Appendix A
Existing conditions analysis

Joint Venture

Key character attributes

Urban character areas refer to areas within the Structure Plan Area that possess distinct physical, architectural, cultural and functional characteristics. These areas are typically defined by their physical and land use attributes, which may include natural and artificial features.

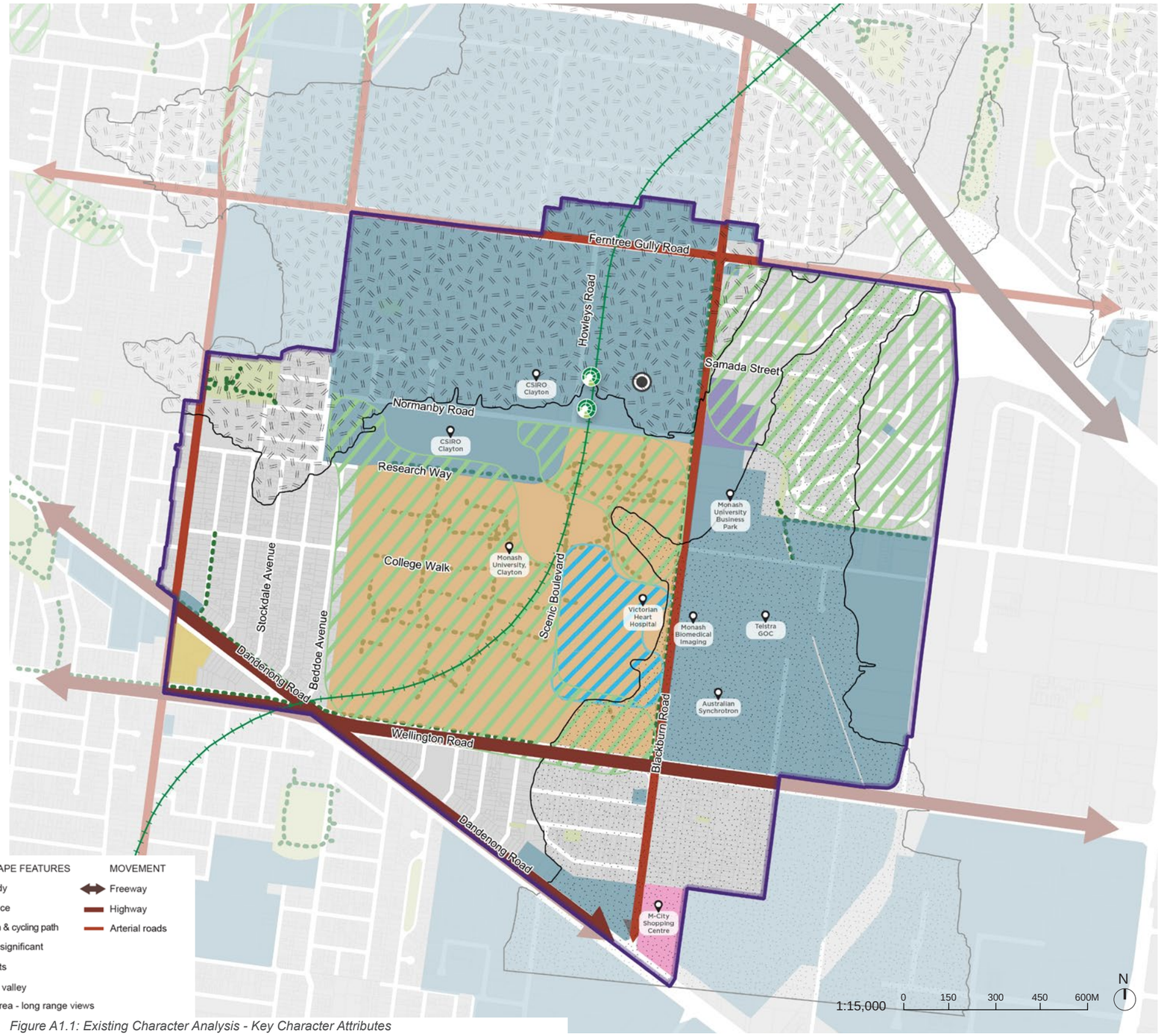


Figure A1.1: Existing Character Analysis - Key Character Attributes

Summary

Following a review of the background documents and local policy, desktop and site analysis was undertaken to understand the character elements and features within the Monash Structure Plan Area.

A number of urban typologies and character study areas have been defined. The following is a description of the key character drivers for the Monash Structure Plan Area.

Land use and key destinations

The Monash Structure Plan Area lacks an activity centre near the proposed SRL station. Monash University provides attractions, amenity and some services to the community, however these are generally located within the core of the university. To the south, M-City provides a recently completed indoor shopping complex.

Land uses within the Structure Plan Area are predominantly education, industrial and business uses, with residential uses surrounding these areas. Land uses are a key driver of character, although other features also contribute to character.

There are a number of key destinations within the Structure Plan Area, including Monash University, The Australian Synchrotron, Monash Health Centre, and the Victorian Heart Hospital.

Topography and natural features

The Monash Structure Plan Area features a substantial downward slope to the south-east and north-west, with the business parks to the north at the highest point in the Structure Plan Area. The large front setbacks in the business parks provide mature tree canopy cover. Monash University has soft and hard landscaping and a variety of open spaces and recreation spaces, as well as good mature tree canopy coverage.

Urban structure

Clayton Road, Ferntree Gully Road, Blackburn Road, Wellington Road and Princes Highway are the primary organising elements of the Monash Structure Plan Area. Monash University and nearby student housing provides a core of activity, with vehicle orientated business parks to the north and Clayton Activity Centre to the south. Movement between Monash University and Monash Health provides additional activity along Clayton Road and Browns Road.

Princes Highway and Wellington Road are the Key Movement Corridors through the Structure Plan Area. Clayton Road, Ferntree Gully Road and Blackburn Road provide important regional connections. A number of local roads provide predominantly vehicle connections to nearby neighbourhoods.

Built form

The Structure Plan Area has a variety of building heights, with the majority being 1 to 2-storey dwellings, and 2 to 3-storey business parks and industrial areas.

Within residential areas, the built form is a mix of original 1960s housing styles, with contemporary infill and multi-unit developments dispersed throughout.

The M-City is approximately 12 storeys, and the student housing on Rusden Place, opposite Monash University is approximately 6 storeys. These buildings provide a highly contrasting built form typology, within the low-scale residential and industrial/business areas.

Elements contributing to character

In the following pages the analysis highlights the main drivers of character within the Monash Structure Plan Area and their distinguishing characteristics.

The main character drivers identified are:

- Land use
- Princes Highway/Dandenong Road and North Road/Wellington Road and the high levels of movement and restricted north-south access
- Topography and views to surrounding areas
- Street tree species and tree canopy size
- Dwellings that are diverse and inconsistent in age and typology
- Linear reserves and natural landscapes
- Urban typologies
- Front setbacks.

The elements with a high and mid influence on character are described on the following pages.

Land use

While the Monash Structure Plan Area is predominantly educational and commercial/ industrial, residential uses throughout the Structure Plan Area are characterised by lower-density, largely 1 to 2-storey detached houses set in suburban streets.

A pocket of more intense residential development exists where sites have been developed to accommodate more compact homes and denser built forms in proximity to Monash University.

The key non-residential uses are summarised below.

- Monash University accounts for a substantial portion of education facilities within the core of the Structure Plan Area. The campus contains services found in typical commercial Structure Plan areas, creating a self sufficient bubble for students and teachers fulfilling their daily needs
- To the north and east of Monash University, extensive employment uses are present, with varied lot sizes and typically 1 and 2-storey large floor plate buildings
- The Structure Plan Area has very little public open space, particularly if the open space within Monash University is excluded.

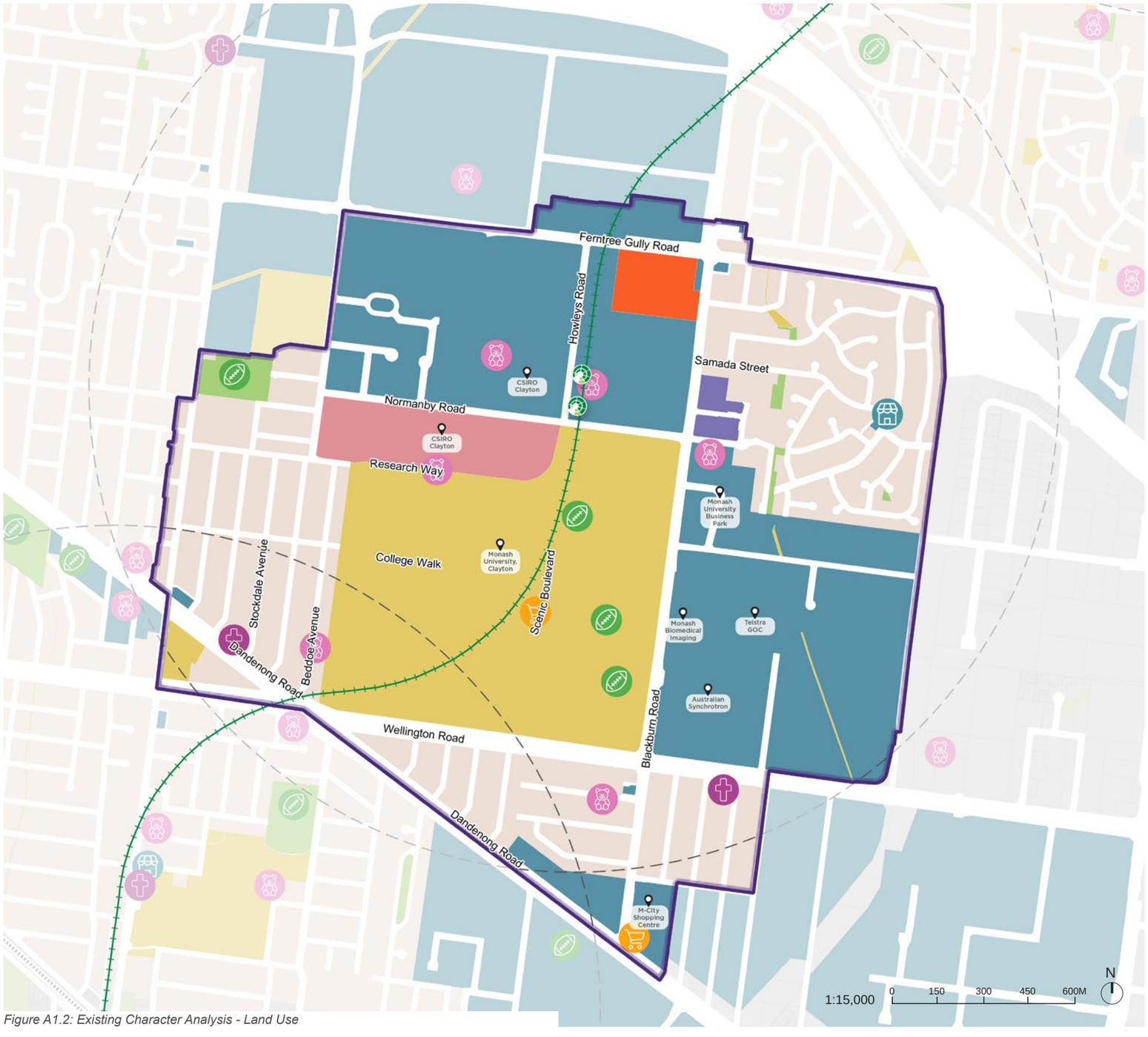


Figure A1.2: Existing Character Analysis - Land Use

Community facilities

The Monash Structure Plan Area has a number of community facilities including education uses (aside from Monash University), child care, community centres, places of worship, sport and recreation facilities. While child care facilities are dispersed across the Structure Plan Area, there is a clear concentration of other services in the southern portion of the Structure Plan Area where more residential uses are found.

The Monash Structure Plan Area has small parks and playgrounds scattered throughout the residential areas. However, it lacks large public open spaces, particularly across the northern portion of the Structure Plan Area.

Community facilities include the following uses that are dispersed through the Monash Structure Plan Area.

Education uses include:

- Monash University Clayton Campus, centrally located in the of the heart of the Structure Plan Area, accessible from Wellington Road
- Clayton North Primary School to the south of the Structure Plan Area.

Sport and recreation facilities include:

- Carlson Reserve located on Clayton Road is the only open space provision within the Structure Plan Area, with tennis courts and a cricket pitch which also functions as an off lead dog park
- There are a small number of children's play areas in reserves and open spaces throughout the residential areas.

Other community facilities include:

- Child Care
- Community Centres
- Health services
- Places of Worship
- Retail services including shops, services, Australia Post, supermarkets.

Figure A1.3: Industrial estate on Dunlop Road

Figure A1.6: Carlson Reserve on Clayton Road

Figure A1.4: Business park on Hardner Road

Figure A1.7: Pinewood Shopping Centre, Blackburn Road

Figure A1.5: Notting Hill neighbourhood House and local shops

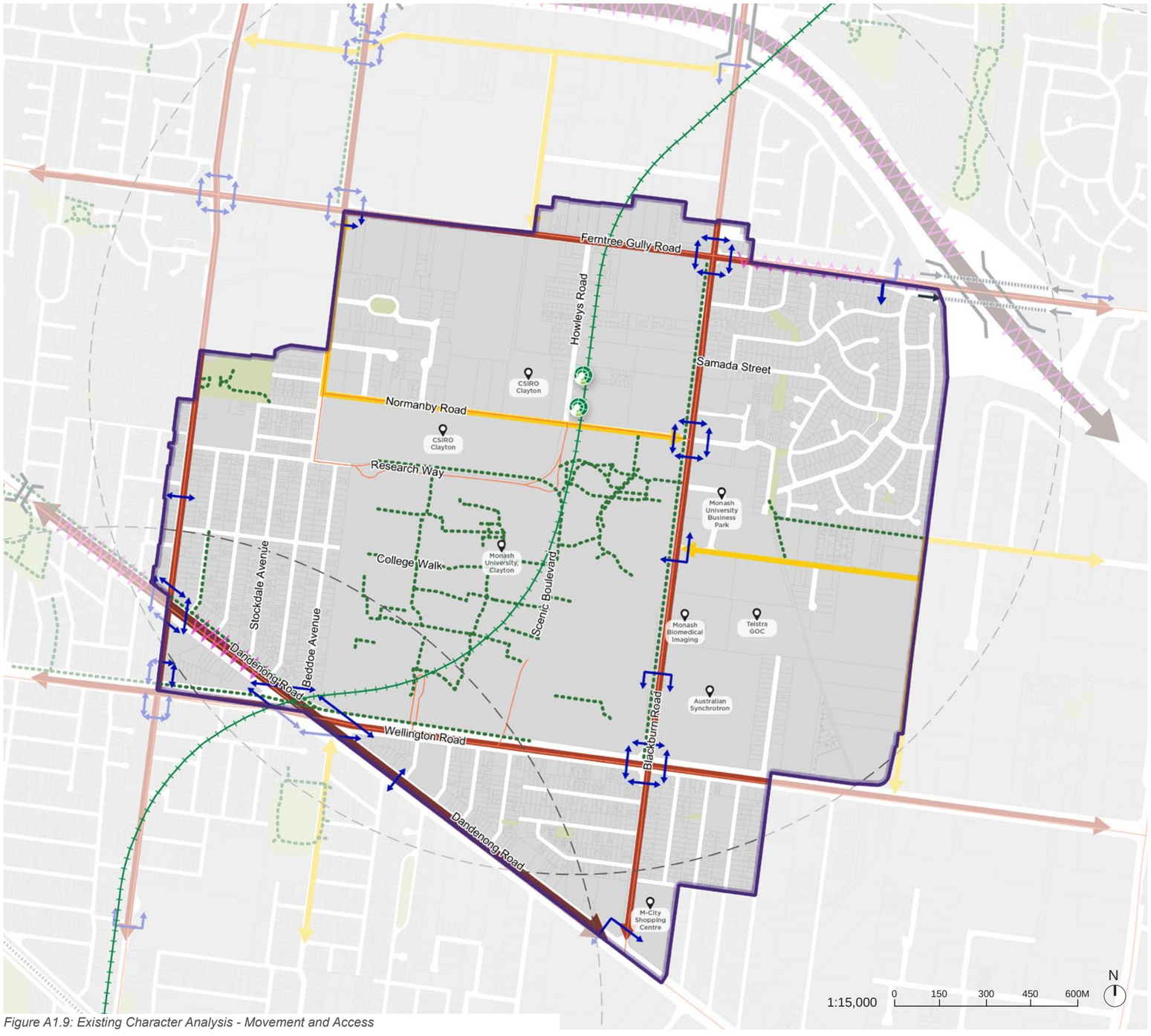
Figure A1.8: Clayton North Primary School, Princes Highway

Movement and access

- The Monash Structure Plan Area has movement networks for public transport, private transport and active travel, walking and cycling.

