predominantly along one side of the road only. It is made up of a varied group of mainly older single storey buildings with some two storeyed examples stepping down the hill behind.

The 2008 Boffa Miskell report shows that about 60% of parcels in Ngaio and Khandallah (including Kaiwharawhara) measure between 400 and 800 m², with the remaining categories (less than 200m², 200-400 m², 800-1,000 m², and over 1,000m²) each accounting for about 10% of lot sizes. These two suburbs have the highest proportion of lots over 1,000m² in comparison with Island Bay and Kelburn. Only about a quarter of lots have site coverage ratios higher than 35%, and homes are predominately 1-storey, with only about 5% rising over two.

HERITAGE

Ngaio, like Crofton Downs, and Khandallah, was an early timber area, and then became used for farming. The area is defined by the topography, and the road and train routes.

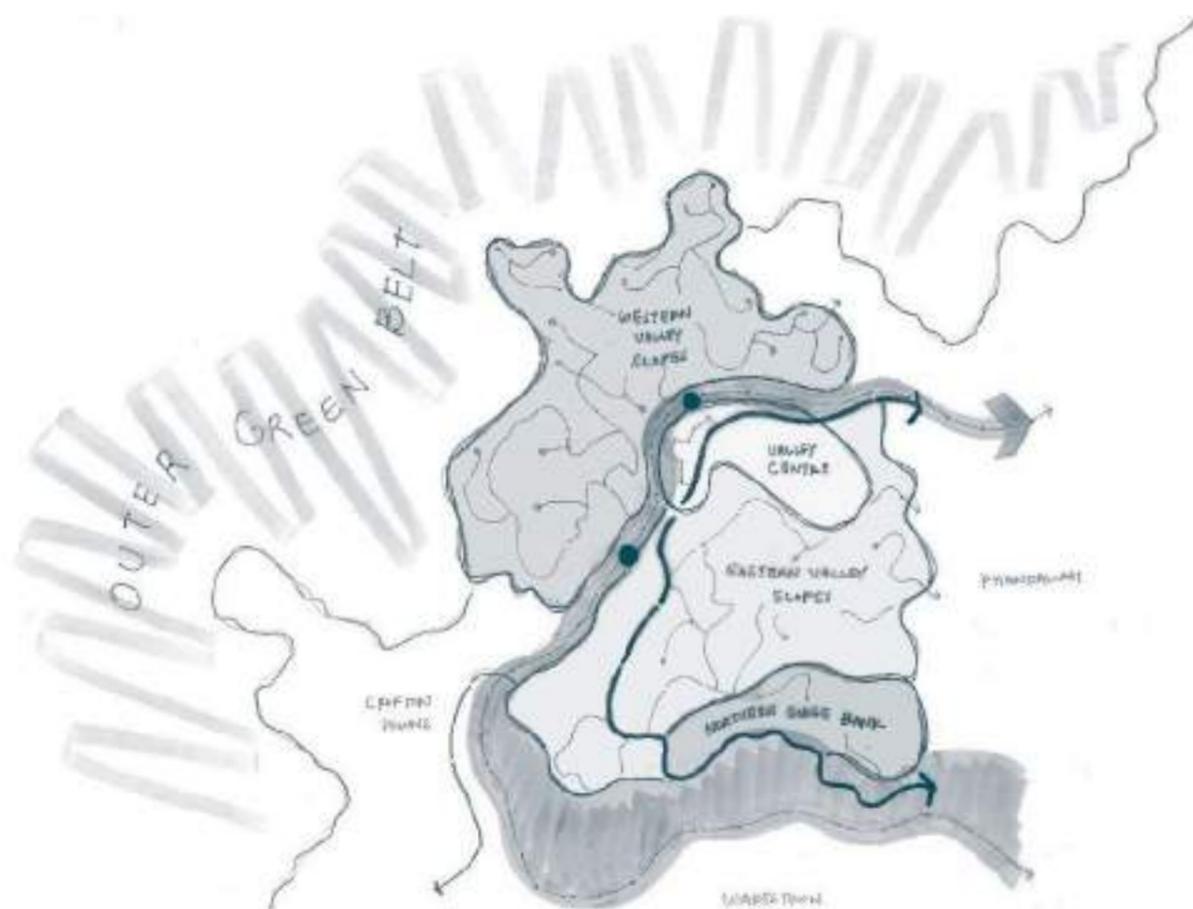
The Anglican Church with the square tower, and the townhall are landmarks, and past stalwarts of the community's identity.

The commercial architecture of the village is not notable, but the space has an overall charm born of the established vegetation, and the proximity of attractive domestic architecture. Together these give an intimate village feel to the area.

Ngaio contains some notable domestic architecture (Chapman Taylor designs), and an interesting selection of villas, Californian bungalows, and English cottage styles.



CHARACTER ASSESSMENT



Ngaio’s quiet and intensely green character belies its location as a 15-minute train ride from the Central City. Mature native and exotic trees, within both the public and private realm, give this suburb its notably leafy structure and evoke its history of timber industry.

Located in an inland valley, Ngaio’s western slopes, which lead up to the Outer Green Belt, are markedly steeper than its more gradual, undulating eastern half. The green

corridor following Ngaio Gorge – and containing the rail line, Northern Walkway, and Korimako and Kaiwharawhara Streams – divides the east and west valley slopes and defines much of Ngaio’s edge to the south. Views toward the escarpment banks within this green corridor from residences and public spaces are a major contributor to Ngaio’s natural feel.

NORTHERN GORGE BANK

The entrance to Ngaio from Central Wellington winds through the lush and narrow Ngaio Gorge, which follows Kaiwharawhara Stream. From the mostly commercial village of Kaiwharawhara at the mouth of the valley, Ngaio Gorge Road is the main gateway to Ngaio, a green and winding kilometre of roadway emptying onto Kenya Street which leads on to the Ngaio Village centre.

By passing Ngaio Gorge Road is Old Porirua Road, a 3.2-m wide track of a road that climbs above the main roadway to the top of the gorge escarpment. Houses here are tucked away in the extreme topography, carving out their spaces in a swath of otherwise unfragmented bush and possessing no street presence apart from the occasional driveway entrance, street-level garage, or car deck.



VALLEY CENTRE

Ngaio Village sits between Ottawa Road (the suburb’s main street) and the rail line, showcasing the Town Hall, local library, and an 1860s farmhouse among a stretch of retail and commercial buildings. Alders line the stream in Cummings Park, tucked behind the shops, where an old totara can be found.

Extending out from this strip, Colway and Tarikaka Streets comprise the rest of this relatively flat zone in the centre of the wider valley.

Colway Street, extending axially out from the Village, has a narrow carriageway but a generous verge and housing setback that allows room for a mix of mature exotic deciduous trees – including copper beech and oak – and natives, particularly large ngaios and pohutukawas. Many of the street-facing houses are 1-storey bungalows, and most property frontages along the north side of Colway are already double-loaded, long driveways accessing one and two storey houses at the far end of the elongated sections.

An existing multi-unit development near the corner of Ottawa Rd is made of 3-storey detached townhomes that have left little room for trees, leaving bare the building faces which contrast strongly with the far more articulated facades of the older homes along Colway.



Perched slightly above Colway, Tarikaka Street displays a notable cluster of workers’ cottages built by the Railway Department between 1928-1929. When the New Zealand Railways Corporation sought in the 1980s to sell off the properties collectively – as they were attempting to with workers’ settlements across the country – to an “Auckland business man”, the Ngaio Residents’ Housing Committee formed a Trust and waged a seven-year legal battle for the railway workers’ right to purchase the lots themselves and maintain the character of the settlement, a feat not achieved by most other historic New Zealand railway communities. The settlement is now a listed heritage area.

EASTERN VALLEY SLOPES

The eastern slopes of Ngaio above the railway corridor and Valley Centre sport an undulating topography lined with roads that wind through well-tended gardens and greenery. Most of the homes in this area are detached 1-2 storeys dating to the mid-twentieth century and sit on generously sized sections that allow ample room for front, rear, and side yards – with separation distances varying but usually measuring between 5 and 10 metres, and setbacks rarely less than 10 metres. Despite the changes in grade, and with the exception of Cockayne Road, most houses are visible from street level, even beyond curving driveways that reach up to 25 metres in length.

Along Cockayne Road and Trelissick Crescent, garages often line the road reserve, interspersed by native bush near Trelissick Park, and car decks and garden planting along Cockayne Road. Elsewhere, fences occasionally line property boundaries.

WESTERN VALLEY SLOPES

Winding even just a few streets up above the train stations along Ngaio's central corridor grants wide views of green hillsides dotted ceaselessly by white houses, framed by Te Ahumairangi Hill in the distance. Steeper than the eastern half of Ngaio, a strong green character is created along the western slopes by informal vegetation grown almost entirely in the private realm. Houses along these sloping sections have the feeling of being tucked into the regenerating bush of the Outer Green Belt.

A branching street network spreads along the western valley, with frequent dead ends terminating in pedestrian accessways. The homes are sizable, 2-3 storey detached contemporary (mostly 1970s) homes, some quirky and colourful. A few 1920s and 1930s properties can be found along the lower slopes.

Along roads that run parallel to the contour lines, houses mostly appear above (upslope) or below (downslope) street level depending on which side they sit, whereas roads running straight toward the ridgeline, usually up side valleys

typically are lined with houses at street level. Along the later type, most front doors are visible from the street and homes have a strong street presence.

Large lot sizes (measuring around 800 – 1000 m²) are married with low site coverage – a minimum 5-metre frontage setback can range up to 20 metres, and separation distances vary between 2 metres (as observed on Huntleigh Park Way) up to 15 metres between some houses on Fox Street. The banks of steep roads like Fox Street are lined alternately with crib retaining walls and veritable green walls of vegetated road cuts. On the downslope side, dense plantings of tree ferns, ngaio, pohutukawa, cabbage tree, and exotic agapanthus is intermittently dotted with car decks and detached garages at the footpath and road edge. Fences are rare yard treatments on this side of the suburb.



POSSIBLE MITIGATION APPROACH

Ngaio is made up of predominantly four suburb characters and all are consistently green in nature; valley slopes, valley floor, main street and gateway corridor.

The tree clad valley slopes have the wide bands of unbroken bush cover on rail easements and along the top slopes of the ridge. The residential areas along these slopes also have a high portion of tree cover forming a significant green visual back drop to the suburb. The southern slopes have similar green characteristics with less percent of tree cover due to more dwellings and lack of green infrastructure easements and public open space.

The base of the Valley is around the Ottawa Road, Korimoko Stream, Cummings park, Colway street Bombay, Aplin and Abbott Streets and is comprised of significant trees on private property, green road easements and with the exception of Colway and Bombay narrow streets. This green Valley floor forms a green foreground for many residents looking across the valley floor to the slopes beyond.

The Ngaio main street is not coherent and is made up of a series of small shops along Ottawa Road and Crofton Road with residential houses between clusters of shops. The nature of this landscape tends to be green due to the high portion of residential gardens along the main street.

There is a gateway landscape experience that Ngaio that the community experience from both the north and the south that comprises of dominantly bush and trees often with expansive views to Mount Kaukau. When considering possible mitigation options, we have suggested mitigation based on these four different character areas as outlined below. Standard medium density polices, and guidelines would apply to all Ngaio residential areas with the exception of any name in this report.

THE GATEWAY INTO NGAIO-KHANDALLAH ROAD, OTTAWA TO WAIKOWHAI STREET

The high percentage of plant cover on both sides of the road into Ngaio forms an import green gateway for the community. The planting that forms this gateway is located on both public land (rail and road easements) and private land especially steep road cuts that are planted like the along the Tarikaka Village edge on Khandallah road.

To protect this gateway character future medium density proposed along this route requires a setback from the property boundary similar to the existing single dwelling setbacks. No parking space should be in the setback with exception of the driveway to enter the garage. A maximum number of street letdown per development should be based on boundary frontage length to limit the amount of hardstand in front of properties.

Street trees where possible along this route should be planted to mitigate the possible visual impact of future medium density. All mature trees within the property boundary that fronts this route should be retained. If there are no mature trees existing in this setback there should be a requirement to plant trees appropriate to the length of the development. All planted trees should meet a minimum height and calliper standard to ensure significant visual mitigation within 5 years. The tree species must be capable of growing to a minimum two storey height within the Wellington’s environment.

Main street between Colway Street to the Town hall roundabout

In addition, the suggested rules for the gateway outlined above we would suggest planting additional street trees were possible on both sides of the Parade to offset the visual impact of medium density on this section and to create a continuous treescape gateway for the community. Consider a maximum building height of two storeys and setbacks that are in keeping with the existing buildings for this commercial street frontage including a continuous Veranda.



Any medium density that has a commercial ground floor must have an active second storey with minimum glazing standards set for facades facing this route.

Creating a mid-Valley Green Frame- Colway, Bombay, Abbott Streets and Aplin Terrace

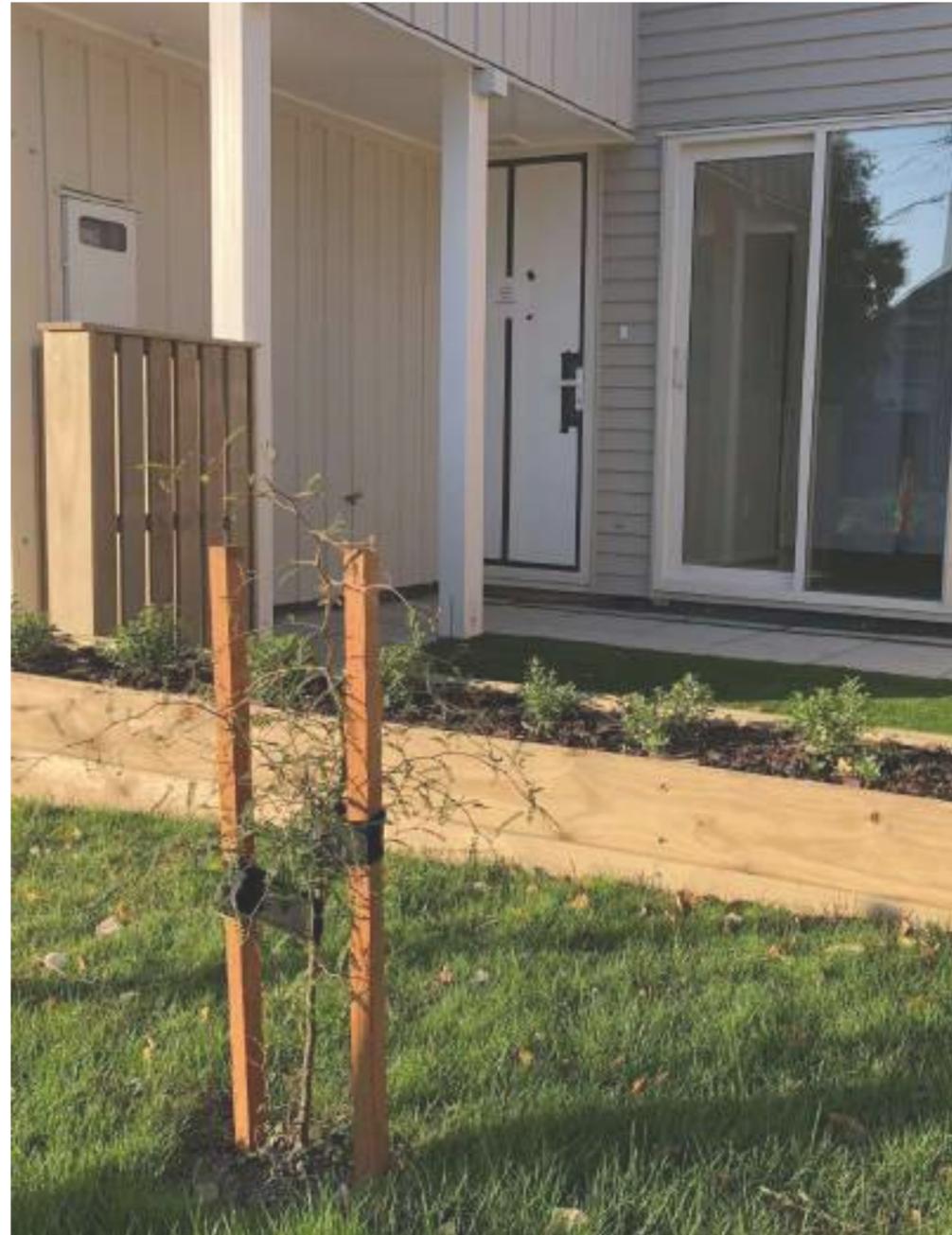
Plant additional street trees on these streets to help mitigate the visual impact of future medium density. This will also create a central valley core of treescape that will help to offset any loss of mature street on private property due to medium density housing developments. These street trees will also help ensure the green nature of Ngaio as viewed from the valley slopes. There are some significant street trees that should be protected with the road easement.

All mature trees within the property boundary that fronts this route should be retained. If there are no mature trees existing in this setback there should be a requirement to plant trees appropriate to the length of the development. All planted trees should meet a minimum height and calliper standard to ensure significant visual mitigation within 5 years. The tree species must be capable of growing to a minimum two storey height within the Wellington's environment.

Future medium density proposed along this route requires a setback from the property boundary similar to the existing single dwelling setbacks. No parking space should be in the setback with exception of the driveway to enter the garage. A maximum number of street letdown per development should be based on boundary frontage length to limit the amount of hardstand in front of properties.

Ngaio's Tree Clad Valley Slopes

All mature trees within the property boundary that fronts this route should be retained. If there are no mature trees existing in this setback there should be a requirement to plant trees appropriate to the length of the development. All planted trees should meet a minimum height and calliper standard to ensure significant visual mitigation within 5 years. The tree species must be capable of growing to a minimum two storey height within the Wellington's environment.



KEY FEATURES

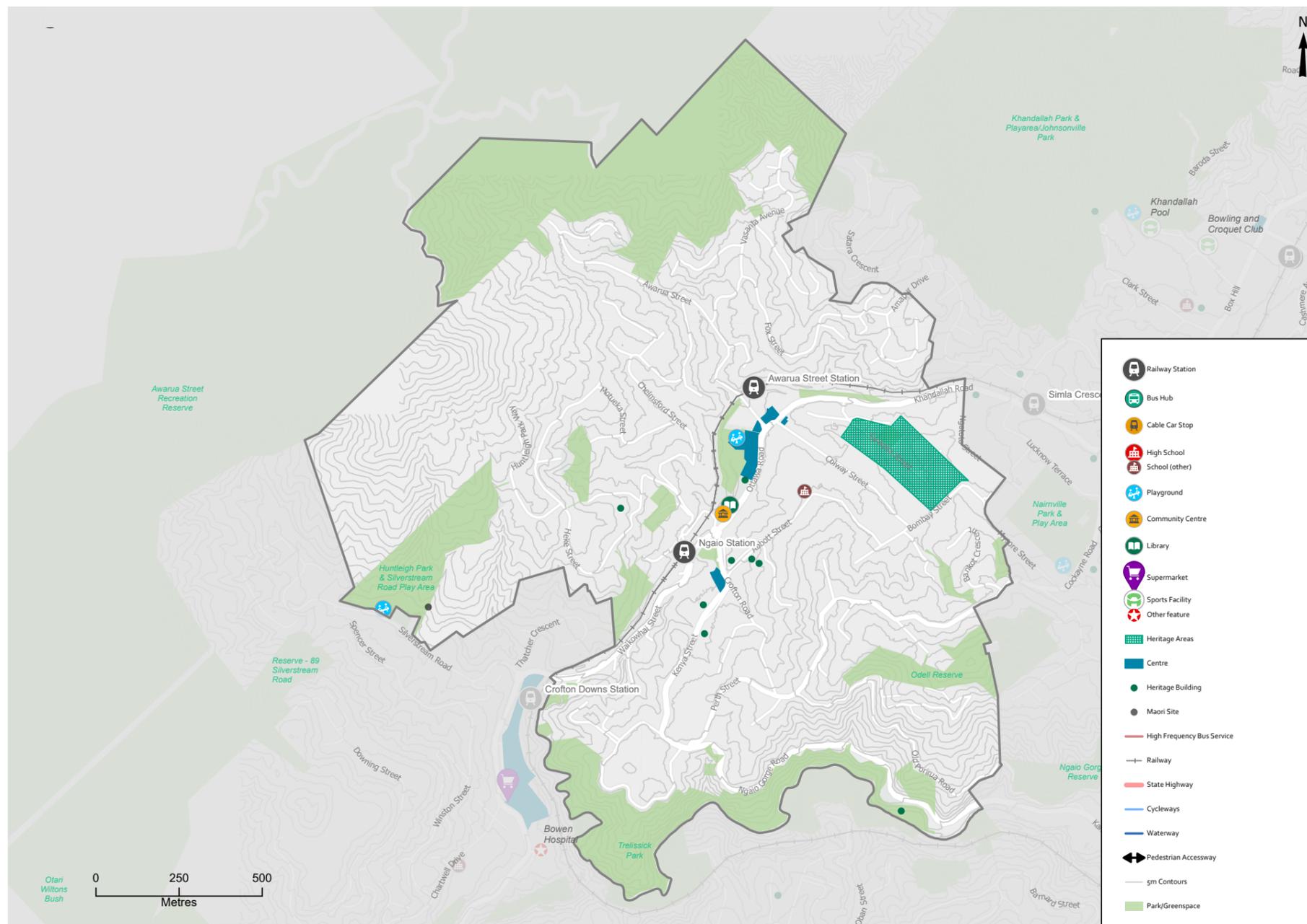
Ngaio is centrally divided by the transportation corridor of Khandallah Road and associated elevated railway line which together provide good public transport options to the community but reduce walkability across the valley. Ngaio has limited collections of shops predominately on the western edge of Ottawa Road and the lack of a main street results in a gateway landscape character for the community. There is no supermarket in the neighbourhood, and residents travel to Crofton Downs, Johnsonville or Thorndon for groceries.

There is good range of public transport choices supported by the community's high use of these public transport options including train stations and a bus route.

Ngaio is also close to the Wellington central city for employment and has a partial cycleway connection via the Kaiwharawhara Gorge into the city.

The key features that might be the core drivers to encourage density in Ngaio are around the rail and Khandallah Road transportation corridor. These include:

- Good walkability to two railway stations that allows for good public transport access into Wellington city for employment and leisure.
- A bus route to provide transport options for medium density development.



EVALUATION

AMENITY AND HAZARDS HEAT MAPS

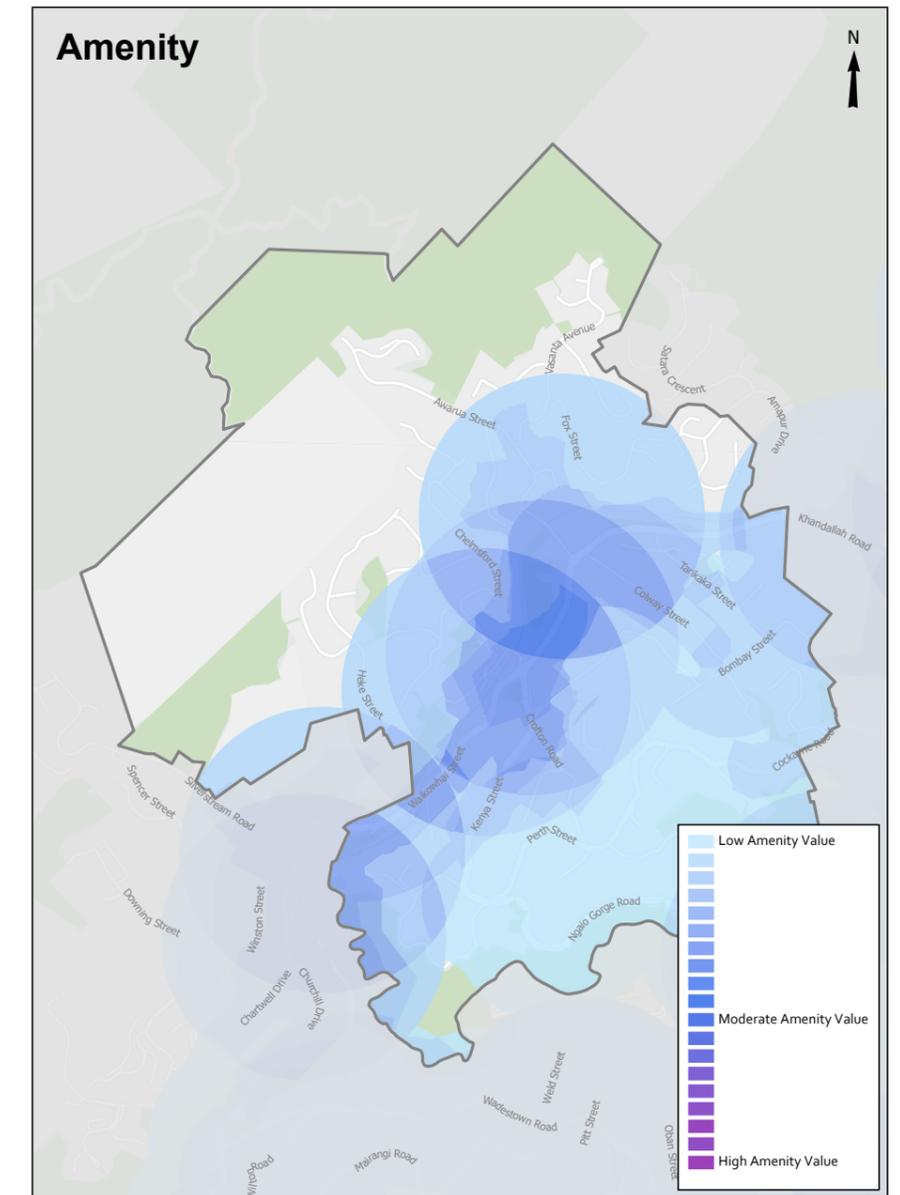
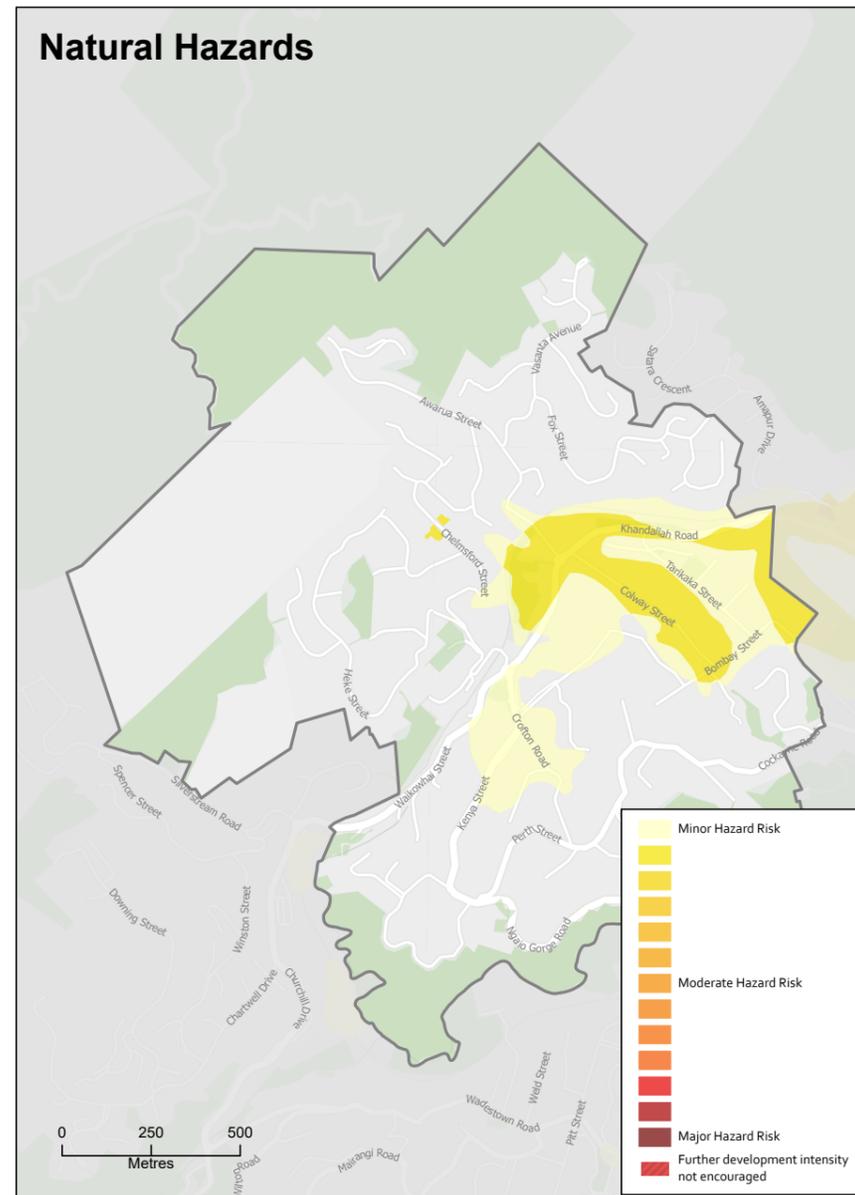
In comparison with many of Wellington's neighbourhoods, Ngaio has few hazards with the exception of one area of flooding around Awarua Street. In most cases these hazards can be mitigated with infrastructure investments at a neighbourhood level and with building standards at an individual residential section level.

The main hazard issues are a reflection of valley floor location and associated liquefaction and earthquake ground shaking. The main issues are

- Korimako Stream flooding the lower reaches of Awarua Street and nearby reserve
- Earthquake ground shaking risk can be managed through investment in building standards.
- Liquefaction prone soils, which can be managed with investment in infrastructure and building standards.

The main amenity values (transport, library and open space) have been mapped with a 400m walkability circles shows the main pattern being:

- A general linear public transport amenity that follows the road and rail corridor.



EVALUATION

PROPOSED DENSITY

In general, proposed density follows the values set out by the amenity heat map. The hazards were not considered significant enough to remove proposed medium density off the proposed density map with the one exception being around Awarua Street.

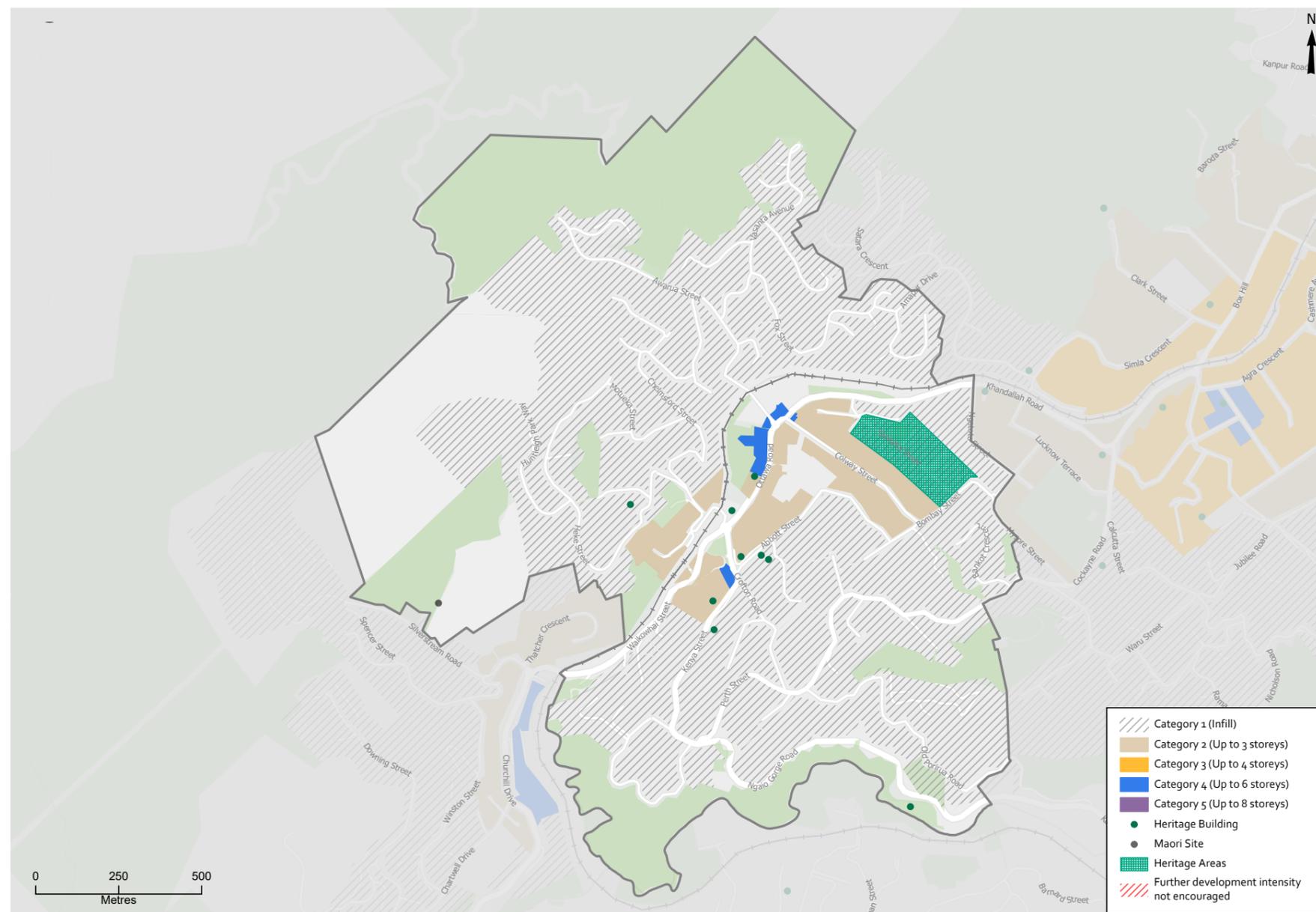
Category 4 has been placed around the retail edge area on Ottawa Road to allow for a mix use outcome of retail or commercial on the street level with residential above.