Key connectivity aspects include:

- The street network ranges from highest-order (primary) streets (including Princes Highway/Dandenong Road and Wellington Road) through to residential streets and local business park streets
- Lower-order streets throughout the Structure Plan Area are arranged in both a regular grid pattern and cul-de-sac networks. The regular grid provides ease of movement in all directions, while the cul-de-sac neighbourhoods hinder efficient movement
- While Princes Highway/Dandenong Road and Wellington Road provide efficient movement for vehicles moving through the Structure Plan Area, the scale of the roads present barriers to north-south movement, particularly for pedestrians and cyclists
- Signalised intersections or pedestrian crossings are present at several intervals along the primary and secondary roads. However, there is often large distances between crossings, making it difficult for pedestrians to cross.



Legend

SRL station

Structure Plan Area

STREET TYPES
- Freeway
- Highway (primary)
- Arterial (secondary)
- Connector (secondary, lower)
- Local (tertiary)
- Barriers to crossing

CROSSING POINTS
- Bridge
- Underpass
- Crossing at grade (cross road, 4-way)
- Crossing at grade (staggered)
- Crossing at grade (single)

LANDSCAPE CORRIDORS
- Watercourse
- Pedestrian and cycling paths

Figure A1.9: Existing Character Analysis - Movement and Access

Figure A1.10: Ferntree Gully Road, travelling east towards Monash Freeway

Figure A1.11: Residential cul-de-sac

Figure A1.12: Signalised pedestrian crossing on Clayton Road

Figure A1.13: Existing Character Analysis - Street Width

Key streets

- The Monash Structure Plan Area contains a relatively well-spaced grid of roads consisting of arterials, main roads and local/connector roads. These are summarised below.
- Princes Highway/Dandenong Road is the highest-order corridor that travels through the south-west corner of the Structure Plan Area. The road reserve is 60 metres wide and has 3 lanes traveling in each direction, and a service lane on both sides. Canopy trees are mainly exotic species and provide a leafy green character within the streetscape. Interfaces include residential and commercial uses which have varied front setbacks
- Wellington Road/North Road is another higher-order road that passes through the Structure Plan Area, changing name at the intersection with Princes Highway. The road reserve is generous at 60 metres wide with a centre median, 3 traffic lanes and a bus lane in each direction and footpaths on either side. East of the existing Huntingdale Station, the North Road centre median with tall canopy trees and a narrow shared path that facilitate east-west pedestrian and cyclist movement to Clayton Road. Wellington Road continues past Monash University, with a service lane on the southern side only, fronting the dwellings to the south. Both Wellington Road and North Road have a mature tree canopy in the median and on both sides of the road reserve
- Ferntree Gully Road runs east-west through the Monash Structure Plan Area. It is a six lane road with service lanes on both sides. Native canopy trees are scattered along the service lane and sporadically along the central median strip. To the east and west, the road interfaces with predominantly 1 to 2-storey detached residential dwellings. Through the centre of the Structure Plan Area, the service lanes are replaced with deep, often landscaped front setbacks of industrial and business park uses
- Blackburn Road has 3 lanes in each direction and facilitates north-south vehicular movements. Native canopy trees are scattered along the footpaths and within a central median strip. Fine-grain residential properties characterise the north-east section, and industrial, business and educational uses characterise the western, and south-east section. Residential uses generally have 9 metres front setbacks, while the industrial and business uses have larger 15-20 metres front setbacks (Image 15)
- Clayton Road has 2 lanes in each direction and facilitates north-south vehicular movements. Narrow footpaths and nature strips are present on both sides of the road, with frequent vehicle crossovers. Street trees are generally small species with poor canopy coverage, potentially due to overhead power-lines. Apart from pockets of commercial and business uses, Clayton Road has predominantly residential interfaces with 8-9 metres front setbacks.

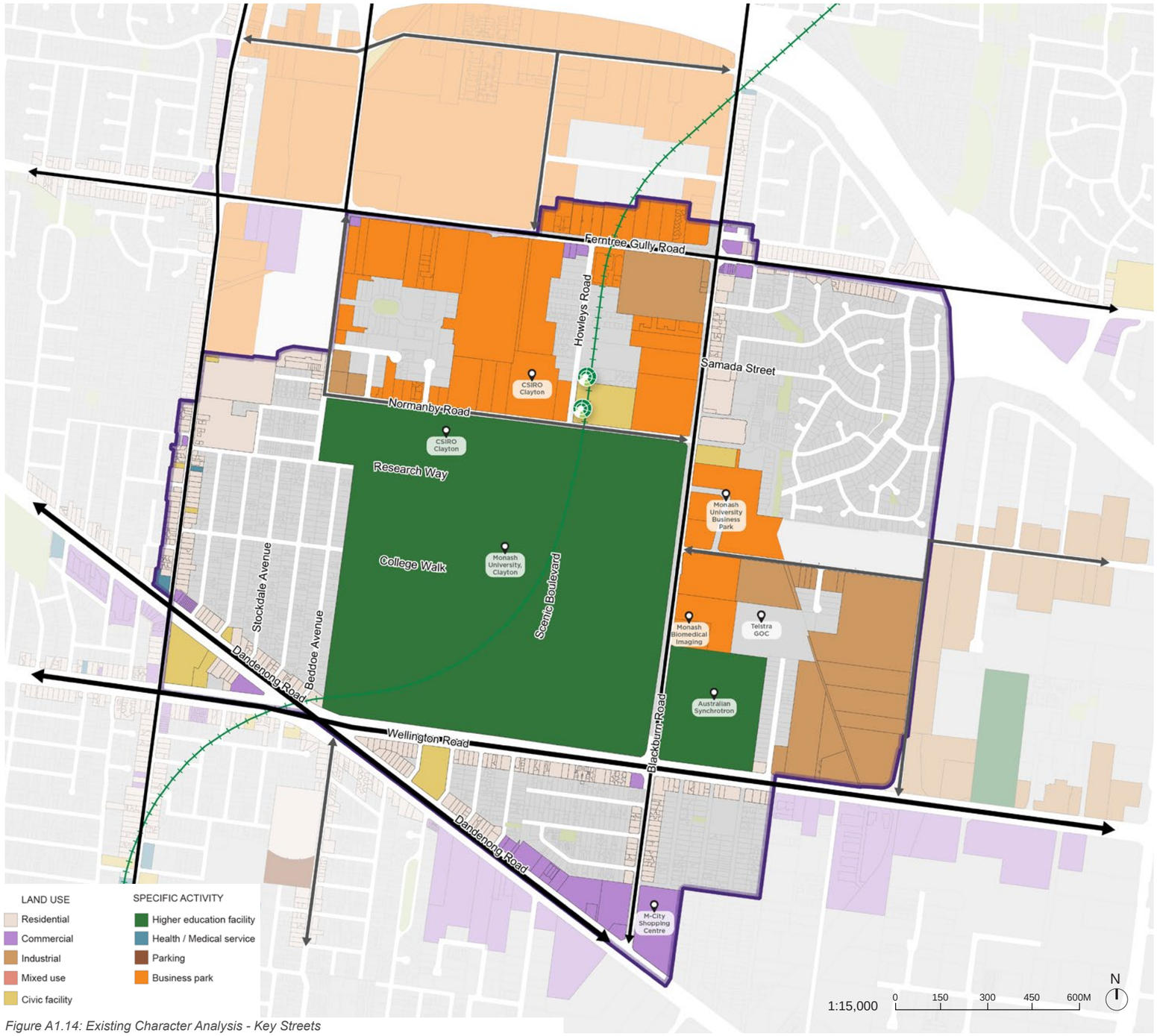


Figure A1.14: Existing Character Analysis - Key Streets

Figure A1.20: Ferntree Gully Road, example of main road within the Structure Plan Area

Figure A1.15: Blackburn Road

Figure A1.18: Wellington Road, example of largest road within the Structure Plan Area

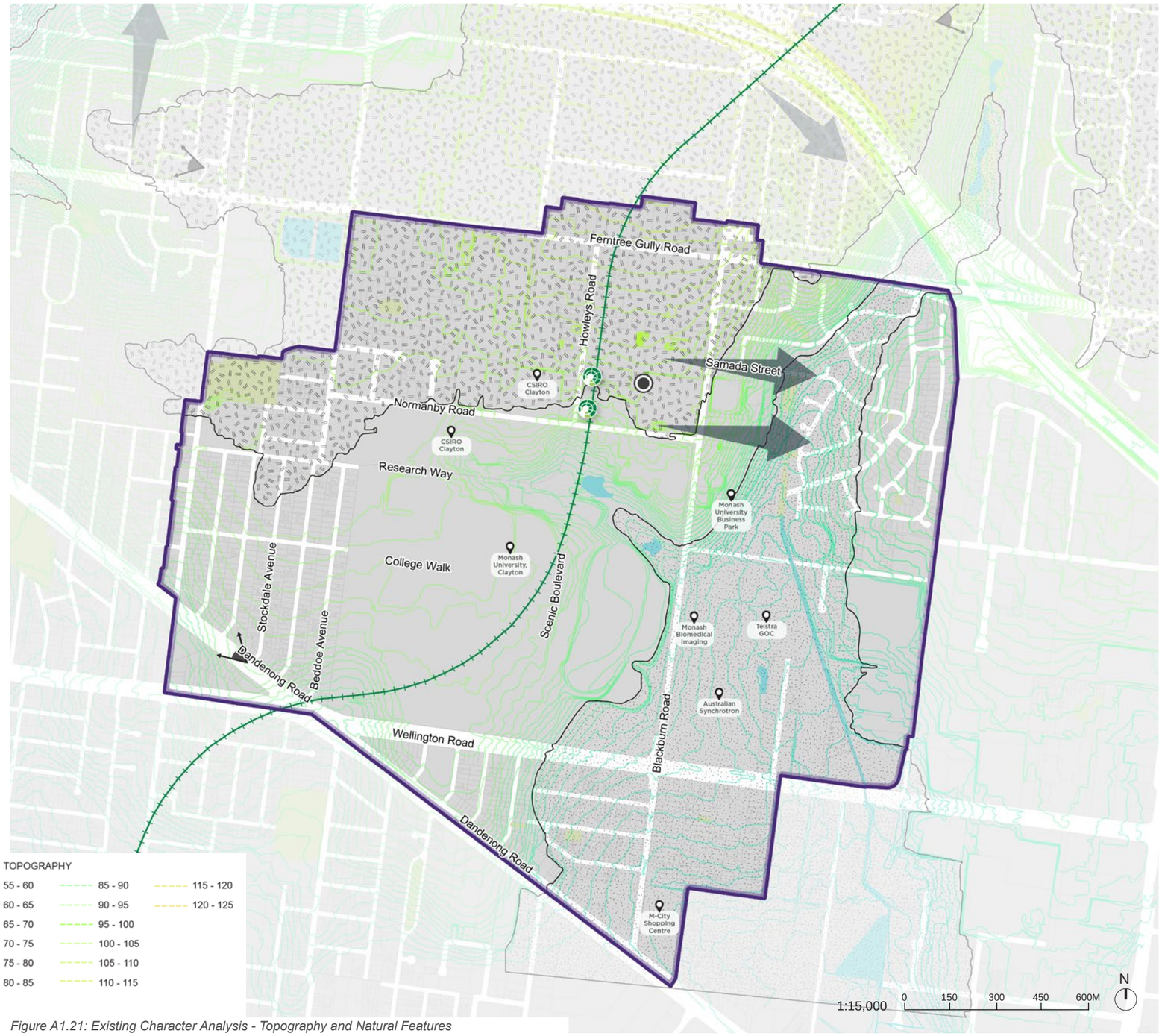
Figure A1.17: Clayton Road, looking north

Figure A1.19: Typical local, residential street

Figure A1.16: North Road, looking west

Topography and natural Features

- The topography and natural features subtly contribute to the character of the Monash Structure Plan Area. There are 2 low-lying valley's within the Structure Plan Area and a number of high points which enhance views to the surrounding neighbourhoods and in some locations, provide long-range views
- On the eastern side of the Monash Structure Plan Area is a low-lying valley with an existing drainage corridor, creating valley views and undulating terrain. The character within the valley is framed by vegetation, with short-range views and undulating streets
- The highest area within the Structure Plan Area is vast in size and relatively flat. Views of the horizon are short-range and constrained, therefore the character is not overly influenced by topography. However, a sense of openness becomes more pronounced and longer range views become more common on the edge of the area
- Monash University is sited on relatively flat topography between the high and low areas of the Structure Plan Area. This provides occasional views to the nearby valley, however mostly views are constrained to within the campus. The north-east corner of the campus has undulating topography, increased vegetation and lakes which contribute to a slightly different character
- Within the 'middle' area, Monash University has many open spaces for passive and active uses. These spaces are accessible by the wider community and offer amenity where public open space is scarce.



Legend

SRL station

Structure Plan Area

FEATURES

- Low lying valley
- Highest area - long range views
- High point
- Key valley views
- Views
- Landmark

TOPOGRAPHY

55 - 60, 60 - 65, 65 - 70, 70 - 75, 75 - 80, 80 - 85, 85 - 90, 90 - 95, 95 - 100, 100 - 105, 105 - 110, 110 - 115, 115 - 120, 120 - 125

Figure A1.21: Existing Character Analysis - Topography and Natural Features

Figure A1.22: Low-lying area, near drainage corridor.

Figure A1.23: Undulating topography at Monash University, Aboriginal Garden

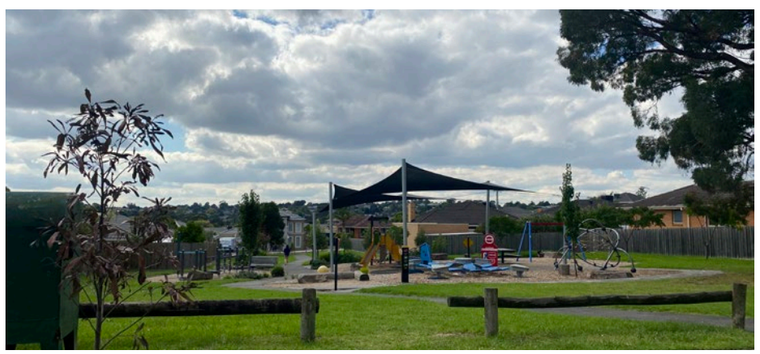


Figure A1.24: Views to surrounding neighbourhoods at Ian Grove Reserve.

Landscape character and tree canopy

The Monash Structure Plan Area has a relatively good level of tree canopy cover, reinforcing the ‘garden city’ character encouraged by Council policy. Pockets of the Structure Plan Area are more landscaped than others, creating variation across the Structure Plan Area as summarised below:

- The ‘garden city’ consists of leafy, low-rise suburbs with well landscaped private gardens and wide streets with high street trees. This character is highly valued by the community and visitors, and is characteristic of the residential areas. The ‘garden city’ also features throughout the industrial areas and business parks as sought through the planning overlays, although the canopy is often a feature of the street, rather than on private property. In contrast, the pockets with a higher built form site coverage, and more recent subdivisions, tend to have a slightly decreased canopy cover
- Areas of remnant indigenous tree canopy remain within the Structure Plan Area, and provides a native Australian feel to the surrounding residential streets.
- Before the 1960s, exotic and native tree species were planted across the Structure Plan Area. Once the area began to develop, native species were preferred over exotic species, and so many open spaces and public land feature mature native species
- Monash University provides substantial tree canopy coverage and features a highly leafy character. It is characterised by planted Eucalyptus species with a native Australian feel along with 1 substantial remnant Red Gum tree
- Within the Structure Plan Area, public open space is generally planted with native tree species, further enhancing the native Australian character of the area
- The residential areas tend to have a reduced canopy cover, with many streets featuring small canopy trees of exotic species. In many cases, this can be attributed to overhead power-lines, causing smaller tree species to be planted.