Category 2 tends to be located close to the areas of highest amenity within a walkable range of 400m. Again, these areas have focused on the railway stations and civic amenity. Generally medium density area has been limited to the valley floor areas or the lower slopes of Ngaio.

It was acknowledged that the existing road networks on the upper slopes of Ngaio are narrow and would not support medium density without a possible negative impact on the road network. Hence the medium Category 2 density is limited to the areas that are walkable to the rail stations and Ottawa Road.

DENSITY MAPPING PROCESS

All density categories locations and types for Ngaio were based on analysis of GIS maps, site observations and multi-disciplinary professional collaboration in a two day workshop. This image is of a workshop draft plan used to decide on future density locations. One of the important considerations for Ngaio that influenced the final proposed density mapping was the green gateway landscape, heritage architecture and the severance of the mid valley railway line.

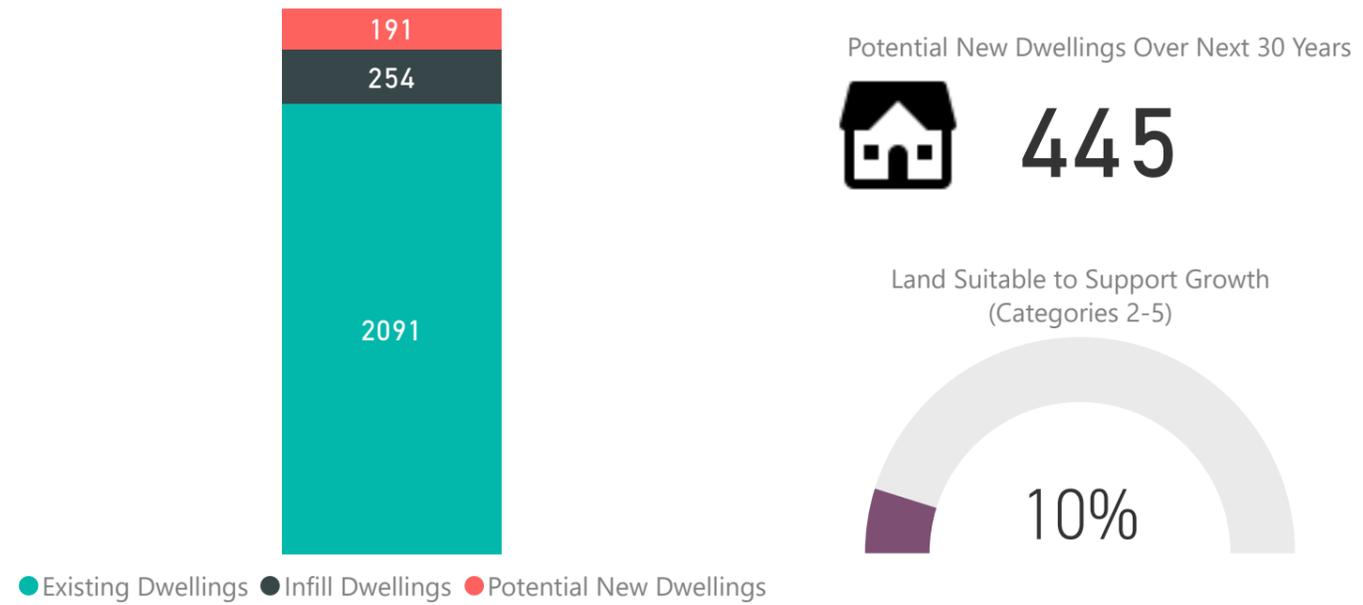


SUBURB SUMMARY

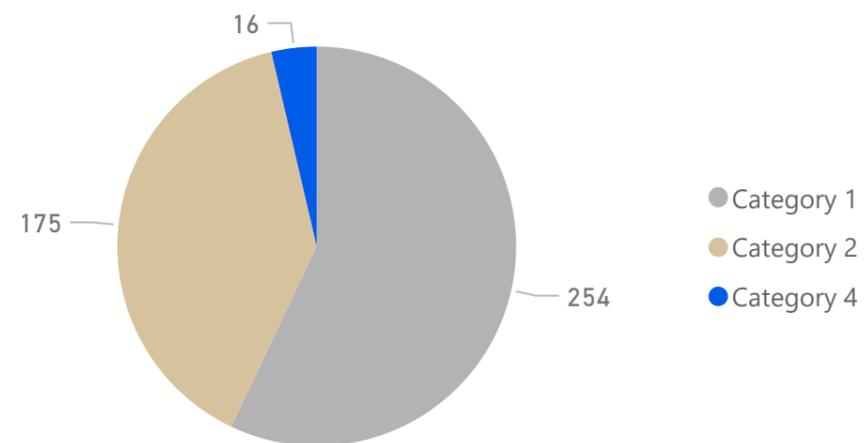
The Ngaio community has a reasonable range of public transport options, but a limited range of retail and community infrastructure to support medium density. Ngaio's low infrastructure investment requirements makes some medium density possible. These factors support limited medium density development in Ngaio.

It is suggested that the following be considered to support medium density zoning:

- A heritage character assessment to assess if there are other heritage areas that should be considered and how that might influence medium density zoning.
- An open space assessment to identify future investment in more land or amenities on existing land.
- A community centre assessment to identify future investment in amenities on existing land or buildings.
- An urban tree assessment to assess if tree protection should be considered and how that might influence medium density zoning.



Estimated New Dwellings by Category



The estimation of theoretical dwellings shown here are an indication only. Note that an 'uptake factor' has been applied to these numbers to more accurately reflect that not every available site will be developed. For the methodology surrounding this please refer to the front section of this report.

CROFTON DOWNS

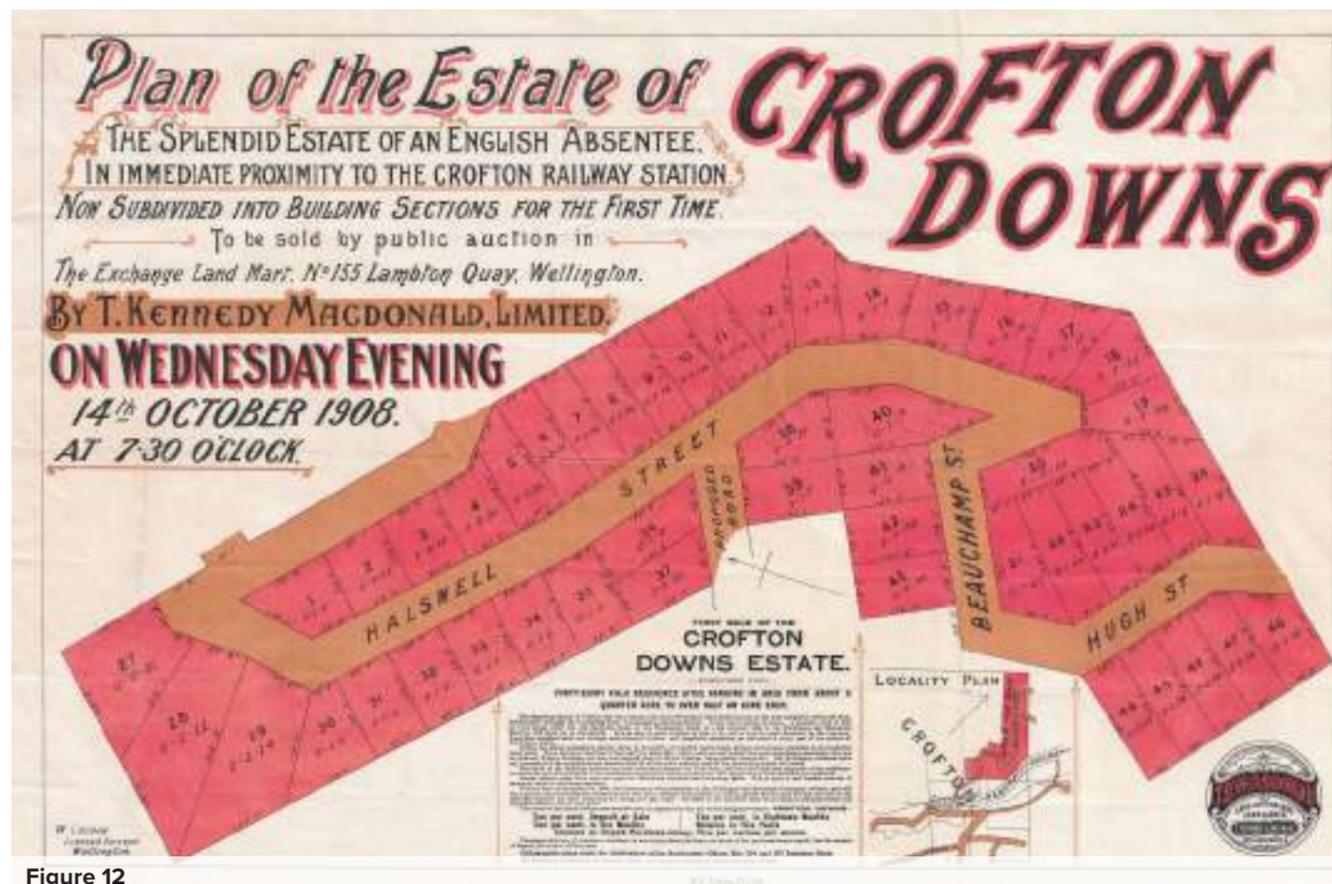
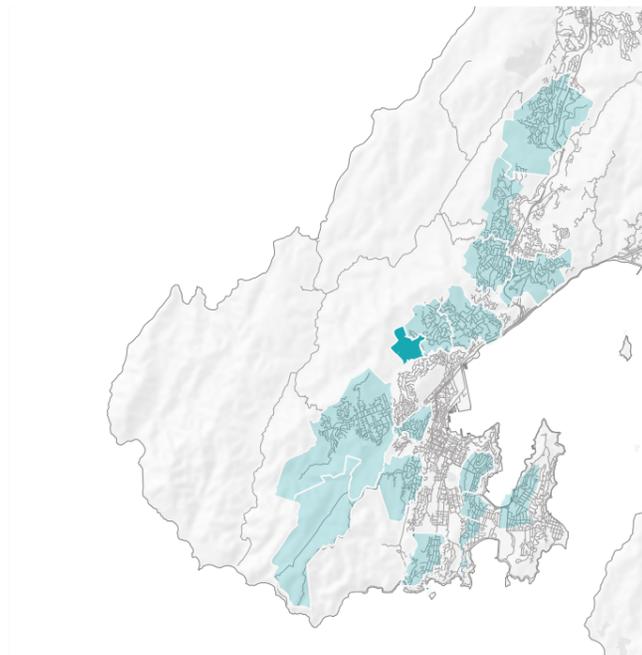


Figure 12

Crofton Downs takes its name from a house built in the 1860s by then Premier, William Fox. The house was possibly named after his wife's birthplace.

CHARACTER SUMMARY

Crofton Downs is a small suburb located approximately 7km north west of the city centre tucked into the foothills of the Green Belt. It is characterised by detached housing along the steep escarpment and a big box retail strip anchored by a supermarket, a Mitre 10 and the Bowen Hospital. It is well connected by rail with the station located at the rear of centre.

SITE VISIT NOTES

LANDSCAPE

Crofton Downs is situated on a very steep elevated valley and is characterised by steep vegetated escarpments either side of the road corridor.

The big box nature of the existing retail and severance from the adjacent residential suburb, created by the main road and steep escarpments, do not promote a pedestrian friendly environment.

The exposed nature of the valley has resulted in a poorer quality of vegetation associated with a regenerating hillside.

URBAN DESIGN

Whilst the centre located in Crofton Downs is classified as a district centre, it is actually a large format retail business zone with a carpark situated on a long linear parcel of land. It comprises a supermarket, a big box Mitre 10, and a service station. The Bowen Hospital complex is situated south of the centre.

The centre is located along a busy arterial road with two zebra crossings at the north and south of the site. The topography, poorly connected street network and arterial road limit the walkability and access to the centre.

The suburb is well serviced by public transport. Crofton Downs rail station is located at the rear of Mitre10 with a park and ride located at the northern point of the site.

Standard and off peak bus services provide an alternative connection in to the city centre.

ARCHITECTURE

Crofton Downs was established as a suburb in the mid-20th century and its housing is predominantly detached housing from this period through to 1980's. The majority of housing appears to be two storied with some variety in building styles and sizes reinforced by the variety in lot sizes – though a significant recent subdivision is very homogenous.

The area lacks higher density options though that has begun to change with an example of recent townhouse multi-unit housing on Thatcher Crescent. Crofton Downs lacks significant landmark buildings with only a linear sequence of big-box outlets acknowledging its community centre.

HERITAGE

The area now known as Crofton Downs was previously covered in native bush. This was a source of food for Māori and also timber. In 1839 the New Zealand Company purchased land including Crofton Downs and Ngaio, and logging commenced. Crofton Downs retained dairy farms up to the the 1940s and was slowly subdivided for housing.

Crofton Downs takes its name from a house built in the 1860s by then Premier, William Fox. The house was possibly named after his wife's birthplace. The street names in the suburb are a tribute to the life of former British prime minister Sir Winston Churchill. It took longer to develop than Ngaio, and still had dairy farms in 1940s.

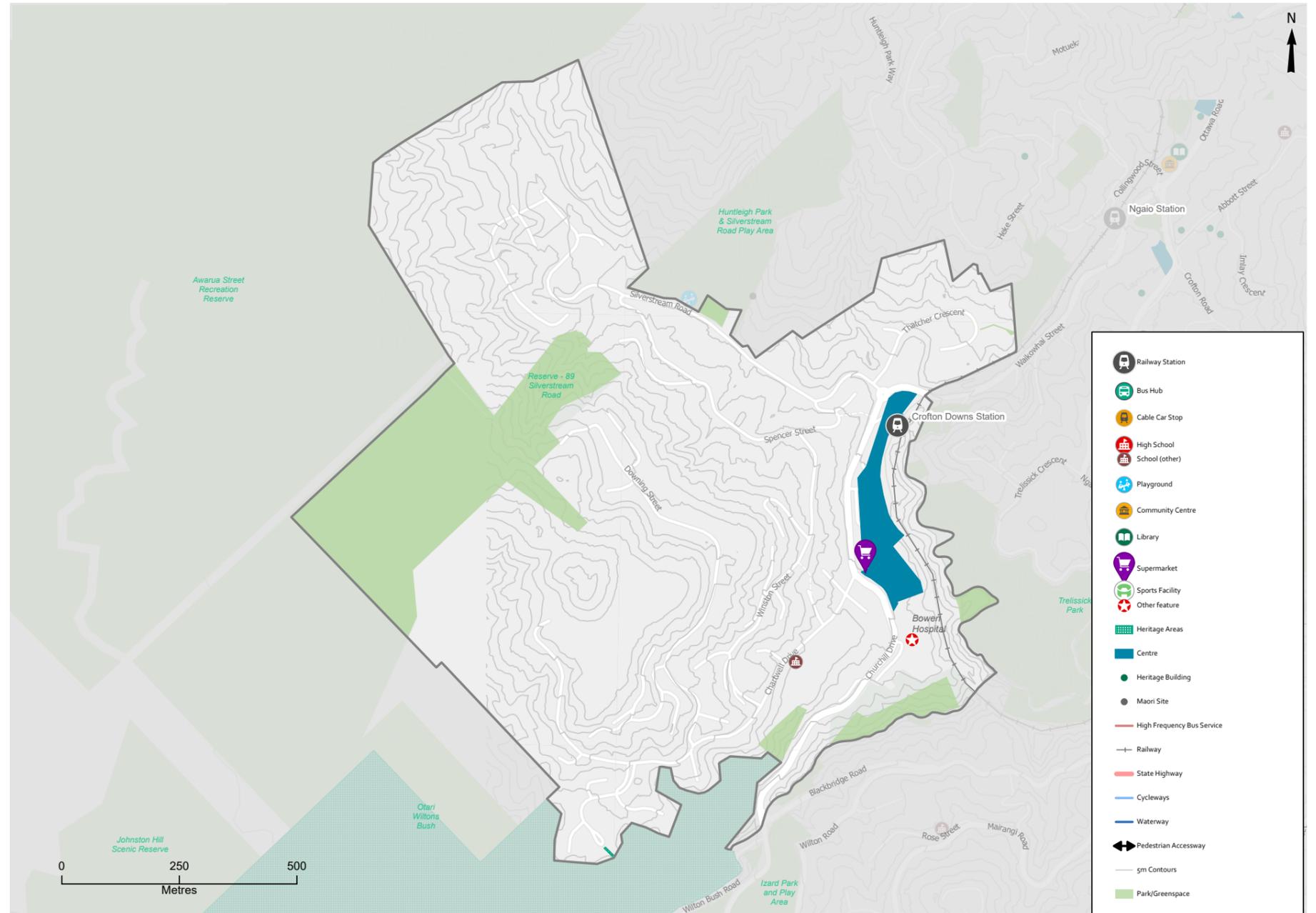


KEY FEATURES

Churchill Drive and the Johnsonville Railway line define the eastern edge of Crofton Downs which provide good public transport options to the community but is a barrier to across valley connections such as the Kaiwharawhara Gorge walkways connecting into the city or Trelissick Park. Crofton Downs has some large format retail and a super market but other retail offerings are limited.

The key features that might be the core drivers to encourage density in Crofton Downs are around the rail and Churchill Road transportation corridor and the supermarket. These include:

- A railway station with one stop into Wellington city for employment and leisure. However Crofton Downs has average walkability access to railway station due to steep slopes, a long earth embankment and a busy Churchill Road that reduces community access to the railway station.
- A bus route to provide transport options for medium density development.
- A supermarket and some limited retail.



EVALUATION

AMENITY AND HAZARDS HEAT MAPS

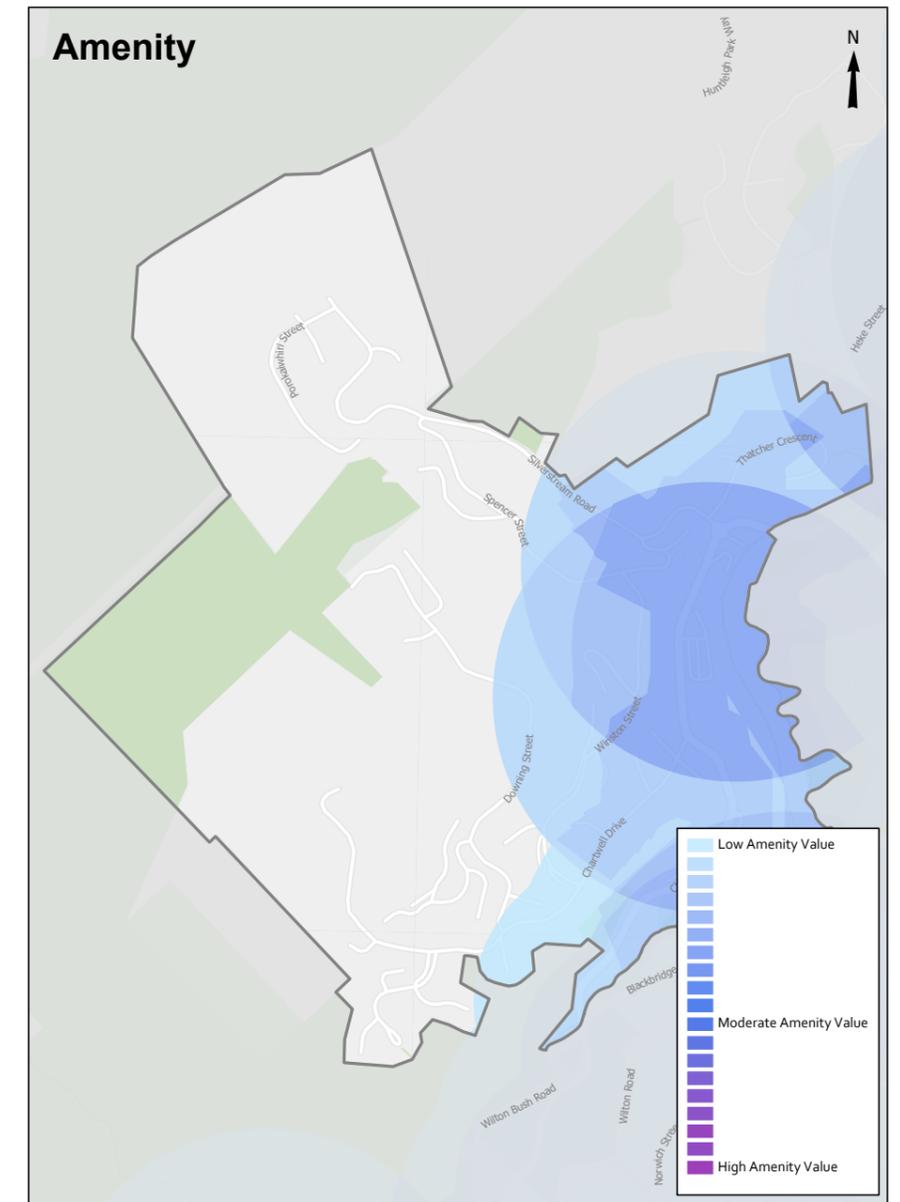
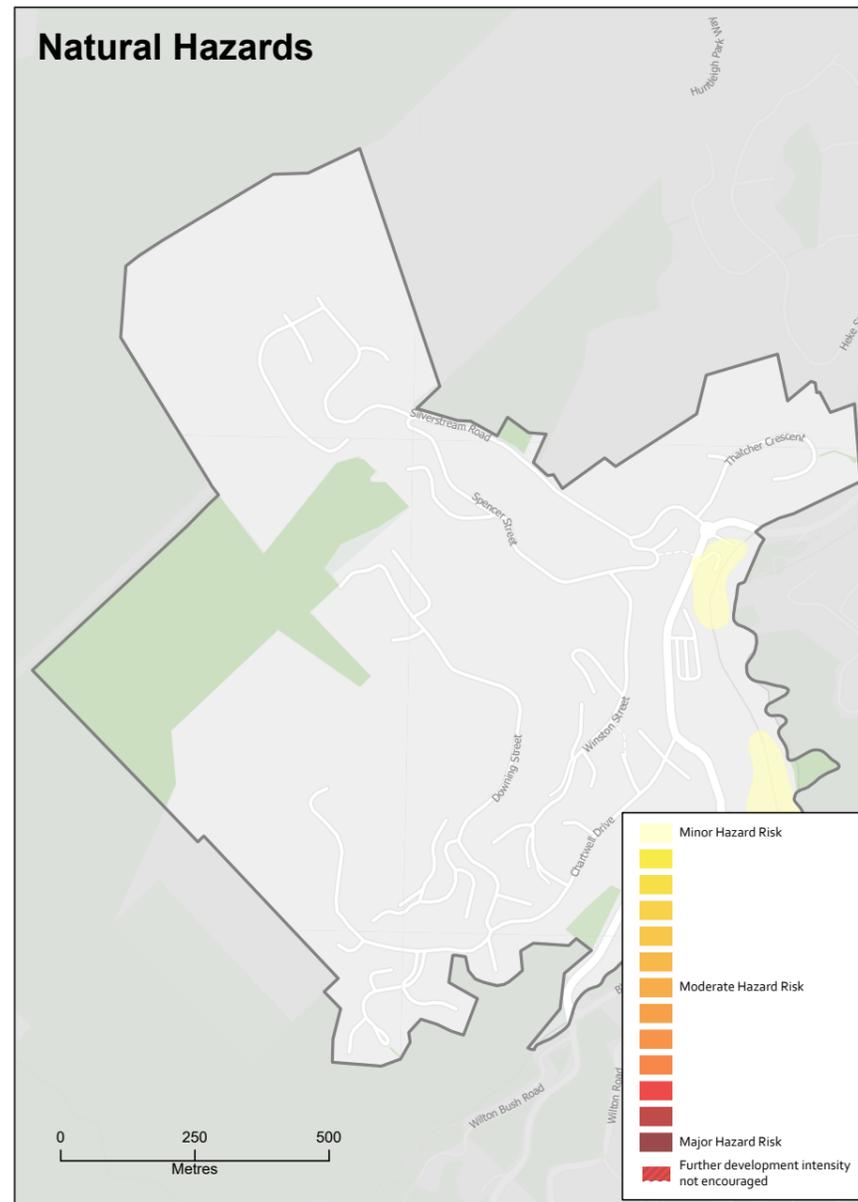
In comparison with many of Wellington's neighbourhoods, Crofton Downs has few hazards. In most cases these hazards can be mitigated with infrastructure investment at a neighbourhood level and with building standards at an individual residential section level.

The main hazard issues are associated with flooding and liquefaction prone soils. The main issues are:

- Flooding, can be managed with investment in flood management.
- Liquefaction prone soils, which can be managed with investment in infrastructure and building standards.

The main amenity values (transport and supermarket) have been mapped with a 400m walkability circle showing the main pattern being:

- A general central pattern around the railway station and supermarket which are adjacent to each other and the public transport amenity that follows Churchill Road corridor.



EVALUATION

PROPOSED DENSITY

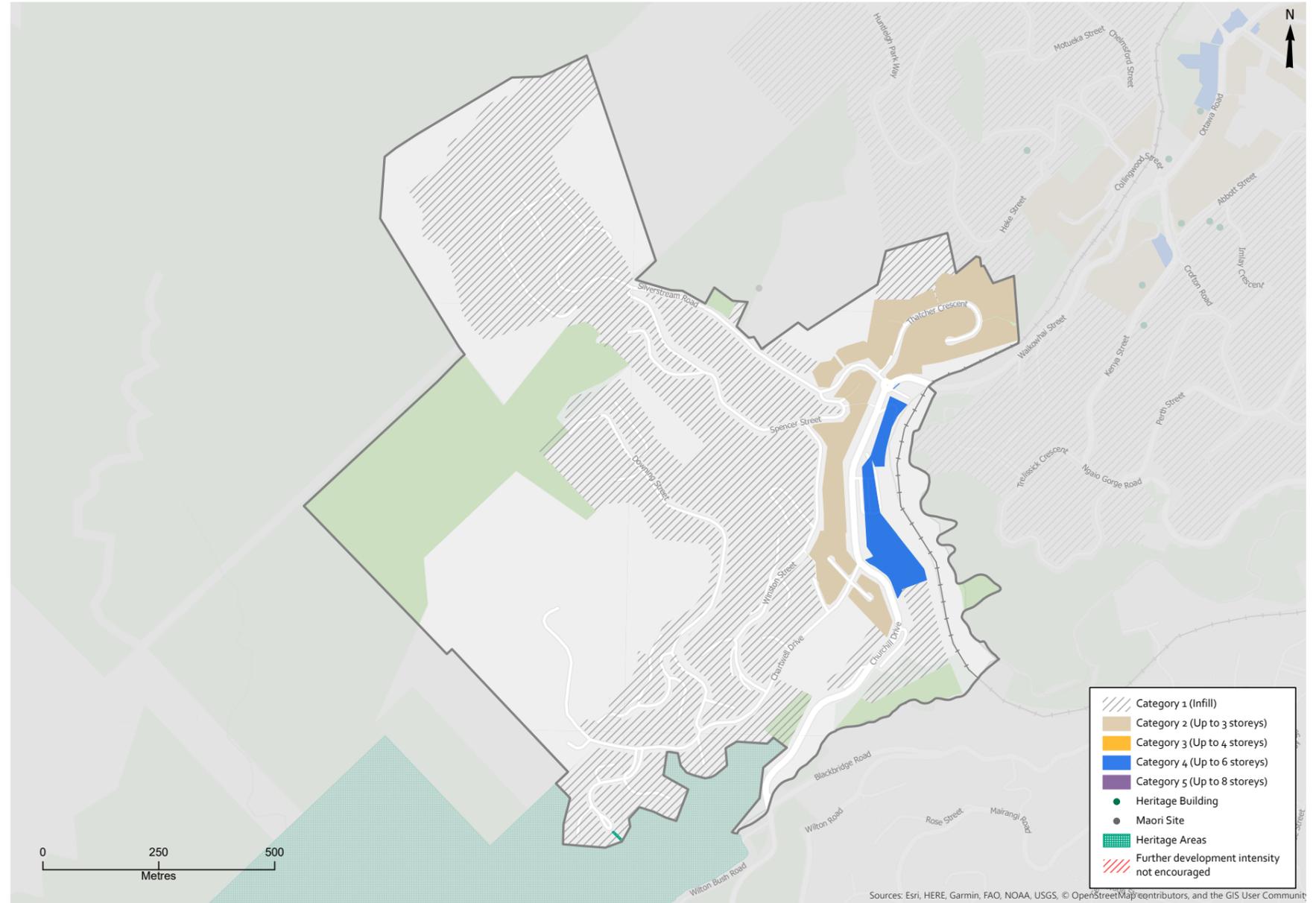
In general, proposed density follows the values set out by the amenity heat map. The hazards were not considered significant enough to remove proposed medium density off the proposed density map.

Category 4 has been placed around the train station, super market and large format retail to allow for a mix use outcome of retail or commercial on the street level with residential above.

Category 2 tends to be located close to the areas of highest amenity and a walkable range of 400m. Again, these areas have focused on the railway station and supermarket. Generally medium density area has been limited to a lower elevation to Churchill Road and the lower slopes of Crofton Downs.

DENSITY MAPPING PROCESS

All density categories locations and types for Crofton Downs were based on analysis of GIS maps, site observations and multi-disciplinary professional collaboration in a two day workshop. This image is of a workshop draft plan used to decide on future density locations. One of the important considerations for Crofton Downs that influenced the final proposed density mapping was the location of the rail station, the existing big box retail and the severance issue of the road cut to the west of Churchill drive.



SUBURB SUMMARY

The Crofton Downs community has a reasonable range of public transport options and is close to Wellington central city. But it has a limited range of retail and no community infrastructure to support medium density. Crofton Downs' low infrastructure investment requirements supports some medium density. These factors support limited medium density development in Crofton Downs.

It is suggested that the following be considered to support medium density zoning:

- An open space assessment to identify future investment in more land or amenities on existing land.
- A community centre assessment to identify future investment in amenities on existing land or buildings.
- An urban tree assessment to assess if tree protection should be considered and how that might influence medium density zoning.