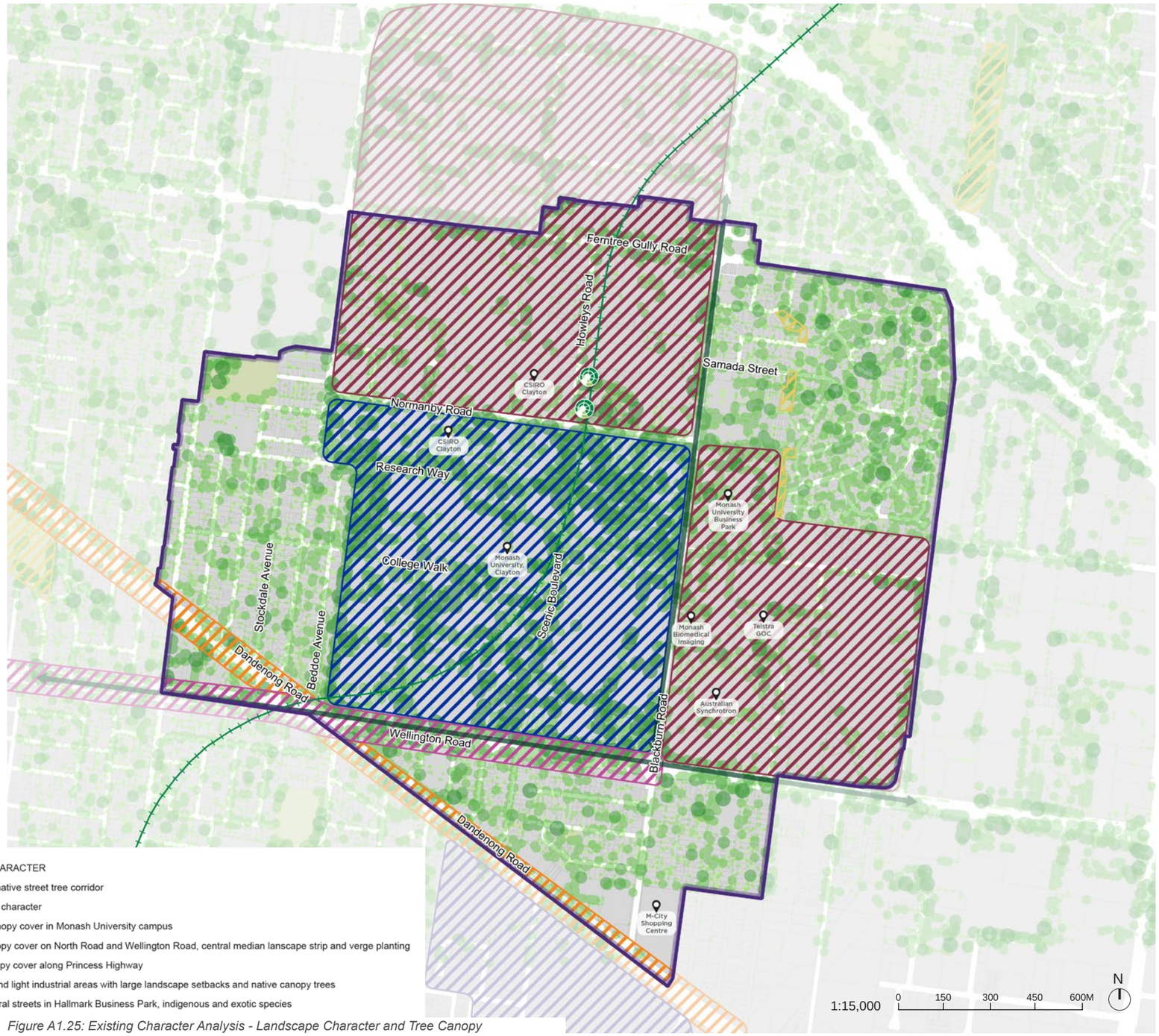


Figure A1.25: Existing Character Analysis - Landscape Character and Tree Canopy

Within the Monash Structure Plan Area, the landscape character tends to change from street to street, with subtle consistencies occurring in neighbourhoods.

Throughout the residential areas, streets typically consist of footpaths and grassed nature strips with street trees. However, the frequency, size and type of street trees differs across the Structure Plan Area, with some areas featuring large exotic and deciduous canopy trees, while other areas have smaller native trees providing less canopy coverage.

Monash University places a strong emphasis on creating and enhancing a native landscape character throughout the campus. The university master plan seeks to celebrate the distinct Australian native landscape by enhancing the formal, informal and wild planting typologies. The campus at the centre of the Structure Plan Area contributes to the landscape character of the whole Structure Plan Area with substantial vegetation that is visible from the perimeter.

The innovation/industrial precincts vary from the typical hardscaped industrial nature seen elsewhere through the use of landscaped setbacks and consistent tree canopy throughout the public realm.

Existing Council strategies encourage the enhancement of the ‘garden city’ character within the industrial and business park areas, which helps to soften the appearance of developments through landscaped large front setbacks.

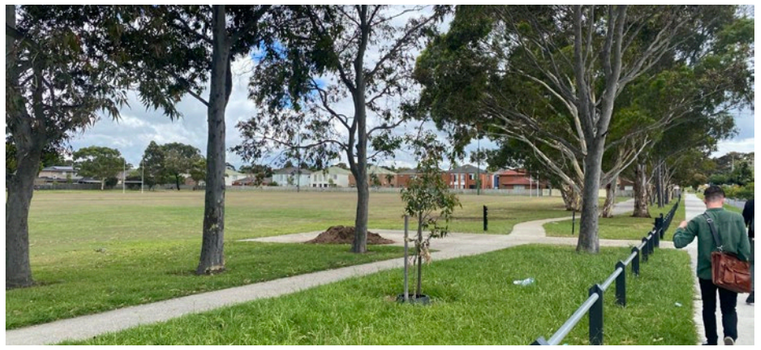


Figure A1.26: Fregon Reserve

Figure A1.27: Scenic boulevard, Monash University

Figure A1.28: Axxess Corporate Park

Figure A1.29: Duerdin Street Industrial Estate

Figure A1.30: Student Housing, Monash University

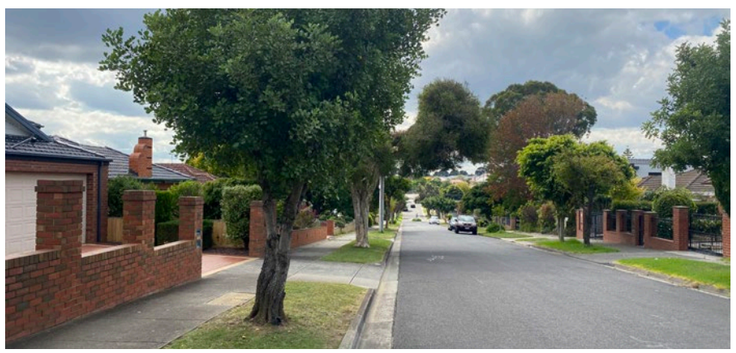


Figure A1.31: Residential street

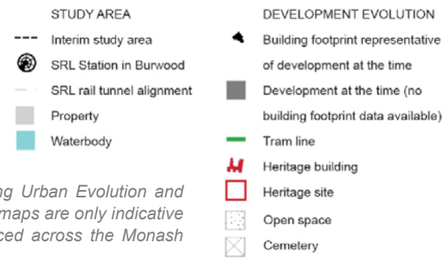
Urban evolution and heritage

Pre-European settlement, the Wurundjeri Woi Wurrung People were the traditional custodians of the land for more than 40,000 years.

Throughout the late 1800s, the area was predominantly market gardens and farming plots. Development was rapid from the 1950s, when residential and industrial development grew substantially in the Oakleigh to Dandenong industrial corridor.

Housing styles have varied throughout the years, with early houses built by owner occupiers before 1960 favouring weatherboard dwellings. The housing boom of the 1960s, saw an abundance of double and triple-fronted brick veneer dwellings throughout the Structure Plan Area.

Nearby industrial land uses were one of the main drivers of residential growth within the Structure Plan Area, providing affordable housing close to employment.



Use this legend above for the following Urban Evolution and Heritage maps. Note that the following maps are only indicative of the development patterns experienced across the Monash Structure Plan Area.

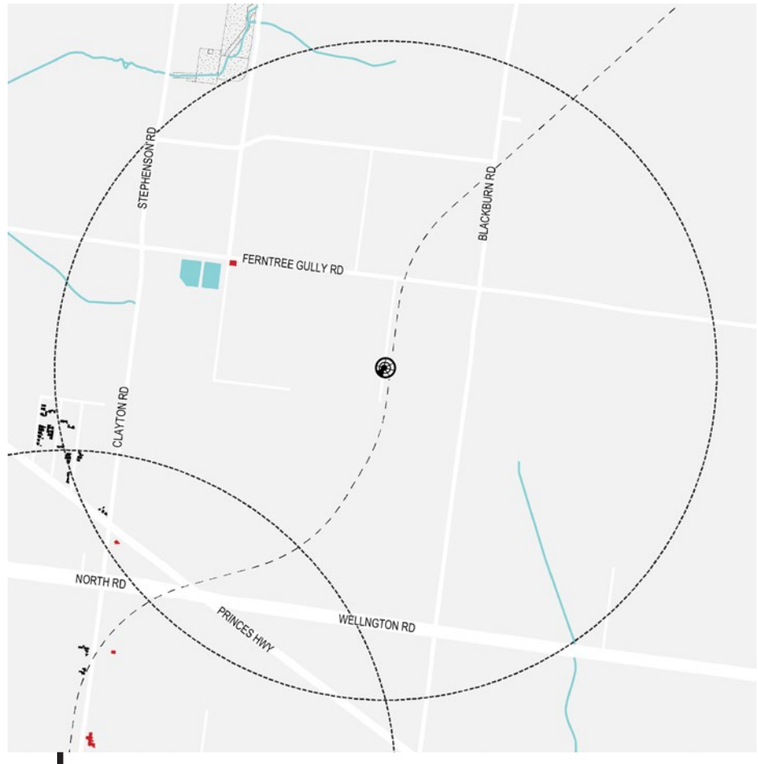
Pre-European Settlement

The Monash Structure Plan Area is located on the traditional lands of the Wurundjeri Woi Wurrung People to the north-east and the Bunurong People to the south-east (in accordance with the July 2021 determination of the Victorian Aboriginal Heritage Council).

The Traditional Owners have lived sustainably in the region for thousands of years, moving within their lands while making use of seasonal plant and animal resources and sharing similarities in speech, burial practices, initiation, kinship marriage ties and religious beliefs.

The Traditional Owners continue to be custodians of the region today, maintaining their connection to their Country.

More information is provided in the SRL East Structure Plan - Aboriginal Cultural Heritage Technical Report.



Pre-European Settlement - 1920s

In 1897 the Monash Structure Plan Area was part of the City of Oakleigh and the Shire of Mulgrave. Market gardens growing cut flowers and vegetables were common in Clayton, along with dairy farmers. Prior to the 1900s, Notting Hill had a butcher, forge, bakery, hotel and brickworks.

The Gippsland rail line (currently known as the Dandenong /Pakenham rail line) was opened from Oakleigh to Bunyip in 1877 and from Oakleigh to Melbourne in 1879. This encouraged development around Oakleigh, west of the precinct.

In 1909, Clayton North Primary School (established in 1865) was re-built as a brick structure with 1 classroom. Since then, the school has remained in continuous operation and is an example of the Edwardian Baroque architecture style.

Before 1920, houses were predominantly made of wood, with 2 to 5 rooms per building. Money was invested into main roads, churches, hotels and shops. The farming plots were generally rectangular, with conifer trees often planted along property boundaries.

Key heritage sites include:

1 Clayton North Primary School, 1909 - Victorian Heritage Register

2 McCulloch House, 1888 - National Trust

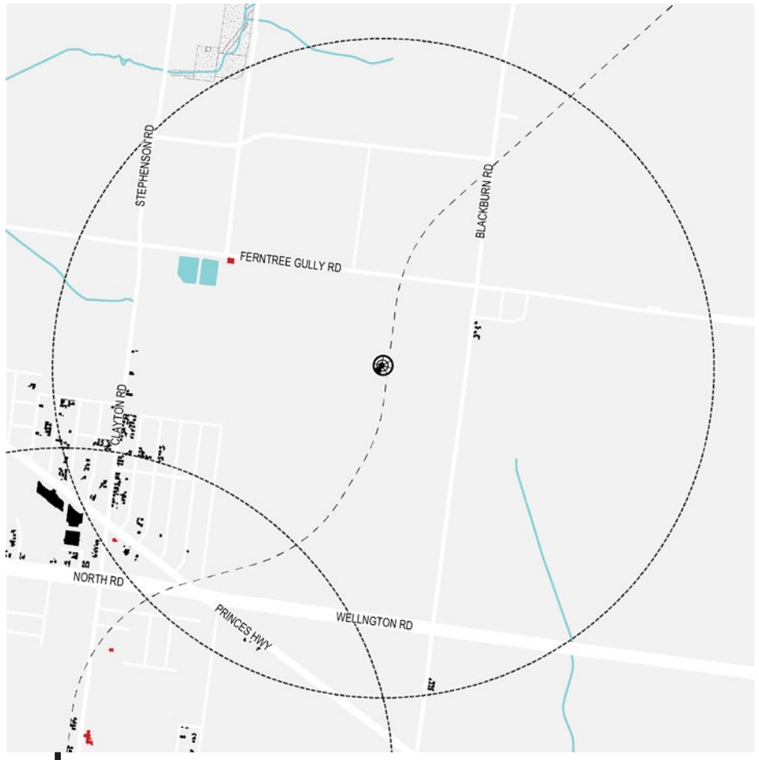
3 Notting Hill Hotel, 1891 - Local significance.

1920 - 1945

In 1922, the Gippsland rail line was electrified, reducing travel time to Melbourne and causing an uplift in subdivisions within the Monash Structure Plan Area.

By the 1930s, Dandenong Road was an important traffic route and became the foundation for a corridor of new housing development. These new subdivisions began to outgrow nearby Oakleigh to the west, and in the 1930s the first signs of suburbia became visible on the western edge of the Monash Structure Plan Area.

At this time, the paddocks and market gardens had cleared almost all the trees from the landscape, with only exotic species planted along some property boundaries.



1945 - 1951

By 1951, the roads of future subdivisions had begun to be laid out, although many dwellings were not yet built.

The houses built as part of these subdivisions were predominantly made from brick or timber, with 2 to 4 rooms per dwelling and pitched roofs. Lots were typically 800 square metres in area and rectangular in shape.

Development was gradually moving east from Oakleigh, although it was slow to establish in the Monash Structure Plan Area due to a central Melbourne plan being developed at the time by the Melbourne Metropolitan Board of Works. This plan wasn't published until 1954 and therefore restricted development until then. At the same time, the Shire of Mulgrave developed their own plan for the Shire, further stalling residential development.

Additionally, access to fresh water and a sewage system during this time also stalled residential development within the Monash Structure Plan Area.

1951 - 1972

Rapid growth in the Monash Structure Plan Area occurred in the 1950s and 1960s, linked to industrial growth in the corridor between Oakleigh and Dandenong, and material and labor availability from the conclusion of WW II. By 1969, industrial land uses occupied 26 per cent of the land of Clayton, compared to 23 per cent for housing.

Residential growth was rapid between 1951 and 1963, providing working class housing close to employment. Housing styles were predominantly double and triple-fronted brick veneer houses with 3 bedrooms. Pinewood housing estate was one of the largest in the Monash Structure Plan Area, along with its shopping centre, which was built by AV Jennings in the late 1950s.

Within the precinct, many houses built before 1960 were built due to scarcity of labor and materials after WW II. Owner-builders favored weatherboard dwellings, as they were easier to construct.

In 1961, Monash University opened the Clayton campus, which was aimed at providing an advanced technical education. Located far from public transport, the campus quickly became a drive-in university with multiple large car parks.

Key heritage sites include:

④ Menzies Building Monash University, 1962 - Local significance

⑤ Religious Centre Monash University, 1967 - Victorian Heritage Register.

1972 - today

The Mulgrave Freeway (currently known as the Monash Freeway) was built in sections throughout the 1970s, beginning from Springvale Road east of the Monash Structure Plan Area, to Warrigal Road (and Chadstone Shopping Centre) west of the Monash Structure Plan Area. In 1988, the missing link between Mulgrave Freeway and the South Eastern Freeway was opened, substantially decreasing travel times into Melbourne CBD.

In the mid 1980s, the Clayton drive-in on the corner of Wellington Road and Blackburn Road closed as cinemas in shopping centres increased in popularity.

Highway retail, such as drive-through bottle shops and fast food outlets became common along the major roads within the Monash Structure Plan Area.

From the 1970s to today, the regular housing lots from earlier in the century began to be subdivided to allow for increased density, particularly close to Monash University. These developments were generally brick veneer units and apartments in the 1970s and 1980s. Contemporary infill developments common today take on a range of architectural styles.

Built form

The Monash Structure Plan Area is generally characterised by low-rise building forms, with a small number of pockets of taller buildings. The built form is varied in age and architectural style, with pockets of original housing still visible in some streets. The following are the key built form characteristics identified across the Structure Plan Area:

- The business parks and industrial areas are generally characterised by low-rise 1 to 3-storey buildings, with a variety of building footprint sizes. These building styles are often tilt up concrete construction, with some of the older industrial buildings made from brick veneer
- Retail within the Structure Plan Area also varies in architectural style. The M-City Shopping Centre features 2 towers with the tallest tower rising to 13 storeys with predominantly underground car parking
- Another tall building within the Structure Plan Area is the soon to be completed Victorian Heart Hospital which is approximately 11 storeys, and is located on the eastern side of Monash University on Blackburn Road
- Student housing on Rusden Place, east of Monash University is 5 to 6 storeys, with the buildings reducing in height as the topography falls to the east
- From 1950 to 1965 the Structure Plan Area experienced a rapid housing boom. The style of these houses were predominantly post-war, double and triple-fronted brick veneer dwellings, with 3 bedrooms. These post-war dwellings were simple in design, and often mass built by large construction companies such as AV Jennings. They commonly had simple windows and doors with minimal decoration, and a standard chimney.

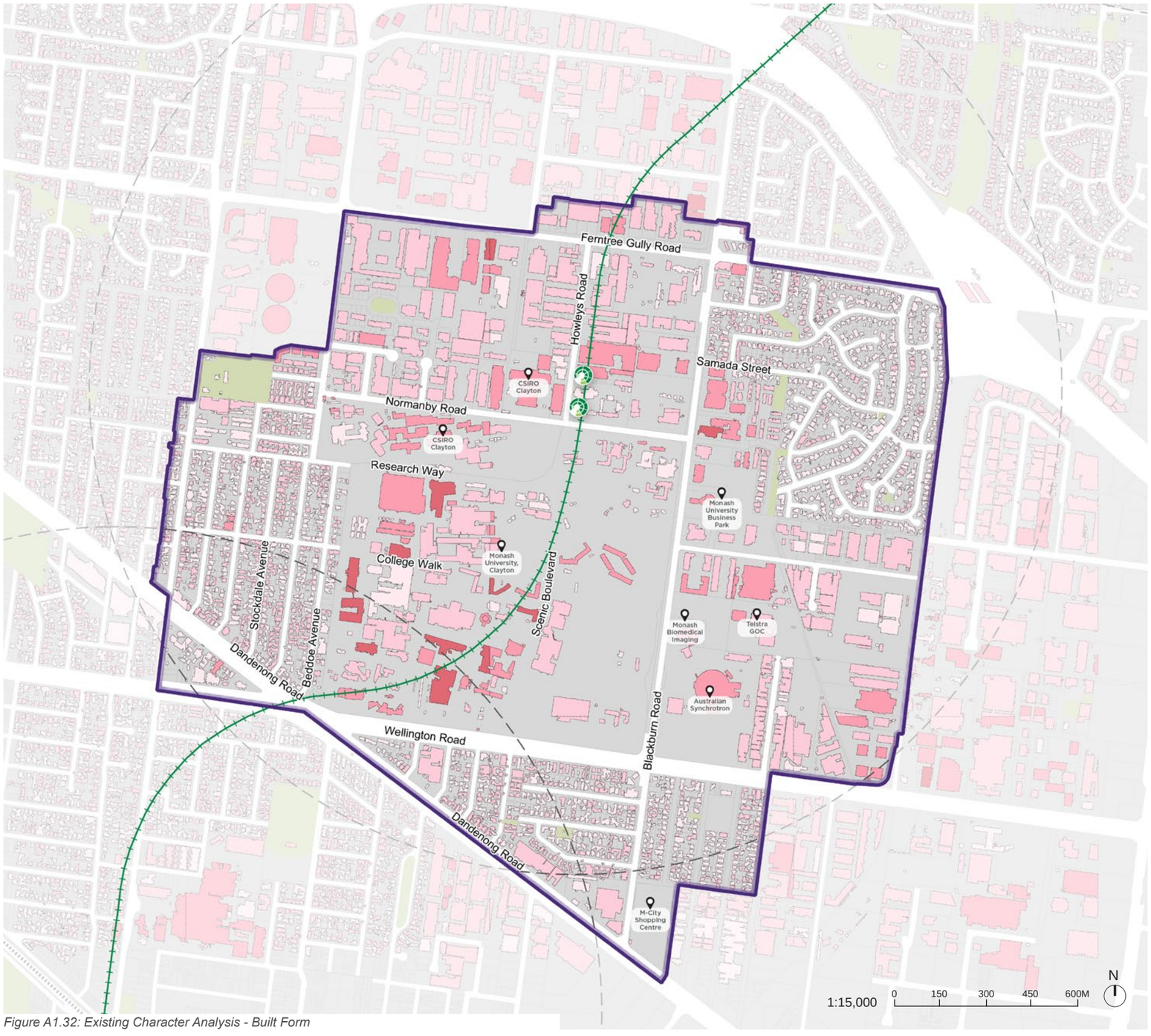


Figure A1.32: Existing Character Analysis - Built Form

- Some of the houses built during the housing boom were built by owner-occupiers. Often these dwellings were weatherboard, instead of masonry as they were simple to construct. The architectural style of these dwellings was simple and were commonly single fronted with a pitched roof and minimal decoration around windows and doors
- Throughout the years, many of these original properties have been subdivided into 1 to 2-storey townhouses and units. There are still some streets with original dwellings, but they are often poorly maintained and scattered throughout the Structure Plan Area
- The tallest building form in the Structure Plan Area is the Menzies building at Monash University built to 12 storeys in 1964. At the time of opening, the Menzies building was the tallest university building in Australia.

The style and character of built form within the Structure Plan Area is varied, with land use a key driver of building typology and building height. Built form typologies have a substantial influence on the character of the area in comparison to architectural style.

Figure A1.33: M-City Shopping Centre

Figure A1.34: Student Housing, Rusden Place

Floor area ratio (FAR)

The Monash Structure Plan Area is characterised by developments of low to medium scale (high FAR) throughout the light industrial, medical and education precinct, and developments of low scale (low FAR) in the surrounding areas.

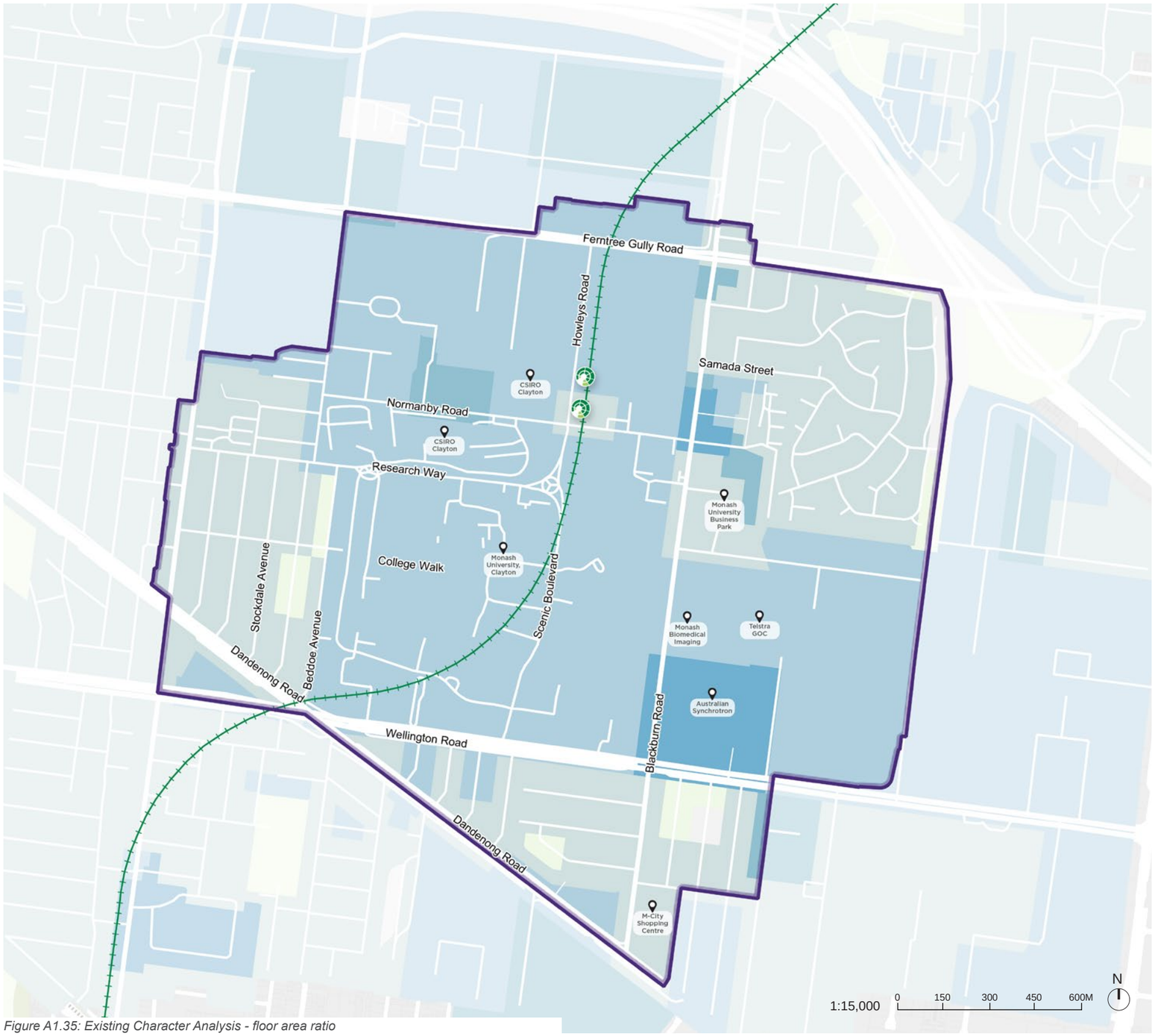


Figure A1.35: Existing Character Analysis - floor area ratio

Lot sizes

The Monash Structure Plan Area comprises a range of lot sizes. These are summarised below.

- Small lot sizes (under 400 square metres), for newer medium-density residential lots. These 2-storey homes are predominately detached houses, set on smaller lot sizes.
- Conventional residential lot sizes (under 800 square metres), which cover a large proportion of the Structure Plan Area. These properties are typically 1 and 2-storey homes, set in the middle of the lot with front and rear open space.
- Large lot sizes (circa 800 to 1200 square metres) being the traditional suburban residential form, of the mid-to-late twentieth century. This size lot is not as common throughout the Structure Plan Area, as many have been divided into smaller lots.
- Extra large lot sizes (over 1600 square metres) principally universities and business parks. Monash University and the industrial land to the north and east are prime examples of this lot size, with large buildings set back from main streets, surrounded by space for landscaping and surface car parking.

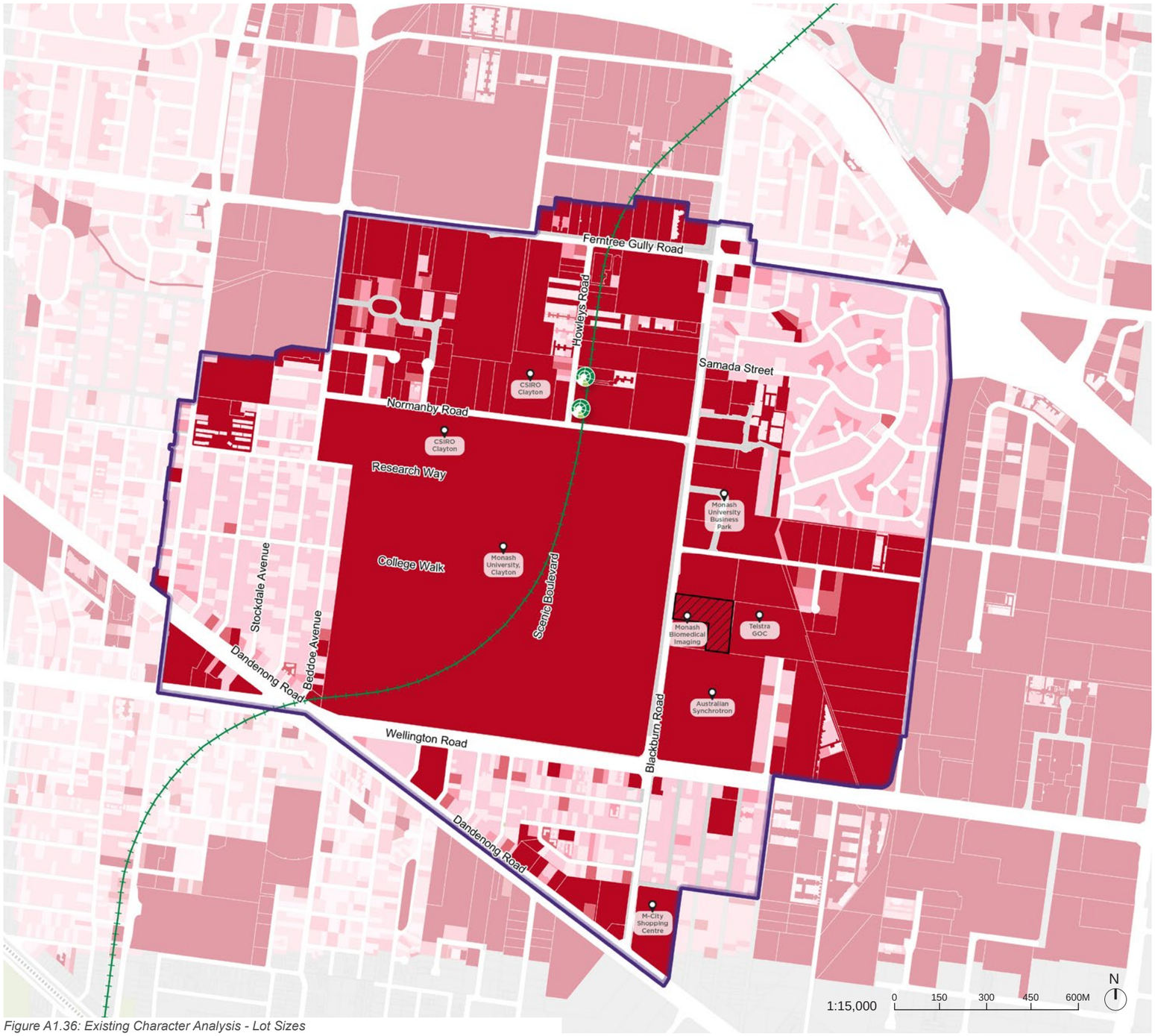


Figure A1.36: Existing Character Analysis - Lot Sizes

Block structure

The block structure within the Monash Structure Plan Area is varied and is a reflection of the pattern of housing growth from the 1950s to today.

The education facilities relating to Monash University are large, inward-facing blocks that discourage through-movement via public connections. Although there are connections through the Clayton campus, they don't appear to be welcoming to the wider community.

The business parks and industrial areas along Ferntree Gully Road, Blackburn Road, Normanby Road, Howleys Road, and Wellington Road are also large inward-facing blocks, with no through block connections. Where possible, opportunities to create through block public connections should be encouraged.

The residential areas have a varied block structure. The western side of the Structure Plan Area contains a regular street grid (Image 39) that dates back to the early 1950s—with some blocks greater than 200 metres long and some less. Overall, these block sizes support walking and cycling through a high degree of permeability and legibility, and minimise congestion by distributing traffic evenly.

Irregular blocks with cul-de-sacs are more prevalent on the eastern side of the Structure Plan Area which was surveyed and developed in the 1960s. The cul-de-sac design reduces permeability and legibility, and concentrates traffic on fewer streets. Some of these have the potential to be 'repaired' to form regular blocks.