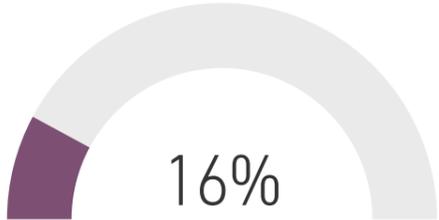


● Existing Dwellings ● Infill Dwellings ● Potential New Dwellings

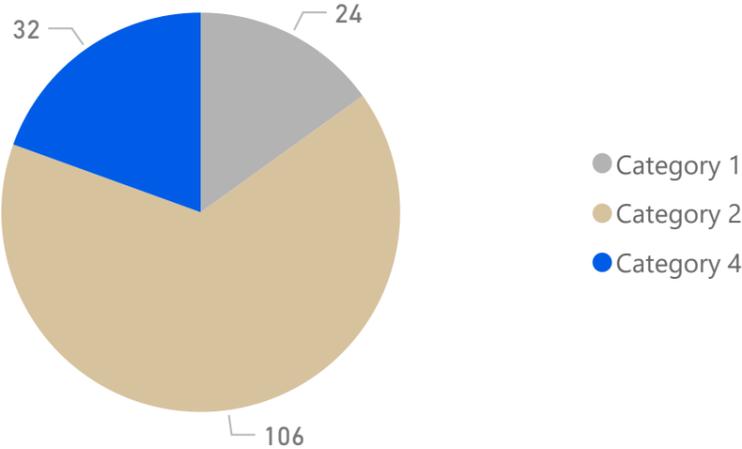
Potential New Dwellings Over Next 30 Years



Land Suitable to Support Growth (Categories 2-5)

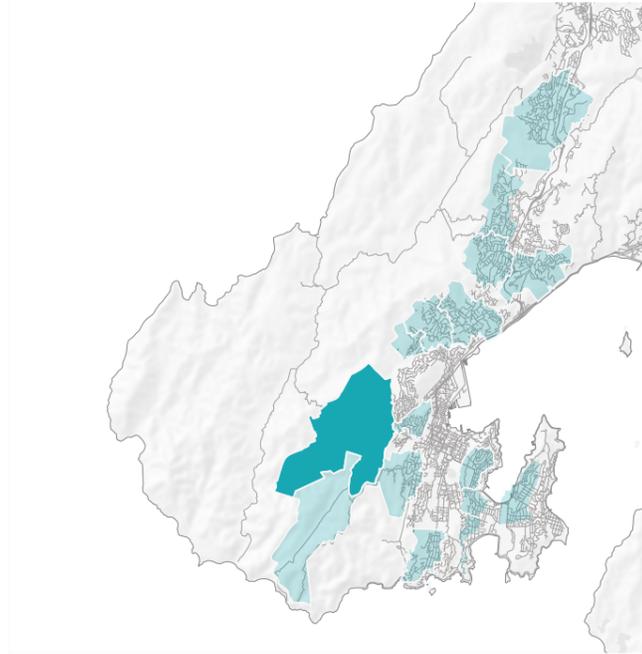


Estimated New Dwellings by Category



The estimation of theoretical dwellings shown here are an indication only. Note that an 'uptake factor' has been applied to these numbers to more accurately reflect that not every available site will be developed. For the methodology surrounding this please refer to the front section of this report.

KARORI



Situated in a basin, Karori (which means ‘the rope of bird snares’) was renowned for its birdlife. Europeans settled there in the 1840s.



Figure 13

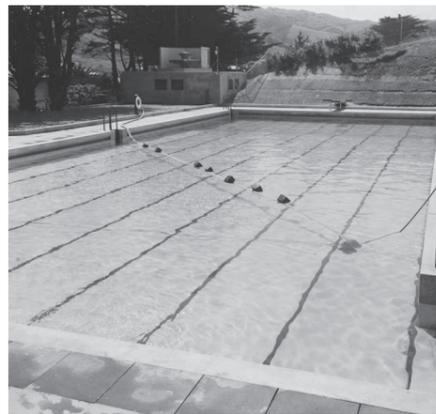


Figure 14



CHARACTER SUMMARY

Karori is a large suburb located 6km to the west of the city centre. It is the only suburb of its size that does not have a high school. Karori is characterised by a long linear arterial route with centres of various sizes and clusters of development dotted along its length. A high frequency bus service provides access to and from the city centre via the Karori Tunnel. The suburb is home to a number of landmark buildings, in particular the Futuna Chapel. A range of medium and high density housing can already be found here.

SITE VISIT NOTES LANDSCAPE

Karori is a predominantly flat plain surrounded by hills to all sides. It is characterised by wide streets in a grid pattern with an open feel, long views to green hills, and mature private gardens on generally large lots.

There is limited vegetation to the public realm and open space is generally restricted to the surrounding green belt, with the exception of Karori Park to the west, Bell Burn Park near the centre and the two main schools adjacent Karori Road.

URBAN DESIGN

Karori has centres along Karori road; a town centre located off Parkvale Rd, suburb centres; Marsden Village and the Standen Street shops. The town centre is a high street based centre with shop top housing above (up to 2 storeys) and on street parking. It is anchored by an aging mall and small supermarkets within it. The shop fronts along the main street are of an aging stock and poor condition. New additions to the centre are the recreation centre and library.

Marsden Village and the Standen Street shops are characterised as clusters of shops and small scale convenience based retail that services residents within close proximity. Both suburb centres provide pedestrian cross movement either via painted zebra crossings or signalised crossings.

Karori Road is a 2km long arterial road with nodes of

development and community facilities intermittently located along it. The neighbouring street patterns are gridded and well connected, providing easy walkability and access to and around the centres.

Karori is serviced by a core bus service that runs high frequency services in to the city centre through the Karori Tunnel as well as a number of standard and off peak services providing additional local connections. The Karori Tunnel is a pinch point during peak hours

ARCHITECTURE

Karori has a number of landmark buildings scattered across its large area. Housing ages, sizes, types and styles vary greatly reflecting its long development as one of the earliest of Wellington's suburbs (it was developed originally as Country Acres to the city's Town Acres) and the scale of the suburb.

The majority of housing are detached and range from smaller single storeyed cottages on small fine grained lots to large lots with extensive multi-level sprawling houses. There are many examples of multi-unit housing types, ages and scales including apartments over commercial, townhouses and apartment blocks indicating a long relationship with higher denser housing.

Karori has a series of centres of various scales and levels of amenity with the architecture reflecting this diversity strung along the length of Karori Road.

HERITAGE

In pre-european, and early european times, Karori (which means 'the rope of bird snares') was renowned for its birdlife. Europeans settled there in the 1840s and began farming. Access was difficult due to the high hills surrounding the Karori valley that limited the number of access possibilities.

Early roads were cut into hillsides, and there are multiple reports of earth slides blocking or damaging roads and cutting off Karori from the city.

Nevertheless, in 1854 Karori became the site of Wellington's Lunatic Asylum, and in 1891 the Karori Cemetery opened, replacing the Bolton Street Cemetery. In 1909 a crematorium was built at Karori – the first in the southern hemisphere.

Colonial Karori is described in several storeys by Katherine Mansfield, whose family moved there in 1893 from Thorndon.

The Karori Tunnel (1900) made access easier, and by 1907 trams ran to Nottingham Street. Karori continued to grow, and by the 1960s, it was one of New Zealand's biggest suburbs.

Karori was settled from the city end, and then progressively along Karori Rd to the west. It contains some very good quality heritage housing, being a mixture of styles including villas, Californian Bungalows, English Cottage, and Arts and Crafts styles. Sections are generous allowing for spreading houses set back from the road. The predominant domestic character of older buildings stock is a large well detailed timber clad building with tiled roof, with gardens and entrances that address the street.

There are also an impressive number of listed buildings, from early settler examples, to modernist design such as the Lang House and the brutalist architecture of the Former Teacher's College. Churches are well represented, with St Mary's Church being a major landmark, and Futuna Chapel continuing to draw visitors.

There are some good examples of commercial buildings in the retail centres (Karori Chambers, and the adjoining building at 264 Karori Rd).

Streets such as Scapa Terrace have a degree of heritage interest due the consistency of age and style.

Overall, Karori contains many examples of listed heritage, and likely many more with heritage potential, all of which contribute to the character of the suburb.

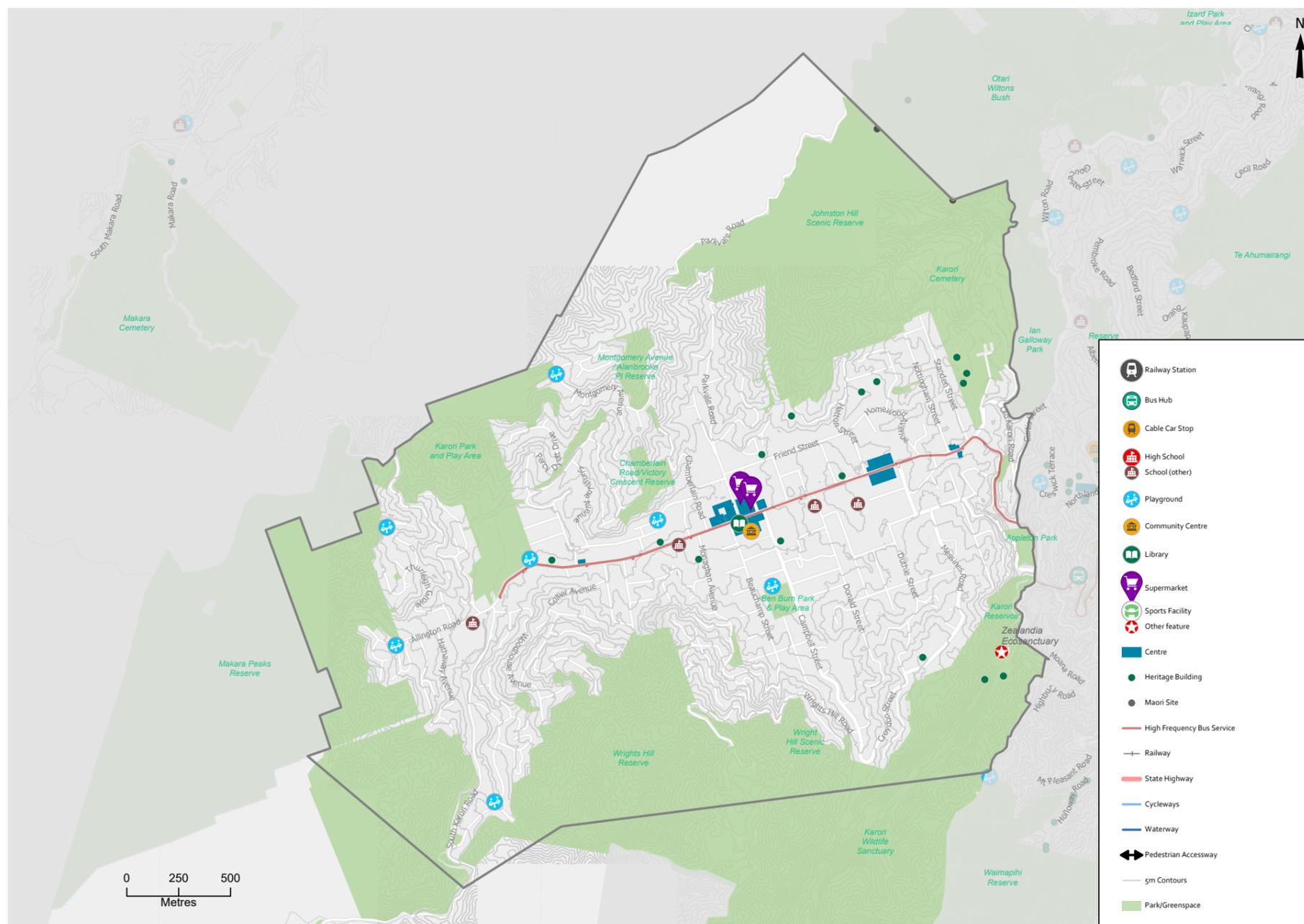


KEY FEATURES

Karori is a long flat valley with Karori Road located along the centre of the valley. Karori Road has a high frequency bus route that provides the only public transport option. There are no cycle lanes or train stations in Karori. There are three small retail centres including one supermarket along this main transport corridor as well as a community centre and library.

The key features that might be the core drivers to encourage density in Karori are around the Karori Road transport corridor and associated retail amenity. These include:

- Average walkability to Karori Road and the associated high frequency bus route and the multiple retail centres.
- A central retail centre, super market and community centre in the centre of Karori.



EVALUATION

AMENITY AND HAZARDS HEAT MAPS

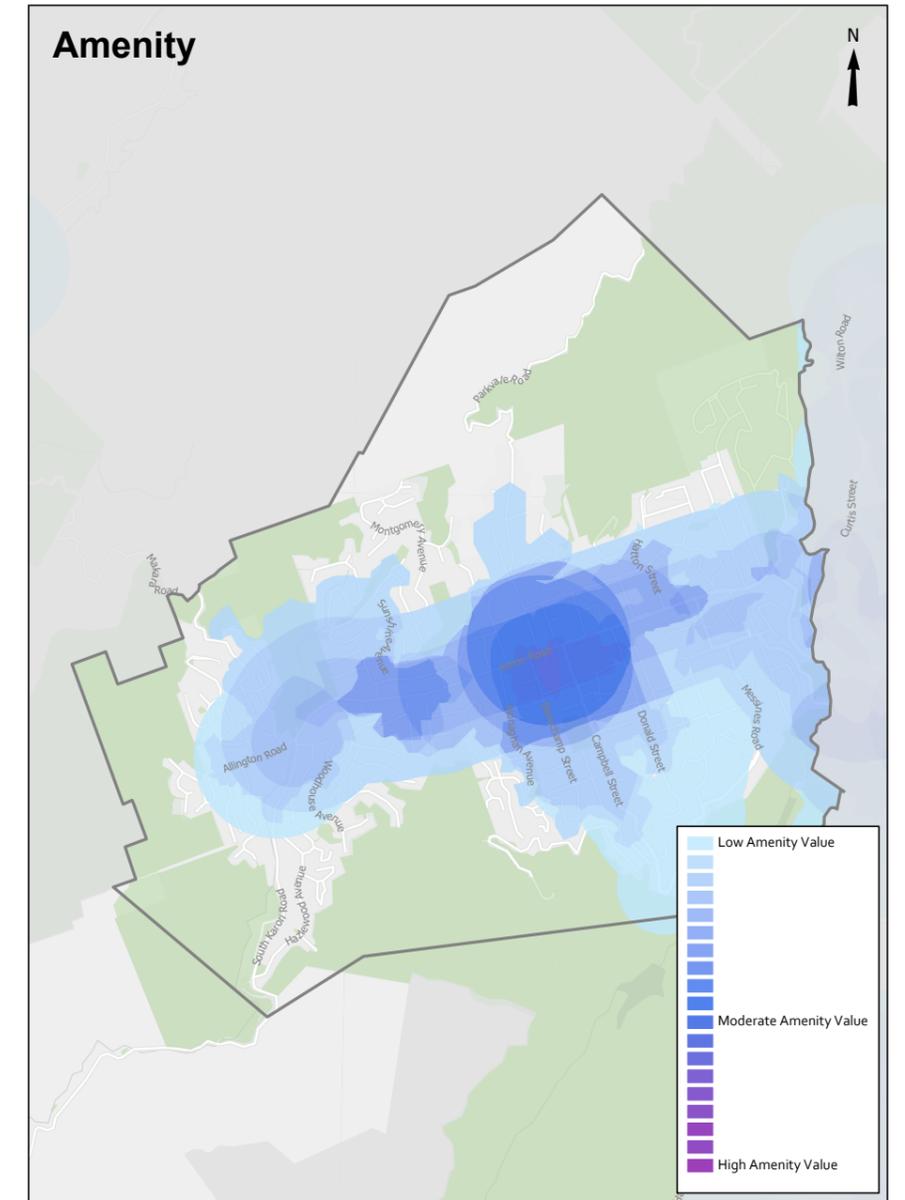
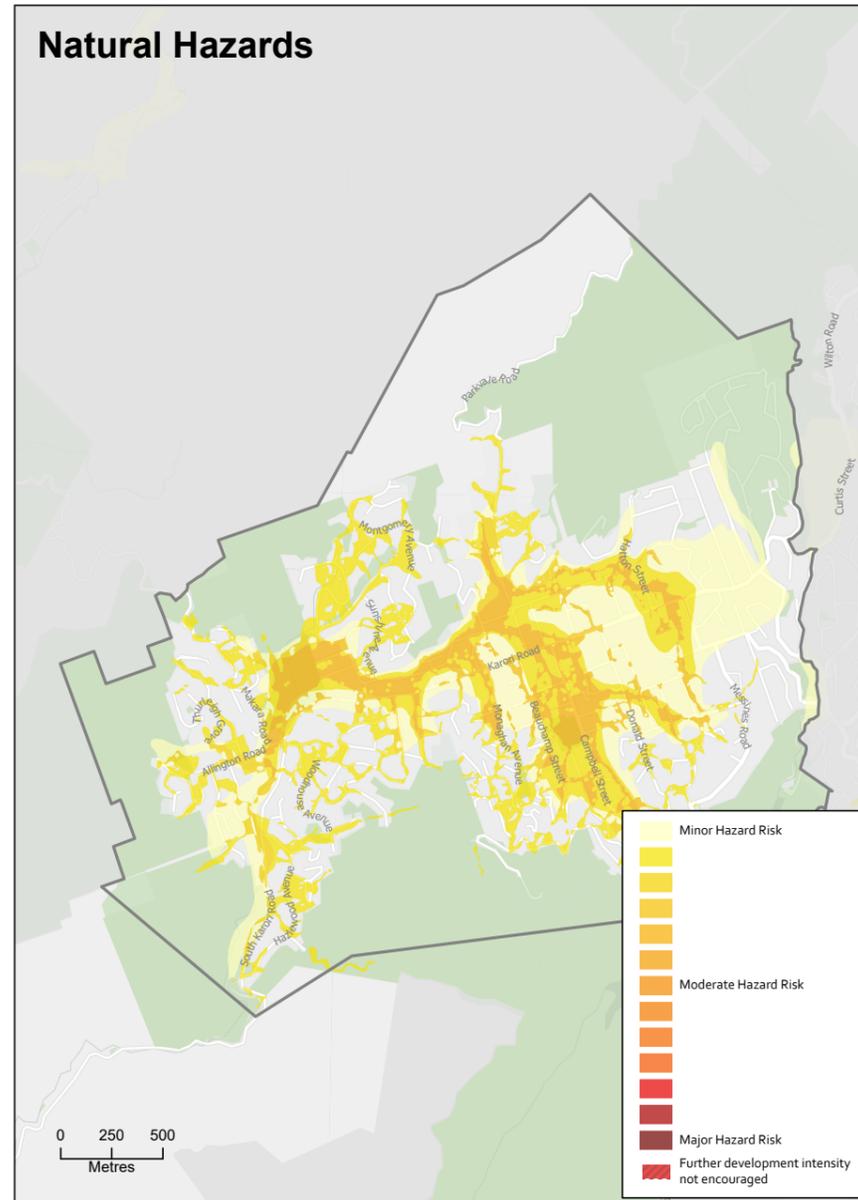
In most cases the hazards in Karori can be mitigated with infrastructure investments at a neighbourhood level and with building standards at an individual residential section level.