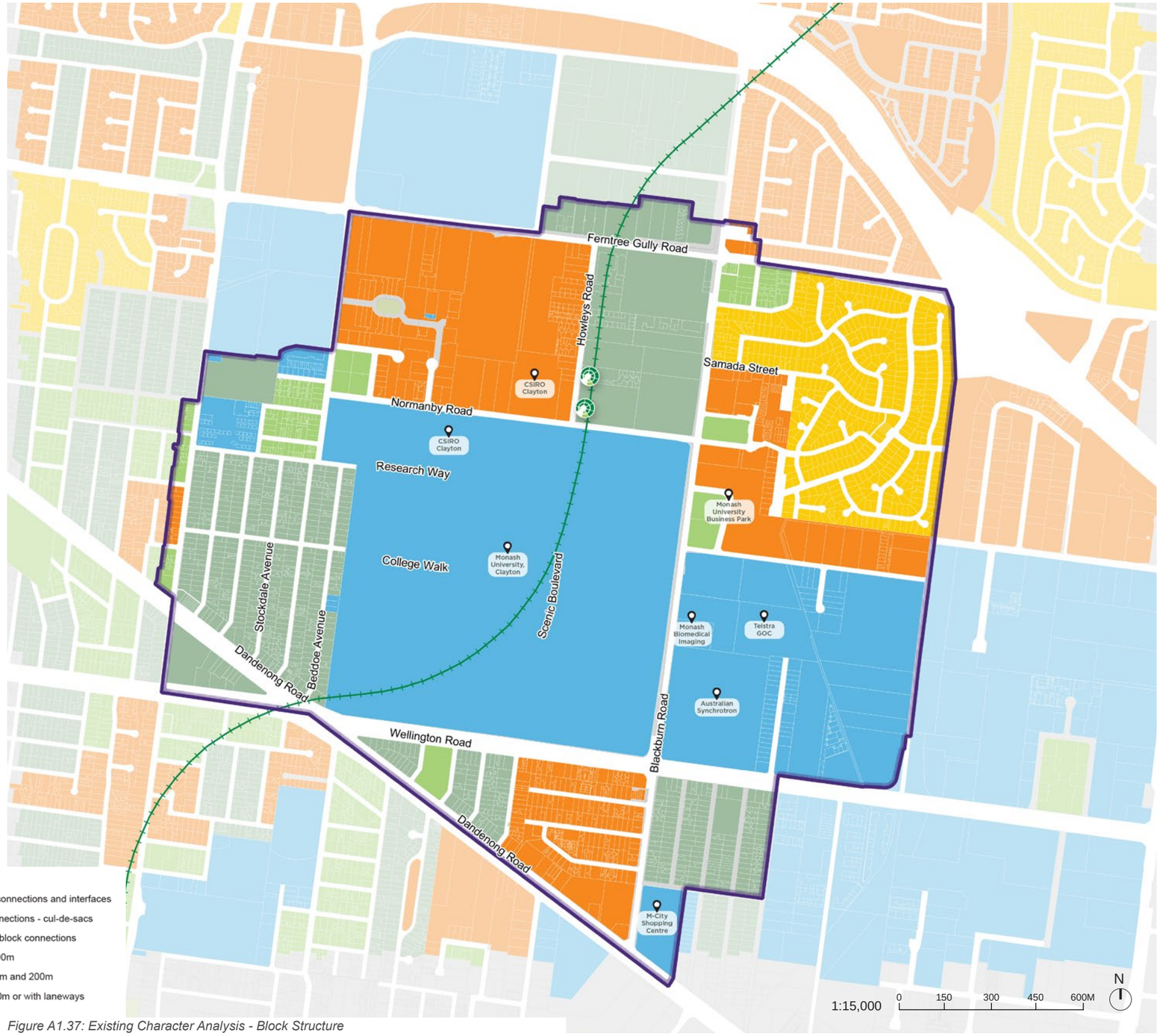


Figure A1.37: Existing Character Analysis - Block Structure

Figure A1.38: Regular residential blocks to the west of Monash University

Figure A1.39: Irregular residential blocks of Notting Hill

Subdivision patterns

The Monash Structure Plan Area is generally made up of independent titles, facilitating redevelopment opportunities. However, scattered throughout the Structure Plan Area are a range of subdivisions and strata-title arrangements. These strata-titled properties are used for residential purposes, some commercial and business land uses.

A number of industrial properties and business parks have strata-title arrangements that may create redevelopment constraints.

There has been considerable development of traditional house-blocks for 2 or 3 strata-titled units, particularly in the west of the Structure Plan Area. These unit developments deliver a higher-than-average density, accommodating growth within a low-rise residential context.

These range in size and arrangement, but will limit the redevelopment potential of the properties in the future. The strata-titled subdivisions range in building typology and include older 2-3 unit developments, newer 2-storey townhouses and single-storey detached dwellings.

As a result of these subdivisions, many of the original houses from the 1950s to 1960s have been demolished and replaced with multi-unit developments. This has changed the architectural character of the residential neighbourhoods and has also increased the site coverage, reducing the abundance of soft landscaping.

A substantial challenge for the Structure Plan Area is managing housing growth across large undeveloped residential lots, while maintaining the existing 'garden city' expected by the community.

Recently, a number of larger-inward facing residential and aged care facilities have developed within the Structure Plan Area. These developments tend to turn their back to their surrounding neighbourhood and establish an entirely new architectural and landscape character. Due to them being strata-titled, the character of these pockets is unlikely to change in the future.

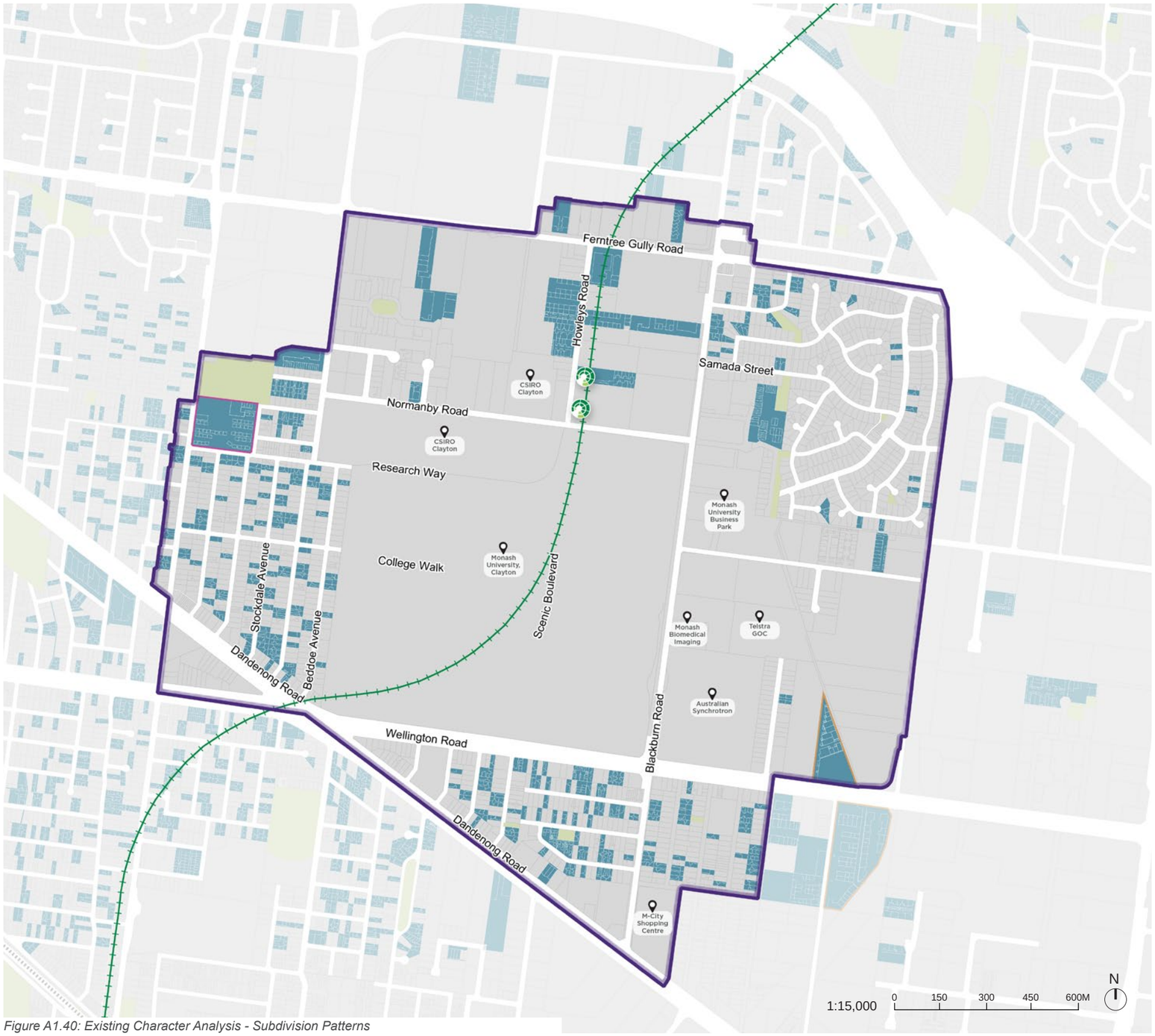


Figure A1.40: Existing Character Analysis - Subdivision Patterns

Setbacks

A range of building setbacks are found across the Monash Structure Plan Area. The pattern of setbacks correlates with land use, access and era of development.

Within the business parks and industrial precincts the predominant setback is in excess of 15 metres, with landscaping and car parking provided in the private realm.

The predominant condition in the residential land areas are residential properties with setbacks from the street (occupied by front gardens and driveways), commonly in the range of 7-9 metres deep. This front of plot private amenity space provides a threshold space between the public street and private property, with front garden landscaping contributing to the residential streetscape.

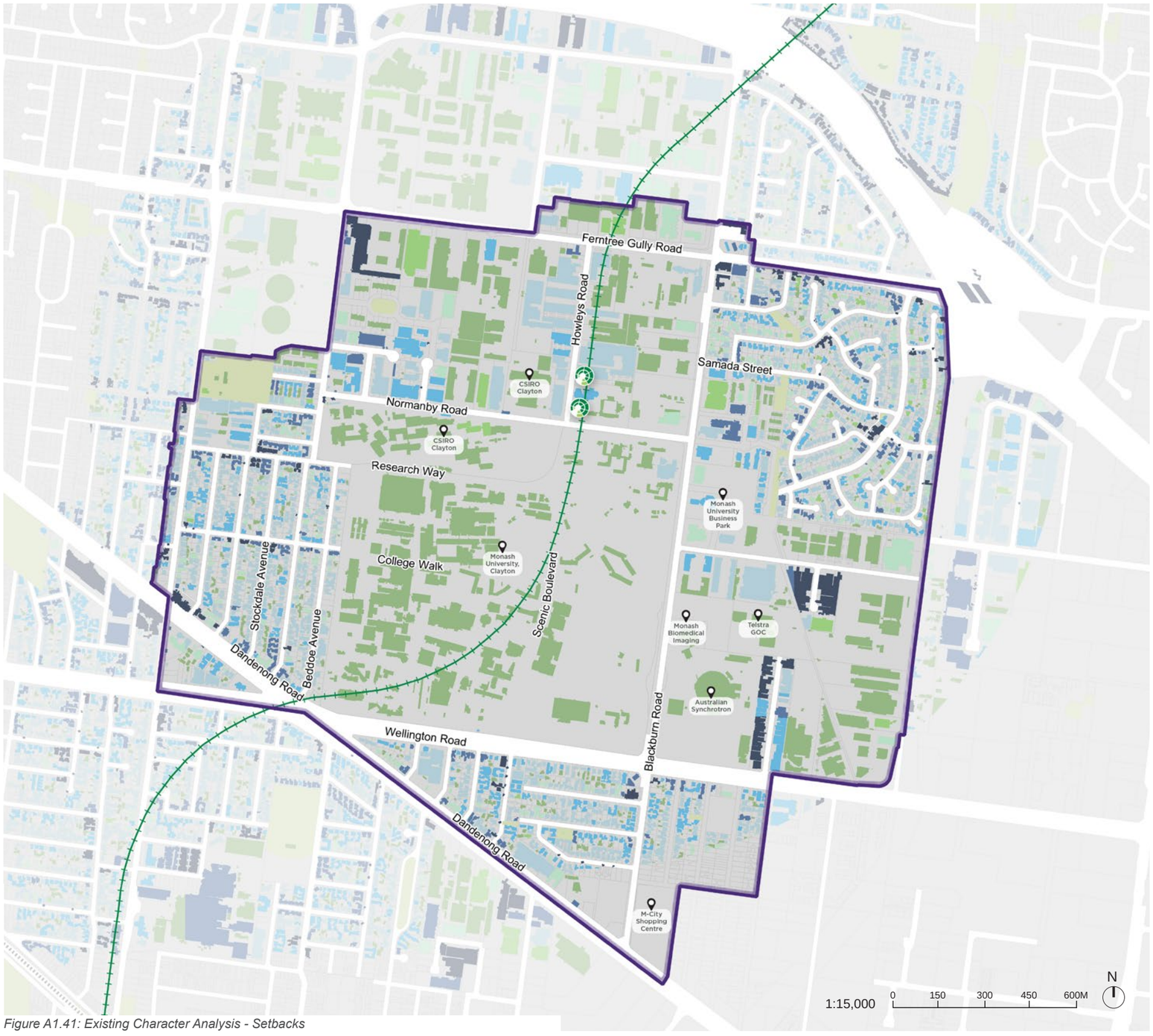


Figure A1.41: Existing Character Analysis - Setbacks

Existing character areas

The character assessment has identified a mix of subtle and distinct changes in character across the Monash Structure Plan Area. The analysis has been synthesised to define a series of distinct existing character study areas. Each character area has been identified as having a distinct sense of place. The character variation within the Structure Plan Area is strongly experienced through both built form and use.

The main physical features that distinguish the character study areas are:

- Princess Highway/Wellington Road with its high levels of vehicle movement
- Type of built form
- Land use
- Street tree species and tree canopy sizes
- Topography and views to surrounding areas
- Front setbacks.

The existing character areas are summarised on the following pages, and are:

- Monash University and CSIRO
- Jock Marshall Reserve and Student Quarter
- Monash Employment North
- Monash West
- Monash Employment South
- Notting Hill
- Industrial
- Monash Corridors
- Residential South
- Blackburn Road North

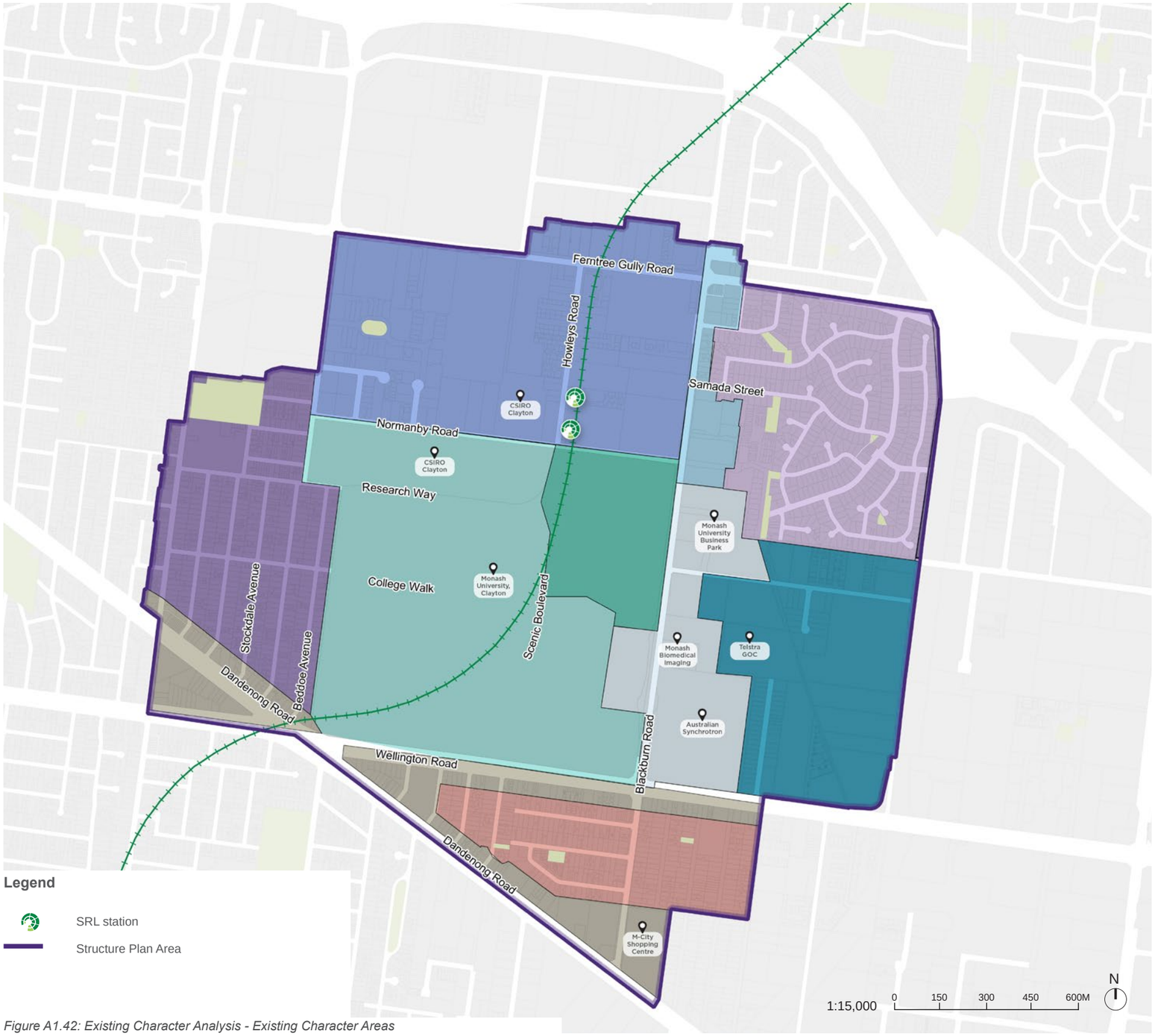


Figure A1.42: Existing Character Analysis - Existing Character Areas

Monash University and CSIRO

The character of this area is defined by the harmonious combination of mid-rise buildings with a lush vegetation, creating an inviting public realm for pedestrian navigation. The Monash University core is comprised of retail and food services, and contributes to an inward-facing environment. The CSIRO research campus resembles the Monash University, although unlike the university it has a perimeter fence which restricts public access is enclosed, restricting public access.

Jock Marshall Reserve and Student Quarter

Located in the north-east corner of the Monash University campus, this area features 3 to 5-storey residential buildings seamlessly integrated into the landscape, and is characterised by a native environment with dense vegetation. The movement network prioritises pedestrians and cyclists, restricting vehicle access to the outer edges of the student quarters. The presence of a lake and the Aboriginal garden in the Jock Marshall Reserve further enhances the overall native character.

Monash Employment North

This mixed-use area is characterised by its business and innovation land uses and features mid-rise office and manufacturing buildings with consistent landscaped setbacks Private streets are prevalent within the business park, while public streets follow a large, regular grid pattern, running north-south and east-west, typically 20 metres wide. Car parking often dominates the streetscape with front setbacks generally providing on-site parking for businesses.

Monash West

In this residential area, dwellings are typically low-rise, featuring a mix of traditional houses and contemporary infill. Local streets approximately 15 metres wide, undulate with the topography and slope south towards Dandenong Road. Lot sizes vary from medium to smaller lots dispersed throughout the area, with front setbacks exhibiting variation and a mix of exotic and native landscaping. Street trees are inconsistently planted, showcasing a variety of species and sizes, contributing to the diverse character of the area.

Monash Employment South

This area's character is defined by technology land uses connected to Monash University, housed in buildings with ample landscape setbacks and scattered mature native canopy trees. Blackburn Road acts as a central vehicular spine and a barrier to east-west pedestrian movement. The built form is mainly low to mid-rise, and integrated with at-grade car parking. Prominent anchors include the Victorian Heart Hospital and the Australian Synchrotron.

Notting Hill

In this residential area, undulating terrain defines the typography, with the north-west corner as a 'high area' and the southern part in a low-lying valley. Streets meander and commonly terminate in cul-de-sacs. The area features substantial canopy cover, with street trees of varied exotic and native species. Dwellings, are generally 1 to 2-storey detached buildings with front setbacks displaying a mix of exotic and native landscaping. Lot sizes range predominantly from 400-800 square metres.

Industrial

This area's character is shaped by its industrial and commercial land uses, predominantly showcasing large concrete warehouse buildings with commercial, glazed frontages, each exhibiting varying front setbacks. The streets are typically 15 metres wide forming a broad grid, complemented by smaller private streets granting access to buildings within lots. Most industrial buildings are set back from the front boundary, with some allocating space for at-grade parking. The area features a uniform nature strip and sporadically planted street trees, primarily featuring native species.

Monash Corridors

The character of this area is primarily defined by Dandenong Road and North Road/ Wellington Road, both 60 metres wide with 3 lanes of traffic in each direction and service lanes on both sides, forming a substantial barrier to north-south movement. North Road/Wellington Road features an established native landscape with mature native trees, while Dandenong Road showcases small exotic trees at inconsistent intervals. The area exhibits a diverse range of building types and sizes, including the M-City shopping complex.

Residential South

Surrounded by the Monash Corridor area, this area has a sense of isolation from other residential neighbourhoods. This residential area predominantly consists of 1 to 2-storey dwellings and multi-unit developments on subdivided lots. Original 1960s houses are present but are generally poorly maintained, feature contemporary additions. Street trees are consistently planted, while some are a mix of native and exotic species of varying sizes.

Blackburn Road North

Situated on the east side of Blackburn Road, this area encompasses a mix of land uses, including residential blocks, student housing with integrated retail spaces, and scattered community facilities. There is a lack of tree canopy coverage, with only a few street trees and dispersed landscaping elements, creating a poor public realm experience.

Monash University and CSIRO

The combination of built form and mature vegetation creates a comfortable public realm for pedestrians to navigate.

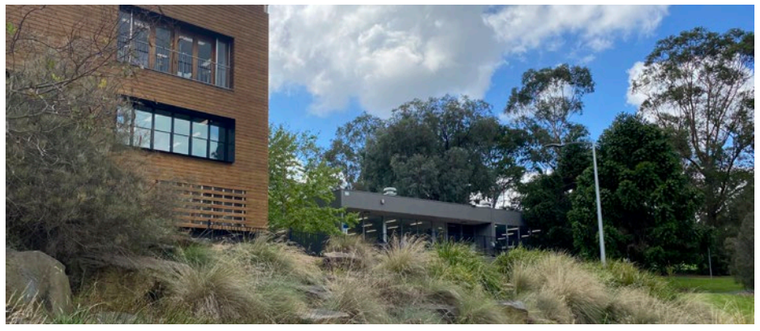
Main drivers of character

- The educational area features mid-rise buildings that forms the core of the Monash University Clayton campus
- View lines within the campus are generally short range due to the mature vegetation and tree canopy and orientation of built form
- There is a strong native landscape character throughout the campus, with mature canopy trees
- The majority of the movement network is pedestrian only. Vehicle movement is restricted to the outer edges of the campus to access car parking
- The campus contains a mix of retail, food and beverage that services the daily needs of the student population, making the need to leave the campus unnecessary, resulting in an inward facing environment
- The CSIRO research campus shares a resemblance to Monash University in terms of its character. However, it distinguishes itself by being enclosed within its boundaries, which restricts public access.

Considerations for change

- The campus has a strong landscape character, which will create challenges for urban intensification due to an increase in site coverage and potential loss of vegetation
- There have been many new buildings and public realm networks established in the last few years, potentially restricting availability of developable land.

Jock Marshall Reserve and Student Quarter



This area comprises mostly 3 to 5-storey residential buildings that are nestled into the landscape.

Main drivers of character

- There is a native landscape character that is driven by dense vegetation, where topography and tree canopy are the dominant character
- Buildings sit below the tree-line at low points so as to not dominate the views from the footpaths
- The movement network through the area is predominantly footpaths for pedestrians and cyclists. Vehicle access points to car parking are limited to the outer edges of the student quarters
- A lake and Aboriginal garden at the Jock Marshall Reserve enhances the native character of the area.

Considerations for change

- The student area has a very strong landscape character, with a focus on dense canopy coverage and buildings nestled within native landscape. This could restrict future urban intensification of the area
- Located in close proximity to the SRL station at Monash, the character area is in a prime location for urban intensification.

Monash Employment North

Main drivers of character

- This mixed-use area includes commercial, industrial and innovation/education uses
- Many of the streets within the business park are private
- The public streets form a large, regular grid, running north-south and east-west and they are generally 20 metres wide
- The buildings are set back from the street, in accordance with Design and Development Overlay 1 (DD01), where landscaping is required
- Lot sizes are varied with most larger than 1,600 square metres
- The business park features a consistent nature strip with footpaths and sporadically planted street trees.

Considerations for change

- Some streets have a strong landscape character (due to the DDO1), which will create challenges for urban intensification due to increase in site coverage and loss of vegetation
- This area has potential for substantial change, due to minimal sensitive interfaces and often large lots
- Zoned SUZ this area could accommodate an increase in employment and commercial uses, as well as short stay accommodation.

Monash West

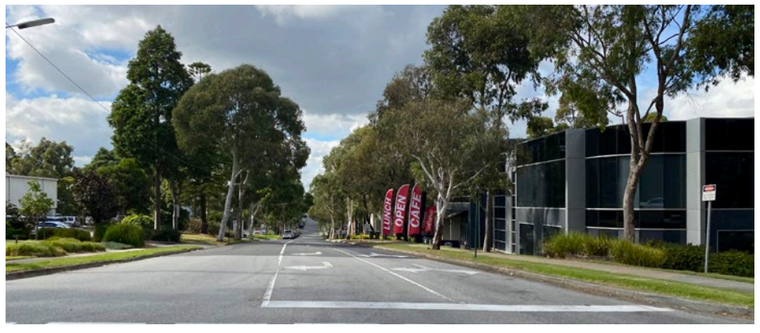
Main drivers of character

- This residential area features local streets approximately 15 metres wide which run north-south and east-west. The streets undulate with the topography, and generally slope south down to Princes Highway
- The area provides views to the south and west between houses and along east-west streets, and occasionally views to surrounding neighbourhoods
- Street trees are planted inconsistently, and the species and sizes are varied within the streets
- Dwellings are generally 1 to 2 storeys, and feature a range of architectural styles from the 1960s to contemporary infill. 2-storey dwellings and unit developments are common throughout the area
- Lot sizes are predominantly 400-800 square metres. Smaller lots of <400 square metres are peppered throughout the area
- Front setbacks are varied, and feature a mix of exotic and native landscaping.

Considerations for change

- Uniform low-density character may restrict development potential
- The area zoned RGZ which interfaces with Monash University could see an increase in density.

Monash Employment South



A main character feature is Blackburn Road, providing a spine of vehicle movement through the centre of the area.

Main drivers of character

- Blackburn Road runs north-south through the centre of the area, creating a barrier to east-west pedestrian movement
- Topography is fairly flat, with a slight decline east-west from Blackburn Road towards the drainage corridor
- The area has large landscape setbacks with native vegetation and mature native canopy trees
- The built form is generally low to mid-rise and sits within a landscape setting, often with at-grade car parking. The area includes notable buildings including the Victorian Heart Hospital (under construction) and the Australian The Australian Synchrotron
- The blocks are large and have limited through block connections. Additionally, the lot sizes are more than 1600 square metres and are inward-looking in nature.

Considerations for change

- This area has potential for substantial change, due to minimal sensitive interfaces and large lots. Although DDO1 may restrict development potential by maintaining the existing landscape character
- Located along Blackburn Road, the width of the road and the SUZ zoning creates opportunity for redevelopment.

Notting Hill

The typography is undulating, with the north-west corner a ‘high area’ and the southern area part of a low-lying valley.

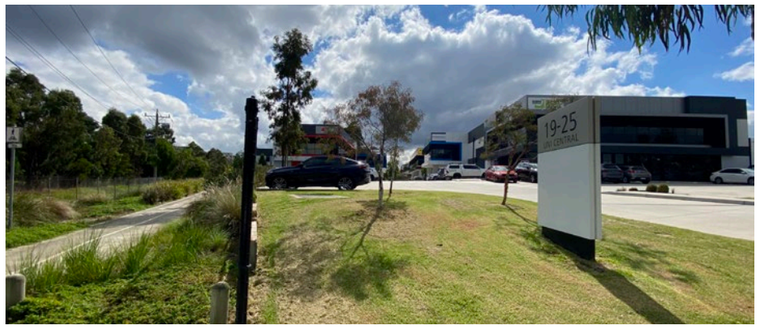
Main drivers of character

- The streets are undulating and winding, and cul-de-sacs are common, particularly in the area south of Ferntree Gully Road
- There is good canopy cover, although street trees are a mix of exotic and native species, and are a range of sizes
- The area is predominantly 1 to 2-storey detached dwellings, with front setbacks of 4-9 metres providing a mix of exotic and native landscaping
- Lot sizes are predominantly 400-800 square metres with some larger lots of >800 square metres.

Considerations for change

- Uniform low-density character with many properties zoned GRZ indicates the community might not expect substantial change in this area
- Atypical block structure with cul-de-sacs may restrict development potential
- Established landscape character could be a challenge to maintain if substantial levels of urban intensification occur.

Industrial



Car parking is often provided within the front setback in this character area. Large nature strips and varied front setbacks generally have mature landscaping.

Main drivers of character

- This mixed-use area includes industrial and commercial uses
- Streets are generally 15 metres wide and form a large-scale grid, with smaller private streets providing access to buildings within the lots
- The buildings are setback from the street, in accordance with DDO1, where landscaping is required
- The industrial buildings are mostly set back from the front boundary, with some buildings providing space for car parking within the setback
- Lot sizes are varied with most lots larger than 1600 square metres
- The area features a consistent nature strip and sporadically planted street trees which are generally native species.

Considerations for change

- This area has potential for substantial change, due to minimal sensitive interfaces, large lots and poor landscape character
- Zoned SUZ, this area could see substantial increase in employment and commercial uses, as well as short stay accommodation and other supporting uses.

Monash Corridors

The pedestrian experience within the corridor is poor and uninviting in this character due to spaced out pedestrian crossings and long wait times, and many dwellings facing the roads have high fences and poorly maintained properties.

Main drivers of character

- This area is dominated by Dandenong Road/Princes Highway and North Road/ Wellington Road, which are both 60 metres wide and have 3 lanes of traffic in each direction, and a service lane both sides
- North Road/Wellington Road has an established native landscape character with mature native trees, while Dandenong Road/Princes Highway has small exotic trees, planted at inconsistent intervals
- The area has highly varied building types and sizes, including large-footprint 1 to 2-storey commercial buildings, 1 to 2-storey dwellings and 1 to 3-storey apartment buildings.

Considerations for change

- This area has potential for substantial change. Substantial road widths of Dandenong Road/Princes Highway and North Road/Wellington Road
- Pockets of RGZ, C1Z and C2Z
- Future building mass and potential overshadowing to adjacent residential areas needs consideration.

Residential South

This character is surrounded by the Monash Corridor area (see character area I), which creates a variety of interfaces and a sense of isolation from other residential neighbourhoods. The area has predominantly 1 to 2-storey detached dwellings of varying housing styles. Subdivisions within the area are common, given its proximity to Monash University.

Main drivers of character

- The area is bound by the barriers created by the Monash Corridor, disconnecting it from nearby residential neighbourhoods
- Dwellings are 1 to 2-storey and commonly feature multi-unit developments on subdivided lots. Original houses from the 1960s are still present, but they are generally poorly maintained and have contemporary additions
- West of Blackburn Road, street trees are consistent within each street and feature Melia azedarach and Melaleuca species. East of Blackburn Road, street trees are inconsistently planted and feature a range of native and exotic species of varying sizes
- Residential properties have varied front setbacks ranging from 4 metres to 15 metres.

Considerations for change

- Uniform low-density character, original 1960s houses and properties zoned RGZ and GRZ may restrict development potential
- Proximity to M-City and Monash University make this area a good location for urban intensification.

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Blackburn Road North

This character area is located on the east side of Blackburn Road, and incorporates a mix of land uses, including residential blocks, student housing combined with retail spaces, and community facilities dispersed throughout.

Main drivers of character

- The area features a variety of building types, sizes, and lot configurations
- Retail strip with zero setback along the southern side of Ferntree Gully Road, comprising small lots with buildings positioned directly at the street edge
- A commercial segment north of Ferntree Gully Road includes a fuel service and a block of 2-storey shops, along with a small plaza in front of them
- Adjacent to the 2-storey Gateway on Monash Hotel, there is a development of 3-storey contemporary townhouses, with minimal landscape and no interaction with Blackburn Road
- Mixed-Use infill sites: The area accommodates large urban mixed-use infill sites with apartments reaching heights of up to 6-storey. This includes Rusden House and the recent development at 660 Blackburn Road
- A 2-storey early education centre, an inward-facing building with a large front setback for customer car parking
- There is a deficiency of tree canopy coverage, with only a few street trees and scattered landscaping elements, creating a poor public realm experience.