The main hazard issues are a reflection of valley floor location and associated flooding, earthquake ground shaking and liquefaction prone soils. The main issues are:

- Flooding, which can be managed with investment in flood management.
- Earthquake ground shaking risk, which can be managed through investment in building standards.
- Liquefaction prone soils, which can be managed with investment in infrastructure and building standards.

The main amenity values (transport, library, retail centers and super market) have been mapped with a 400m walkability circle showing the main pattern being:

- A general linear public transport amenity that follows Karori Road.
- A central area around the supermarkets, retail centre and community centre.



EVALUATION

PROPOSED DENSITY

In general, proposed density follows the values set out by the amenity heat map. The hazards were not considered significant enough to remove proposed medium density off the proposed density map, but the assumption is that issues around flooding would be resolved with infrastructure investment before any density was added into the community.

Category 4 has been placed around the core of the central retail in the central Karori Road area to allow for a mix use outcome of retail or commercial on the street level with residential above.

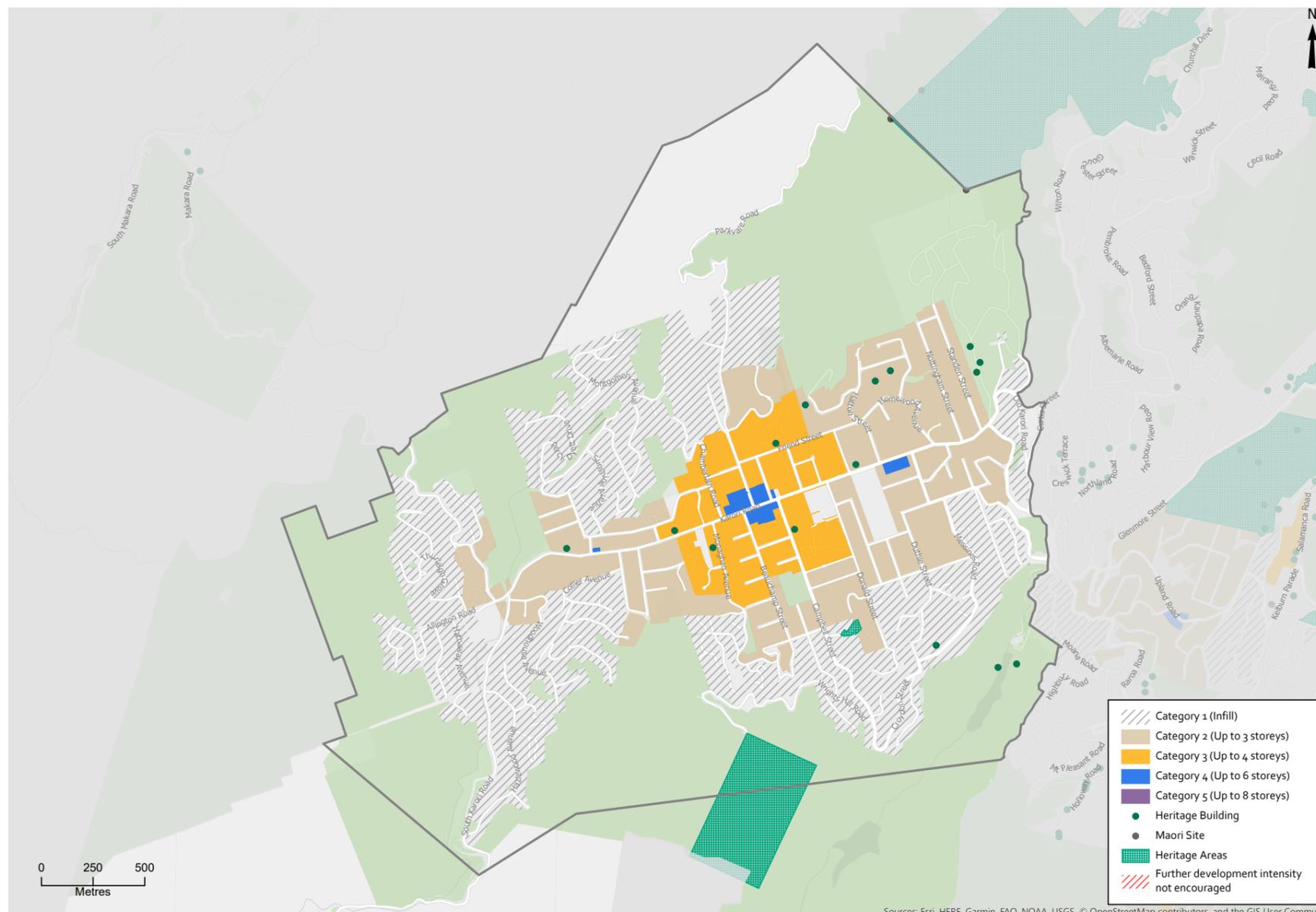
Category 3 is located close to the areas of highest amenity within a walkable range of 400m, which is focused on the central commercial centre and the super markets and civic amenity.

Category 2 tend to be located close to the areas of highest amenity within a walkable range of 400m. Again, these areas have been focused on Karori Road and the associated high frequency bus route. This generally medium density area has been limited to the valley floor areas or the lower slopes of Karori.

It was acknowledged that the existing road networks on the upper slopes of Karori are narrow and would not support medium density without a possible negative impact on the road network. Hence the medium Category 2 density is limited to the areas that are walkable to Karori Road.

DENSITY MAPPING PROCESS

All density categories locations and types for Karori were based on analysis of GIS maps, site observations and multi-disciplinary professional collaboration in a two day workshop. This image is of a workshop draft plan used to decide on future density locations. One of the important considerations for Karori that influenced the final proposed density mapping was the three retail and community centres and the disjointed road network on the upper valley slopes.



SUBURB SUMMARY

The Karori community has limited public transport options and a limited range of retail and community infrastructure to support medium density. Karori needs significant infrastructure investment before any medium density could be developed and this cannot be done incrementally. The council and community would have to invest in infrastructure in the hope it encourages future density or a large comprehensive medium density development is proposed that helps to offset the infrastructure costs. These infrastructure and investment issues will probably limit future medium density development until they are resolved.

It is suggested that the following be considered to support medium density zoning:

- An infrastructure assessment to identify future investment and possible strategies for funding.
- An open space assessment to identify future investment in more land or amenities on existing land.
- A community centre assessment to identify future investment in amenities on existing land or buildings.

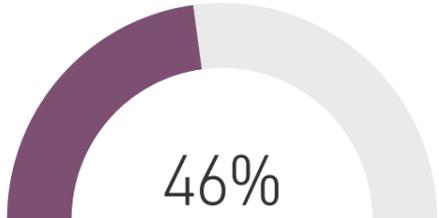


● Existing Dwellings ● Infill Dwellings ● Potential New Dwellings

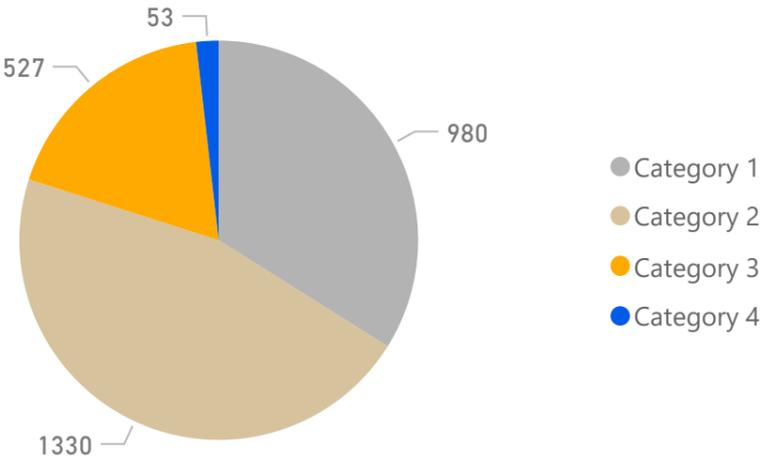
Potential New Dwellings Over Next 30 Years



Land Suitable to Support Growth (Categories 2-5)

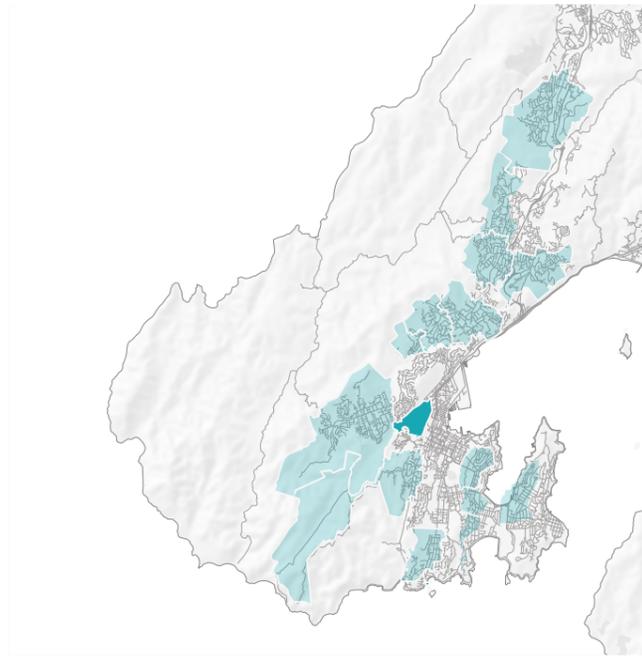


Estimated New Dwellings by Category



The estimation of theoretical dwellings shown here are an indication only. Note that an 'uptake factor' has been applied to these numbers to more accurately reflect that not every available site will be developed. For the methodology surrounding this please refer to the front section of this report.

KELBURN



The suburb of 'Kelburne' was established after the Upland Estate Company purchased farmland from William Moxham in 1896. It was named after Viscount Kelburne, son of the Governor of New Zealand at the time. The 'e' at the end of 'Kelburne' was later omitted to avoid confusion with the suburb of Kilbirnie.



Figure 15



Figure 16



CHARACTER SUMMARY

Kelburn is the closest of the suburb study to the city centre. It is located on the western boundary of the city centre and includes the Wellington Botanic Gardens, Victoria University campus as well as the famous Cable Car within its precinct. It is easily accessed to and from the city centre via both high frequency buses as well as active modes. With the exception of The Glen, the topography is steep and rolling with windy narrow streets and a myriad of pedestrian walkways. The suburb centre is a small boutique cluster of buildings tucked in to the bend of Upland Road.



SITE VISIT NOTES

LANDSCAPE

Kelburn is characterised by steep topography with a northerly aspect and long views. The town centre is defined by significant mature pohutukawa trees. The residential area centred on Glen Road consists of wide streets with no street trees, but large established gardens with a mix of native and exotic trees. The suburb is well served with close connections into the botanic gardens, university, and transport links to town centre.

URBAN DESIGN

The centre in Kelburn is classified as a suburb centre which provides small scale convenience based retail for day to day needs. It is a high street based village centre with shop below and housing above (up to 3 storeys) located along the bend of Upland Road with on street parking on both sides of the road. There are several small boutique retail offerings as well as a community hall and village pub.

The vehicle movement through the centre is slow, this is a result of a number of factors that create side friction; marking for cyclists, speed limit of 30km/h, the bend in the road and the zebra crossing at the centre of the village. Whilst the neighbouring street patterns are windy, narrow and steep, there are a number of pedestrian walkways providing easy walkability and access to and around the centre.

The suburb is within walking and cycling distance to the Botanic Gardens, the Victoria University campus and the city centre. It is well connected to public transport, serviced by a core bus service that runs high frequency services in to the city centre, and the cable car.

ARCHITECTURE

Kelburn has a number of significant landmark buildings reflecting the age and location of the suburb and the range

of amenities such as Victoria University of Wellington. For similar reasons, along with its topography, Kelburn's housing tends to be very diverse in its age, size, style, and typology. Large mix of typologies including detached, semi-detached, flats, apartments over retail, apartment buildings of all ages (from late 1800's to current) and scales (from single storied detached to huge student accommodation blocks). The majority of housing appears to be two storeyed which differs the majority of Wellington's Outer Suburbs.

The centre appears perhaps surprisingly small but its topographical constraints and its location adjacent the Wellington CBD has allowed Kelburn to maintain a relatively well maintained fine grained village architectural look and feel.

The 2008 Boffa Miskell report indicates that over 50% of parcels in the Northern inner suburbs (including Aro Valley, Highbury, Kelburn, and Thorndon) are between 200-600m², with about another quarter less than 200m². Less than a fifth are over 600m². Site coverage ratios run the gamut – divided almost equally between the four categories of 25%, 25-35%, 35-50%, and over 50%. The majority of houses are an almost even split of 1 and 2 storey with less than a fifth of houses rising above two storeys.