Considerations for change

- There is opportunity for transformation primarily driven by the limited presence of sensitive interfaces, lot sizes, and an underdeveloped landscape character
- There is opportunity to increase density along the corridor and ensure active ground floor by enabling commercial use.

Appendix B
Development conditions analysis

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Heritage

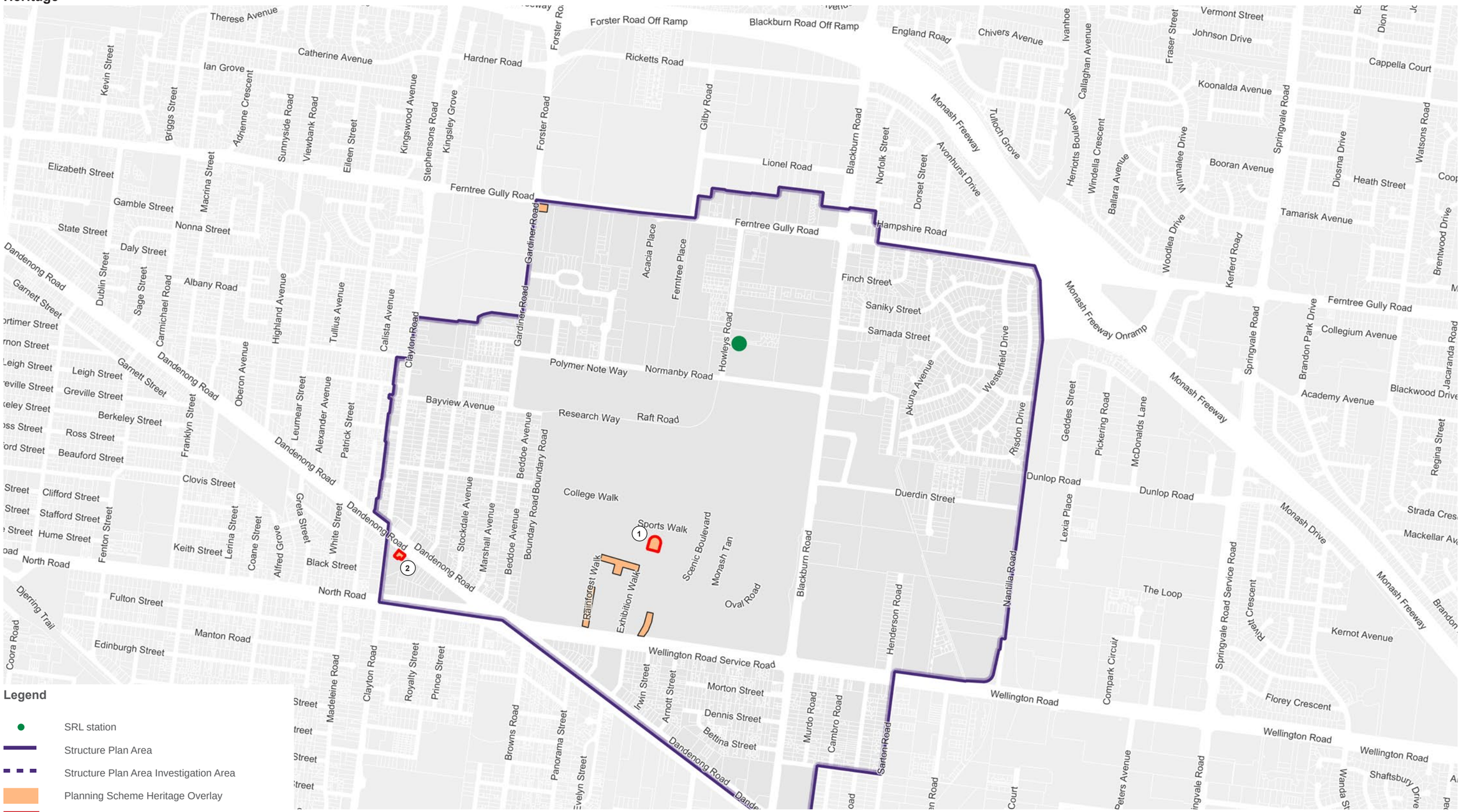


Figure B1.1: Urban Development Analysis - Heritage

The Religious Centre Monash University is of historical and social significance as a reflection of the early ecumenical movement in Victoria, which encouraged greater experimentation in religious practice and more interaction and understanding between different religions. It was the first example in Australia of such a centre, which was funded by Christian and Jewish groups, but was presented to Monash University to be used by all religions. Also architecturally substantial as a fine example of a religious building of the 1960s. It is notable for its centralised plan, symbolising unity, eternity and ecumenism, and as an example of the circular plans first used by Roy Grounds in the 1950s and adopted for a range of building types in the 1950s and 1960s.

Clayton North Primary School No. 734 was established in 1865 and in 1875 its original wooden school building was replaced by a stone and brick structure comprising 1 classroom. In 1909 a brick building was constructed in Edwardian Baroque Style which incorporated the earlier structure. The school has been in continuous operation since 1865.

Source: Victorian Heritage Database Report

1 *Religious Centre Monash University*

2 *Primary School No. 734*

Sensitive views and vistas

Major views and vistas have been recorded in order to assess any views which might constrain development. No sensitive views were identified.

Within the Monash Structure Plan Area the key views to landmarks, notable open spaces and the 1 heritage place occur along existing streetscapes, and do not pose substantial constraints to future development. Long views are channelled through Blackburn Road (north-south), and Normanby Road (east-west).

While views of Monash University are reduced by the higher proportion of landscape and canopy cover within the landscape-rich university campus, the recently constructed Victorian Heart Hospital is prominently visible, situated along Blackburn Road.

Furthermore, the Victorian-Heritage Register-listed Clayton North Primary School maintains secure visibility along Dandenong Road.

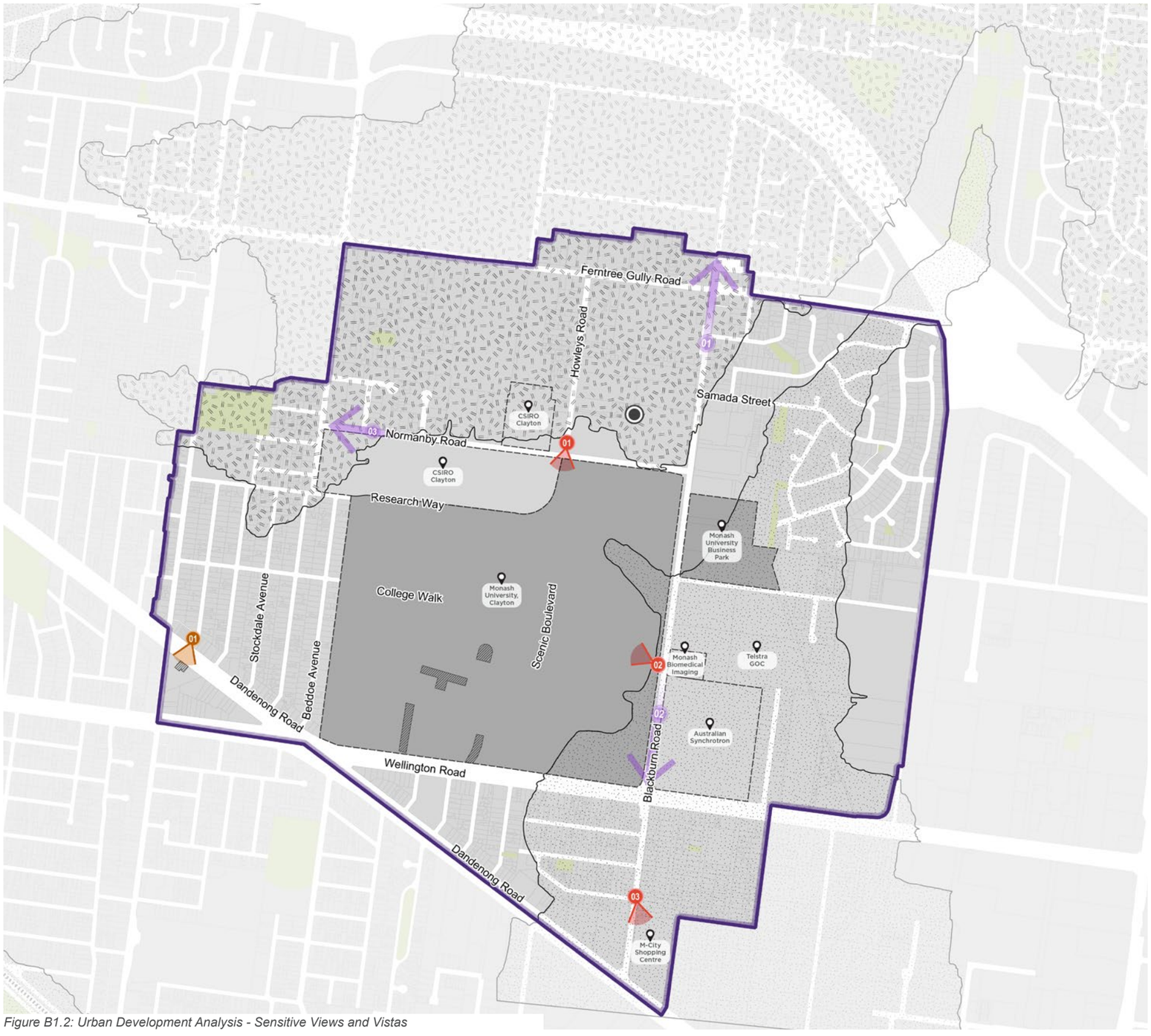


Figure B1.2: Urban Development Analysis - Sensitive Views and Vistas

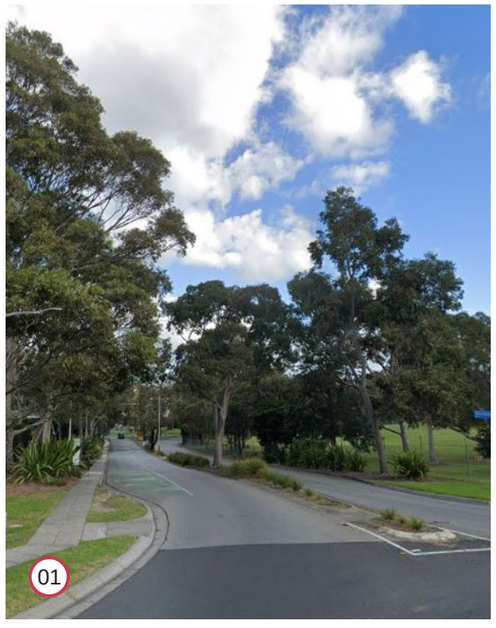
Legend

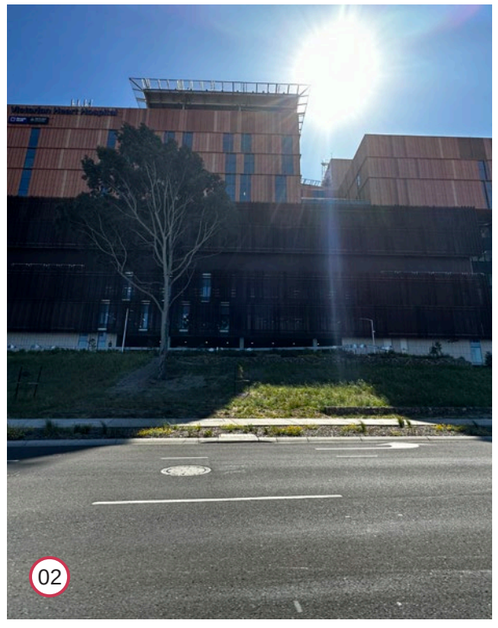
- SRL station
- Structure Plan Area
- Structure Plan Area Investigation Area
- Heritage Places
- Low Lying Area
- High Lying Area
- High Point
- Long Range Views
- Views to Key Open Spaces
- View to Key Heritage Places
- Views to Key Landmarks

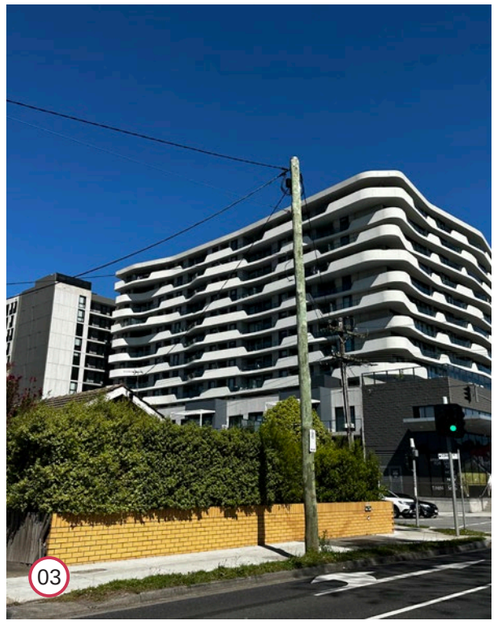
Long range views

Views to key heritage built form

Views to Key Landmarks







Small lots (excluding strata titled lots)