HERITAGE

Initially Upland Farm, Kelburn perches and meanders on the hills overlooking the harbour. It was developed by the Kelburne & Karori Tramway Company, and the Upland Estate Company, starting in 1898

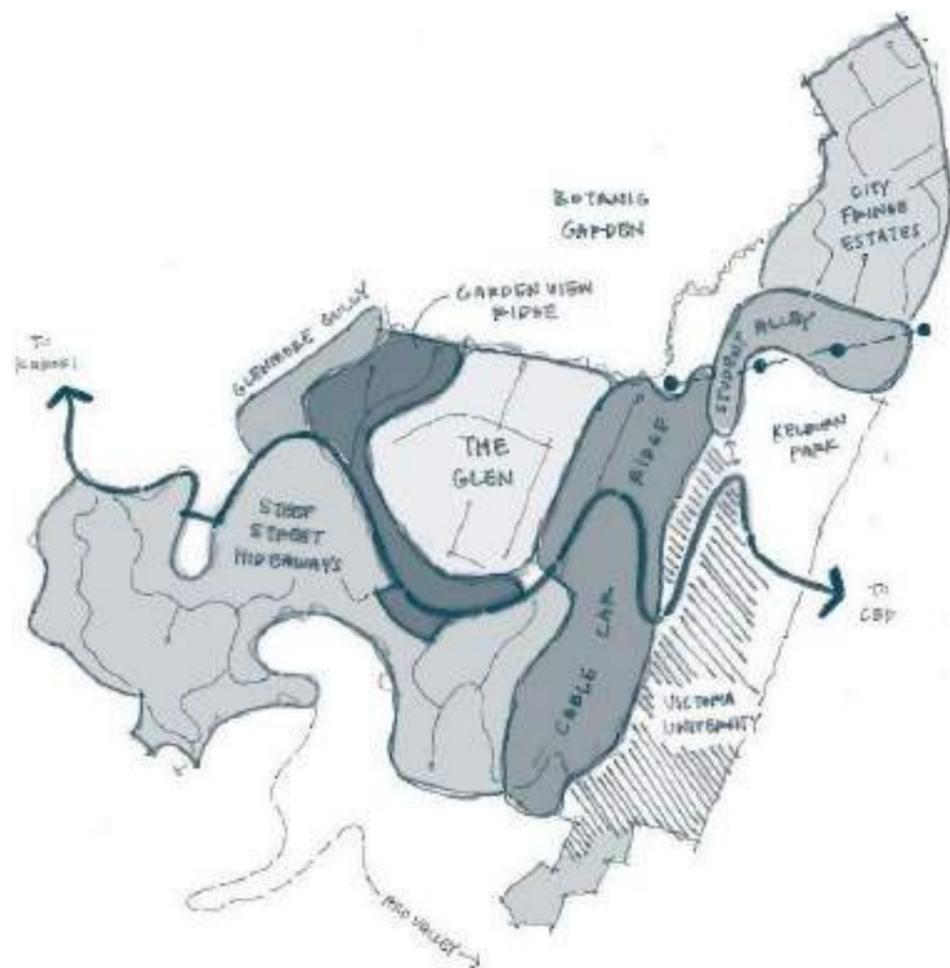
The name of Kelburn appears to have been used with regard to Kelburne Park in 1895 as a gesture of respect to Lord Glasgow, the then current Governor, whose family seat was at Kelburne in Scotland. The 'e' was dropped in 1914 concurrently, and to match the change in the spelling of the Viscount of Kelburne to the Viscount of Kelburn. (Ring Around the City, Humphires and Mew). The link with Governors continued, with streets named Glasgow, Fairlie, Kelburn, and Plunket.

The cable car opened in 1902, and provided a link to Kelburn, but also to Karori beyond. Kelburn's popularity began to rise once there was easy access to the city. Early marketing described it as being healthy, with clear air, marvellous views, and all day sun. It was marketed, and aimed at the well-to-do professionals, and hence the sections are generally large.

Kelburn Village has a simple charm from the small scale and the relaxed juxtaposition of the domestic housing on the northern side. The Glen is a contained and concentrated collection of quality examples of villas and bungalows that deserves consideration as a heritage area.



CHARACTER ASSESSMENT



Kelburn is characterised by a rich tapestry of distinctive areas, ranging from collections of wan student flats to multi-million-dollar estates overlooking the harbour. The suburb is anchored by venerated Wellington icons – the Cable Car, Botanic Garden, and Victoria University – and connected by a network of serpentine, retaining wall-bordered roads augmented by pedestrian staircases and steeply ramping walkways. An enterprising mosaic of mature trees and lush

vegetation fills the steep hillsides between the impressive diversity of housing.

The primary gateway to Kelburn from the central city is Salamanca Rd – a veritable green tunnel formed by steep road cuts and dense vegetation – which opens onto Kelburn Parade, the main street of Victoria University of Wellington’s primary campus.

STUDENT ALLEY

The first distinct pocket of housing is accessed from Salamanca Road just as it turns north from Kelburn Parade and is characterised by flat buildings and townhomes overlooking Kelburn Park, which occupies a large, almost plateau-like terrace perched above the motorway. Just beyond the Cable Car line and wrapping around the north side of Kelburn Park, Everton Hall and Weir House accommodate over 500 students.

A feeling of openness is evident in front of the flat buildings along Salamanca Road. The absence of street trees and front yard setbacks preserve views across the harbour to the Rimutaka Range and expose the eclectic buildings rising up to 6 storeys above the road – two of which date back to the 1920s. At eye-level, garages line the footpath, only occasionally interspersed by front doors or front steps – with most dwelling storeys beginning one level above the street.

CABLE CAR RIDGE

The ridge paralleling The Terrace and connecting the Botanic Garden to Aro Valley hovers some 150 metres above the western extent of the Central City and was a frontier to the hilly areas westward toward Karori, until the beginning of the twentieth century when the Cable Car unlocked their ready access. As a result many of the homes along this ridge showcase classic early 1900s quality, charm, and coherence.

The top of the Cable Car aligns with Upland Road, where, north of its intersection with Salamanca, the roofs of houses



going down the western slope are just visible from street level, and houses along the eastern slope tower 2 and 3 storeys above the road, with garages built into the hill and retained gardens fitting in between.

Rawhiti Terrace features its homes in a similar way, with large, multi-storey houses exposed along the ascending slopes and car decks and rooflines visible on the harbour-facing eastern downslope. Rawhiti and its counterpart, Central Terrace, are particularly narrow roads, terminating unceremoniously in dead ends that leave little room for manoeuvring. Trees in this area are on private land only.

CITY FRINGE ESTATES

Following Salamanca Road past Gladstone Terrace, an atypically orthogonal network of streets flows down the hill towards The Terrace and connects a suburb comprised of some of Kelburn’s highest value properties.

Most of the homes are 2 or 3 storeys with zero lot lines – eking out every last inch of this valuable, harbour-facing slope some 500 metres from the Parliament grounds. The roads are particularly narrow and steep, tracing terraced routes between listed villas, vine-clad and brick traditional homes, and modernist additions.

GARDEN VIEW RIDGE

Above the University and tucked behind the city-facing ridge, Upland Road forms a mostly level terrace connecting straight through to the Kelburn Viaduct, the suburb’s secondary gateway. Just south of the turnoff to The Glen, a congruous row of houses appears along Upland Road, seeming almost to cling to the descending northern bank of the street. The properties are marked along the footpath by solid, roughly 2-metre high fences and walls that vary from brick to painted timber, the shifts corresponding conspicuously with the lot divisions. A row of on-street parking, a grassed berm with mature street trees – including the signature, tunnel-forming pohutukawas – and the wide footpath create one of the most comfortable pedestrian environments in the suburb as the road curves through the Village Centre.

Bookended by St Michael’s Anglican Church on the east, the Centre has a staggered, “wedding cake” effect of upper storeys above ground-floor retail in the shops, displaying an assortment of architectural styles. The pedestrian realm is

extended above and below street level through nooks and alcoves created by the shop buildings.

Through the tunnel of pohutukawas, past the shops and Kelburn Normal School, the ridge continues toward the Viaduct but spurs north in the direction of the Garden, where houses on downhill slopes continue to cling to the hillside and enjoy impressive views over The Glen.

THE GLEN

Below the ridge, a collection of villas and bungalows settled in a wide valley above the Gardens line some of the widest roads in Kelburn – particularly for an area whose only non-residential land use is the Indonesian Embassy – measuring 20 metres from property line to property line. The architectural style, scale, and massing provides a coherent feeling to the suburb.

There is a consistent built edge to the street – an unbroken border of garages, retaining walls, and fences lining the footpath – even along the recently modernised properties.

Ngaio Road follows a small side valley off Glen Road and has a separate character. Toward the end of the street, a grouping of contemporary terrace houses blend sympathetically to the older surroundings, presenting a modest front garden of natives and articulating its street-facing façade with high-quality materials while discretely tucking 6 units within its constrained section.

STEEP STREET HIDEAWAYS

Much of the rest of Kelburn is defined by Upland Road to its North and the neighbouring suburb of Highbury to its south. The roads in this area traverse steep hillsides and are lined with garages. The homes predominately have no street presence, with dwelling levels mostly hidden from the street, far above or below, and accessed by steep walkways or staircases – or the occasional private hillside lift. Mature trees and lush planting on private land give the area a dense green landscape character.

GLENMORE GULLY

Below the Kelburn Viaduct, a strip of housing along Glenmore Street feels removed from the rest of the suburb by its topographical siting. A few flat buildings are interspersed within an area of otherwise 1-3 storey homes dating between the 1900s and 2010s – with detached garages or carparking spaces fronting the road.



POSSIBLE MITIGATION APPROACH

Kelburn has a diverse range of neighbourhood characters from the Glen street Valley community fringed by the botanical gardens to the existing multistory medium density housing around the university. When considering possible mitigation options, we have suggested mitigation based on these different character areas as outlined below.

The Valley (Ngaio, Glen, Rimu streets)

The options for this area is not limited to the options listed below but these could be considered a starting point for community consultation.

Option One - No Change and heritage protection of existing housing stock

This might involve creating a heritage zone that would exclude future medium density housing from this area. This would also include existing housing stock gets considered for heritage status. This would remove the suggested medium density layer from this area and would also limit new single-family homes if there is heritage status on the existing house.

We noted that recent medium density housing had been integrated into this Valley community on Ngaio street which shows it can be done in a sensitive way that is in keeping with the existing character of the Valley. There is also new single family dwellings that have been built on Rimu street in a modern architect style that was still sensitive to the character of the area even though it did not matching the the predominate architectural style of this area. From a medium density planning perspective this is an important area with a lot of positive density enablers especially around proximity to the city centre, transport options, access to open space and the university, the best outcome might be limited medium density allowed but with design guidelines that protect the character of this community as outlined in option two.

Option Two - Allow limited future medium density but have design guidelines.

This area gets medium density that limits density to two storeys with design guidelines that encourage future building designs that are in keeping with the existing residential architecture in scale, height setbacks but not necessary in architectural style.

The design guidelines might encourage building setback that match existing historical setbacks and frontage design which typically includes a zero-lot line for garages an elevated garden with the residential home set back from the street frontage. It is imagined that the controls would be more architectural than public realm apart from the consideration of street trees.

There is space for street trees on Rimu, Glen and Ngaio street and they would have a positive impact on reducing the feeling of the existing wide streets however we believe the key to the protection of the existing community character is in the architectural design guidelines and not trees mitigating the built form outcomes. That does not exclude street trees from being considered as an mitigation option but they are not seen as the key issue for protecting these streets character.

Future medium density proposed requires a setback from the property boundary similar to the existing single dwelling setbacks. No parking space should be in the setback with exception of the driveway to enter the garage. A maximum number of street letdown per development should be based on boundary frontage length to limit the amount of hardstand in front of properties.

Main commercial centre (between Plunket street and the Church)

These rules are suggested so that any new medium building is in keeping with the existing streetscape character. The suggest policy rules might include a maximum building



height of 3 storeys on the western side of the street starting at street level. Maximum building height is 3 storeys on the eastern side of the street but limited to one storey from the street level, this would still allow a 3 storey building but being built down the slope which is consistent with the existing condition. This would help to maintain expansive views from the street as well as good access to sunlight at the street level.

Building guides might also include a requirement for an active second and third storey with minimum glazing standards set for facades facing this route.

Central Terrace, Kelburn Place and the cable car community

These three communities have a significant amount of positive enablers for medium density beyond just their proximity to the city centre and university. The consistent character of these three areas is steep landscapes with predominantly single to double storey single dwelling houses on narrow streets with high landscape embankments. We have limited these areas to category 2 medium density which is similar to the existing housing stock of these areas. Typical medium density design guide lines would be applied to these areas.

Salamanca road corridor uphill to the edge eastern edge of Rawiti Terrace

This residential block has a high number of four storey plus medium density building, this might be due to its proximity to the university. This area has a high number of enablers for medium density and as such the proposed density layers suggest more similar type of medium density in the future. Many of these existing buildings have minimal setbacks and few landscape frontages of significant and any future design guidelines might encourage the same outcomes to remain in keeping with the existing environments.



KEY FEATURES

The botanical gardens with a significant open space on the northern edge of Kelburn and a university campus to the east helps to define the character of Kelburn. The community is divided by Upland Road with a sloping ridge and valley to the north which provides good building platforms, and steep hills and winding roads to the south. Upland Road has a high frequency bus route and there is a cable car connecting the community to central Wellington, thus providing good public transport options. The town centre on both sides and central to Upland Road Kelburn has a main street with a good walkable catchment.

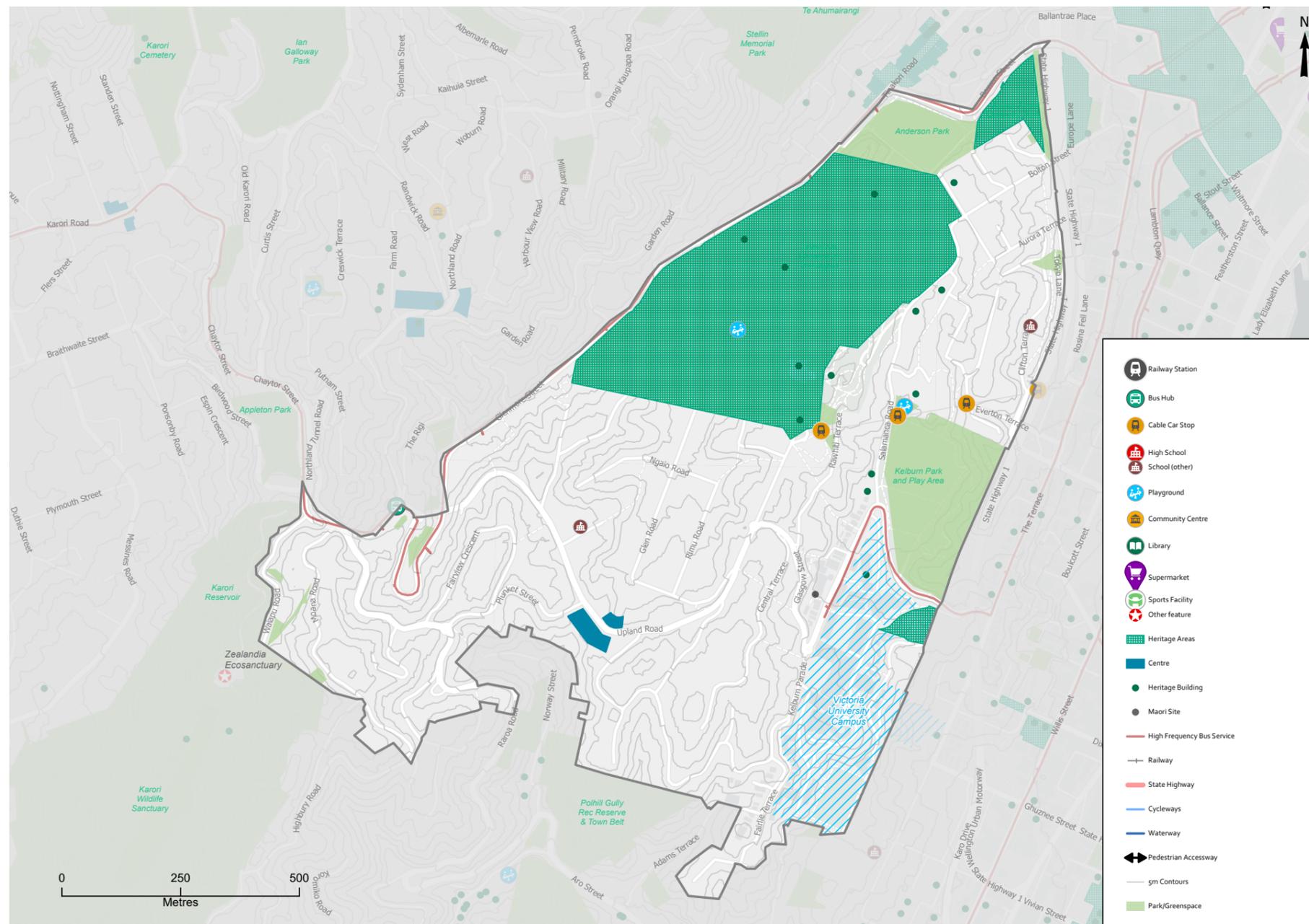
Kelburn is also close to the Wellington central city for employment and has good public transport connections into the city.

Kelburn has a high portion of open space within easy walking distance for most of the community.

Kelburn's proximity to the university may encourage medium density due to the value of being able to work, study and live close to this institution.

The key features that might be the core drivers to encourage density in Kelburn are around the transportation corridor, open space, university and the town centre. These include:

- Good walkability to public transport with quick access into Wellington city and the university for employment, education and leisure.
- An accessible and walkable town centre.
- A high frequency bus route to provide transport options for medium density development.
- Easy access to a significant open space.



EVALUATION

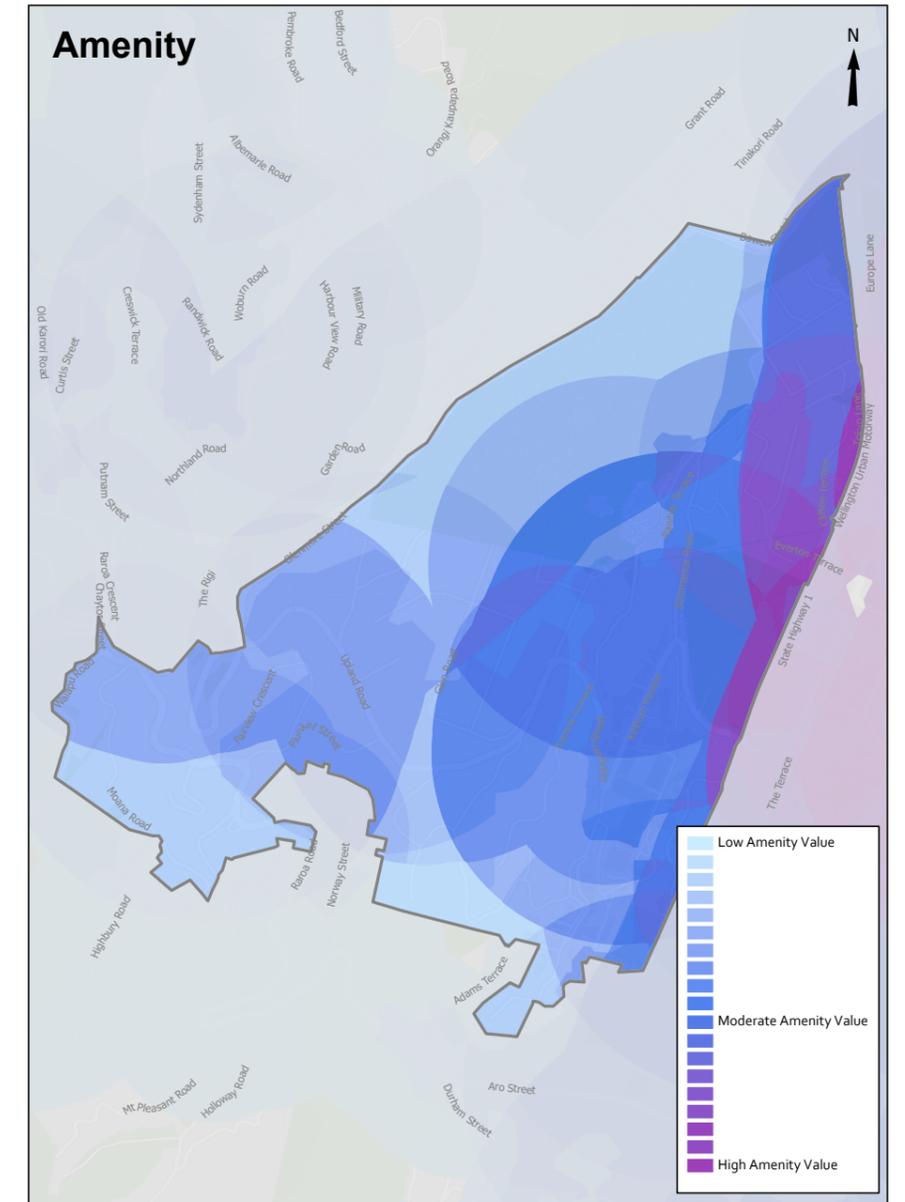
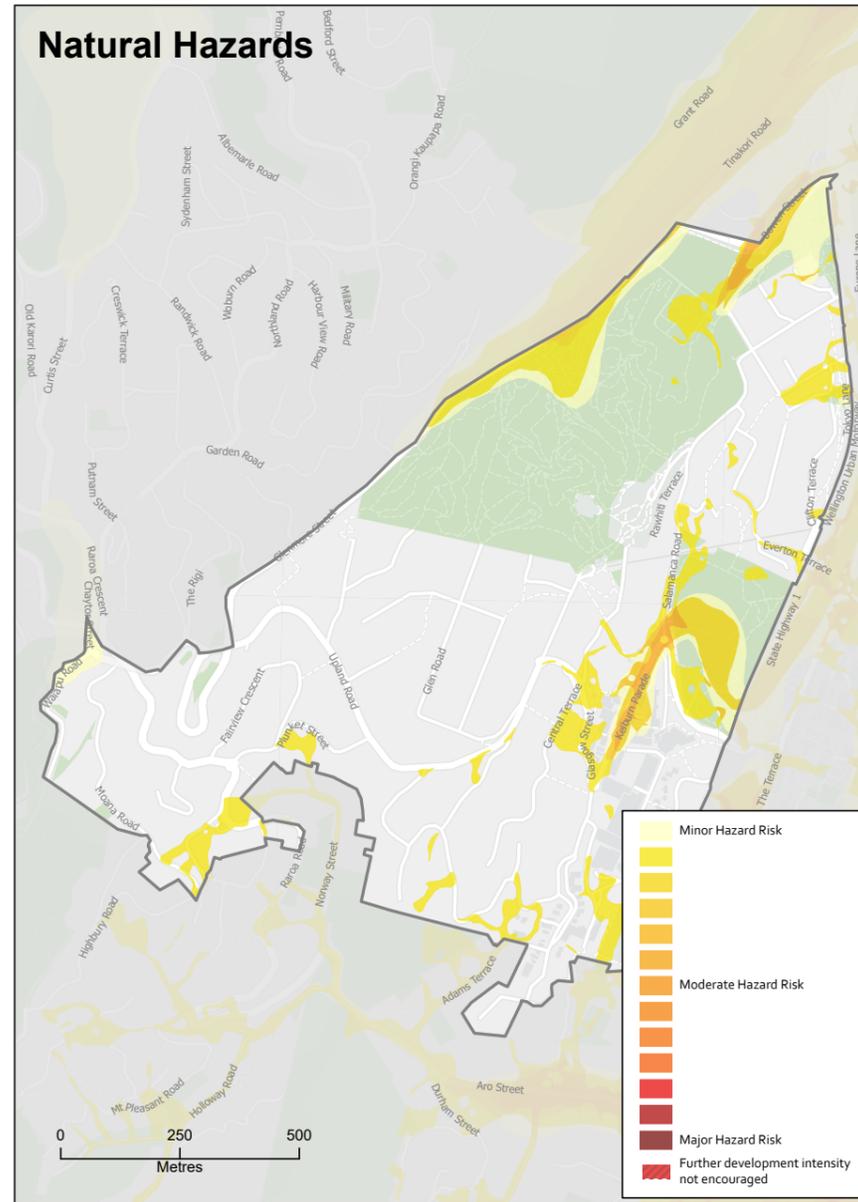
AMENITY AND HAZARDS HEAT MAPS

In comparison with many of Wellington's neighbourhoods, Kelburn has few hazards. In most cases these hazards can be mitigated with infrastructure investments at a neighbourhood level and with building standards at an individual residential section level.

The hazard issues shown are minor flooding and earthquake ground shaking risk, although these are primarily not on currently residentially zoned land.

The main amenity values (transport, main street, and open space) have been mapped with 400m walkability circles showing three main patterns:

- A medium focus on the town centre of Kelburn that has good retail and amenity values.
- A general linear public transport amenity that follows Upland Road and the high frequency bus route.
- A strong focus due to the proximity to the university and Wellington central city.



EVALUATION

PROPOSED DENSITY

In general, the proposed density follows the values set out by the amenity heat map and the proposed density tends to focus more towards the east close to the university and the Wellington central city. In general the hazards were not considered significant enough to impact the proposed density map.

Category 4 has been placed around the retail, commercial and main street centre that allows for a mix use outcome of retail or commercial on the street level with residential above.

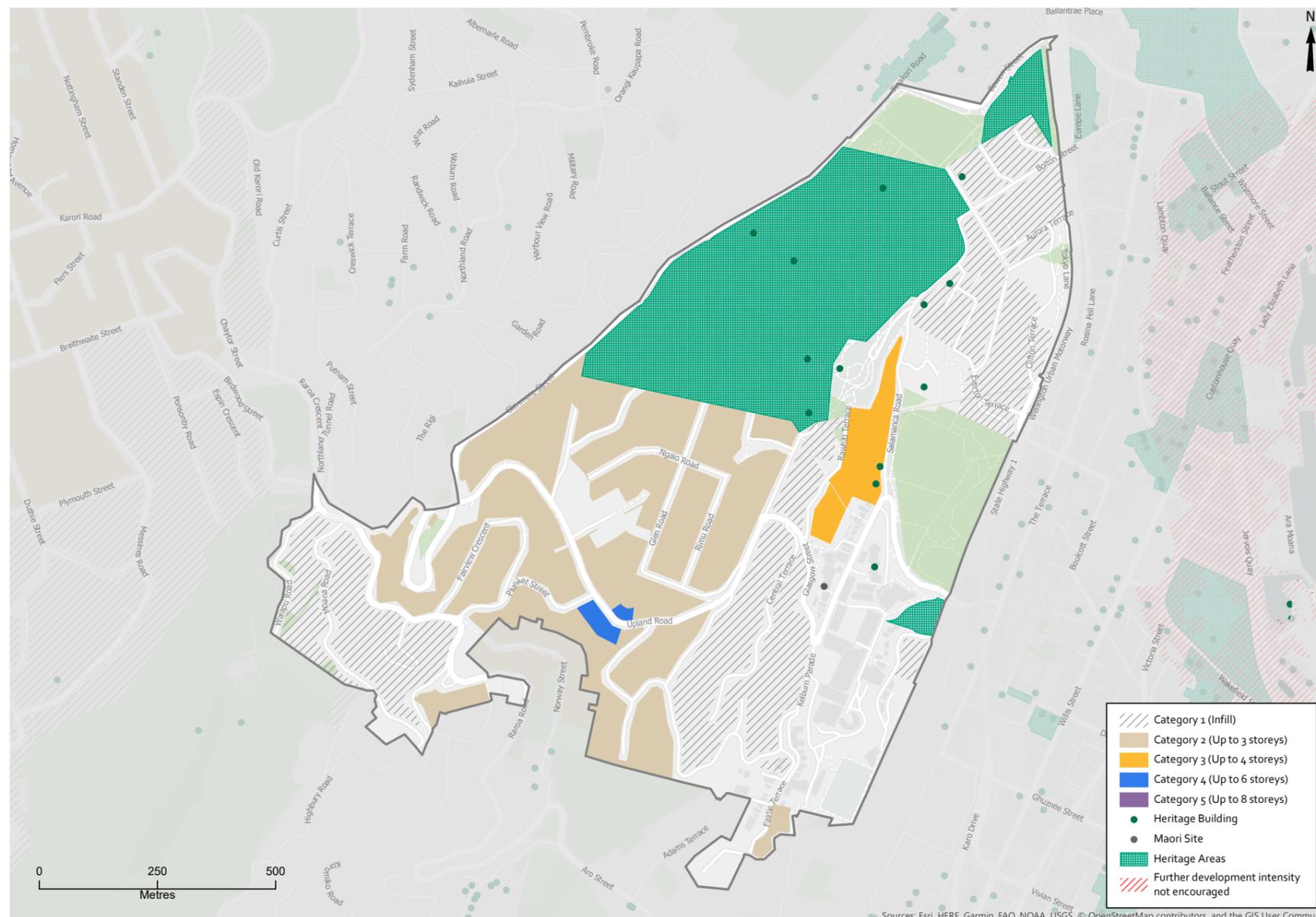
Category 3 tends to be located close to the areas of highest amenity within a walkable range of 400m. These areas have focused on the eastern edge of Kelburn closest to the university. Some areas within a 400m walking range were excluded due to suburb character, limited street network and steep slopes.

Category 2 tends to be located close to the areas of highest amenity within a walkable range of 400m. These areas have focused on Upland Road and the associated high frequency bus route and the retail centre. The Glen has been shown as Category 2 but has options around a density reduction and or design and policy guidelines that ensure the character of the Glen remains.

Limited medium density has been proposed to the south of Upland Road due to the typical existing road networks are narrow and would not support extensive medium density without having a negative impact on the road network.

DENSITY MAPPING PROCESS

All density categories locations and types for Kelburn were based on analysis of GIS maps, site observations and multi-disciplinary professional collaboration in a two day workshop. This image is of a workshop draft plan used to decide on future density locations. One of the important considerations for Kelburn that influenced the final proposed density mapping was the architectural character of the Glen and the proximity of the university.



SUBURB SUMMARY

The Kelburn community has a reasonable range of public transport options, including walking in to the central city, but a limited range of retail and community infrastructure to support medium density. Kelburn's infrastructure investment would be influenced by the amount of density that happens in the future. This infrastructure cost would reduce with more density. The key factor that makes Kelburn desirable for medium density is the proximity of this suburb to the jobs and amenity that the central city and university offer. These factors support limited medium density development in Kelburn.

It is suggested that the following be considered to support medium density zoning:

- A heritage character assessment to assess if there are other heritage areas that should be considered and how that might influence medium density zoning.
- A community centre assessment to identify future investment in amenities on existing land or buildings.
- An urban tree assessment to assess if tree protection should be considered and how that might influence medium density zoning.

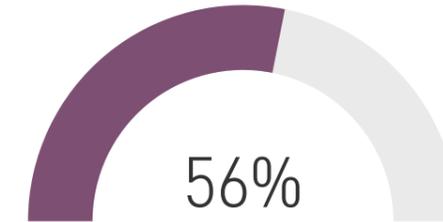


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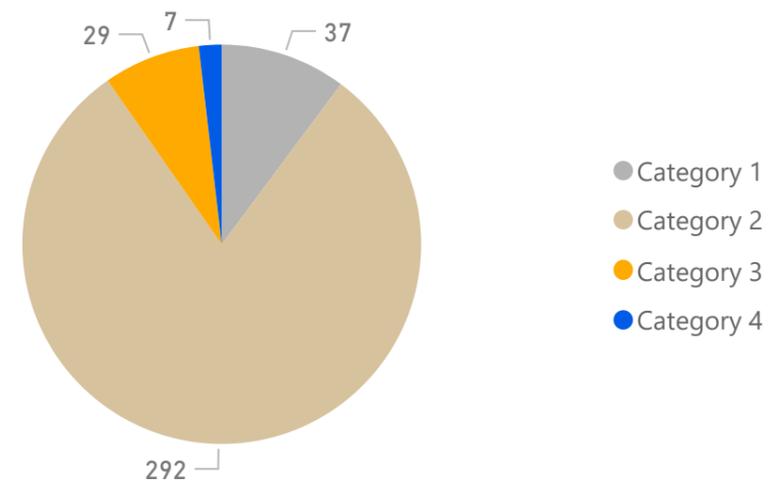
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