Figure B1.3: Urban Development Analysis - Small Lots

Strata-titled lots

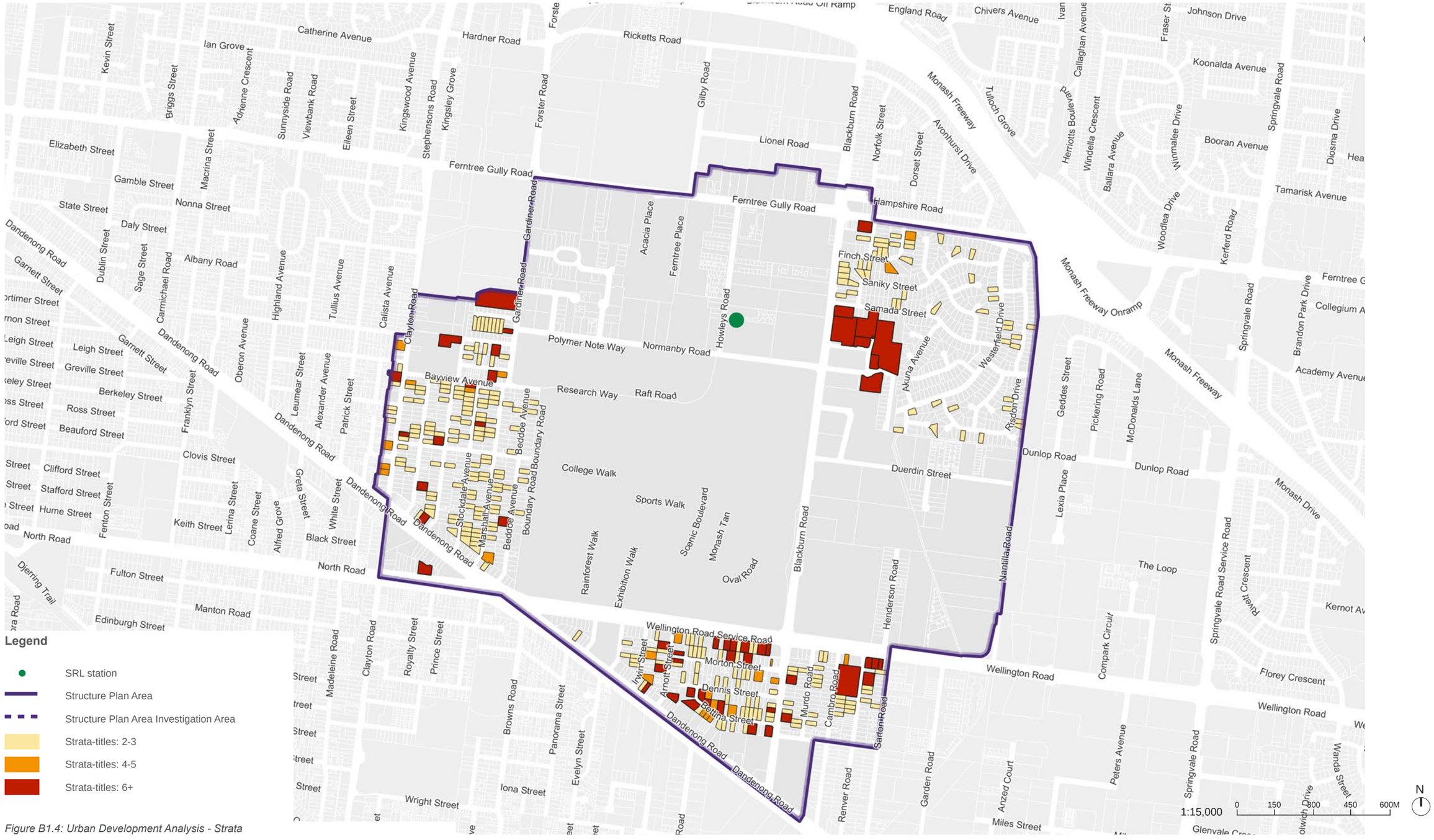


Figure B1.4: Urban Development Analysis - Strata

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Areas subject to Flooding

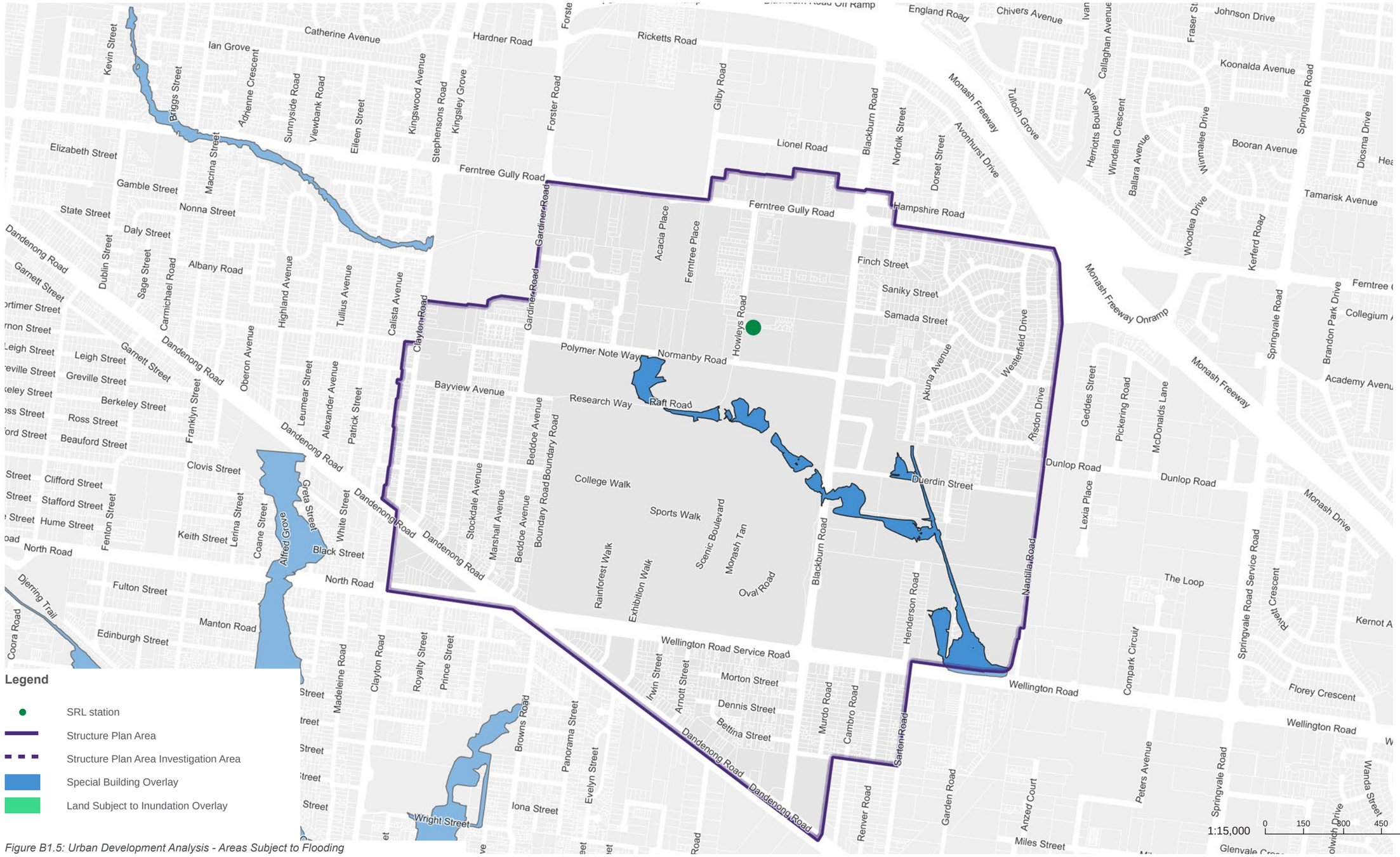

Figure B1.5: Urban Development Analysis - Areas Subject to Flooding

Valued landscape character (significant landscape overlay)

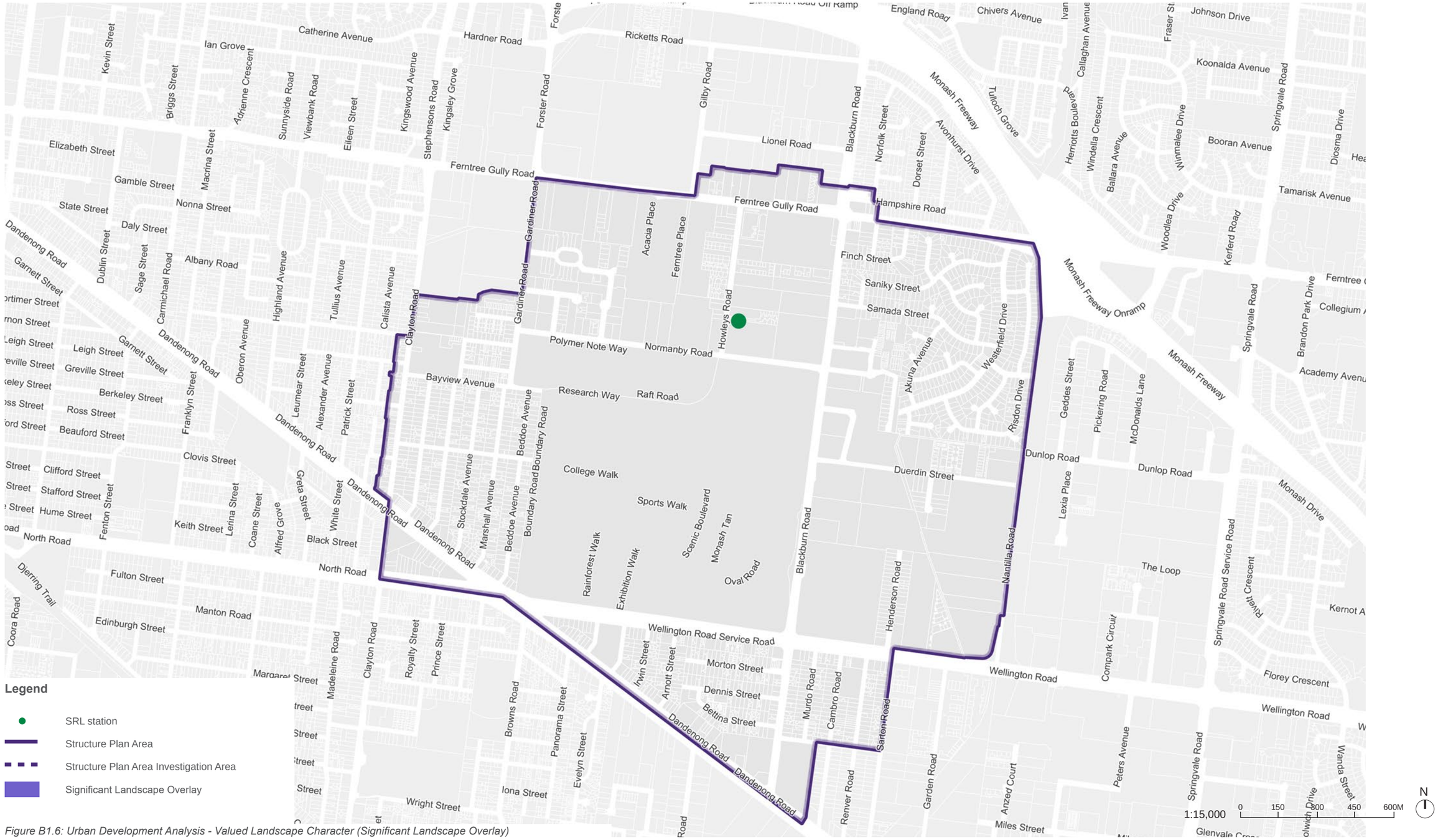

Figure B1.6: Urban Development Analysis - Valued Landscape Character (Significant Landscape Overlay)

Valued character (neighbourhood character overlay)

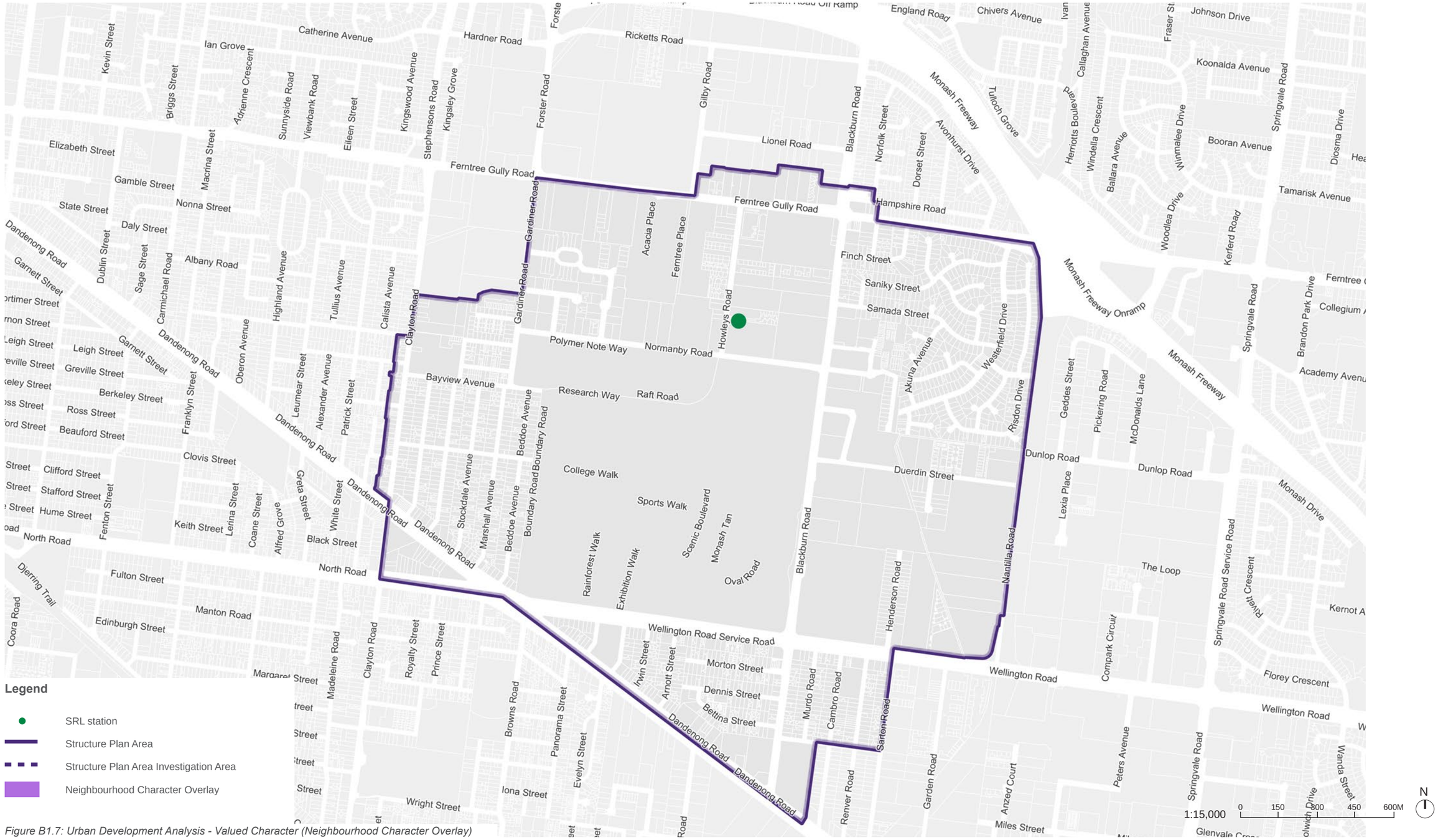

Figure B1.7: Urban Development Analysis - Valued Character (Neighbourhood Character Overlay)

Building height

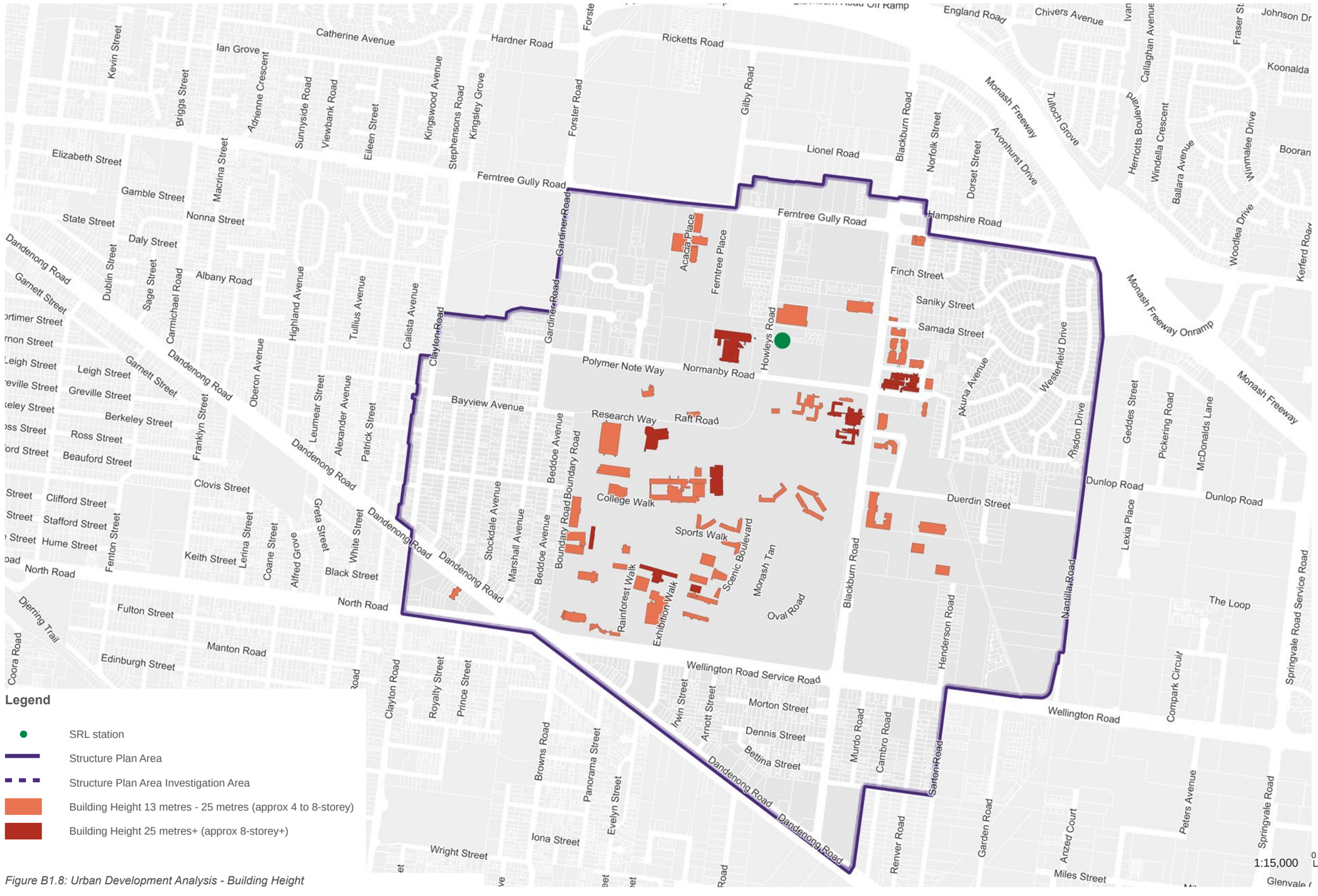

Figure B1.8: Urban Development Analysis - Building Height

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Recent building approvals

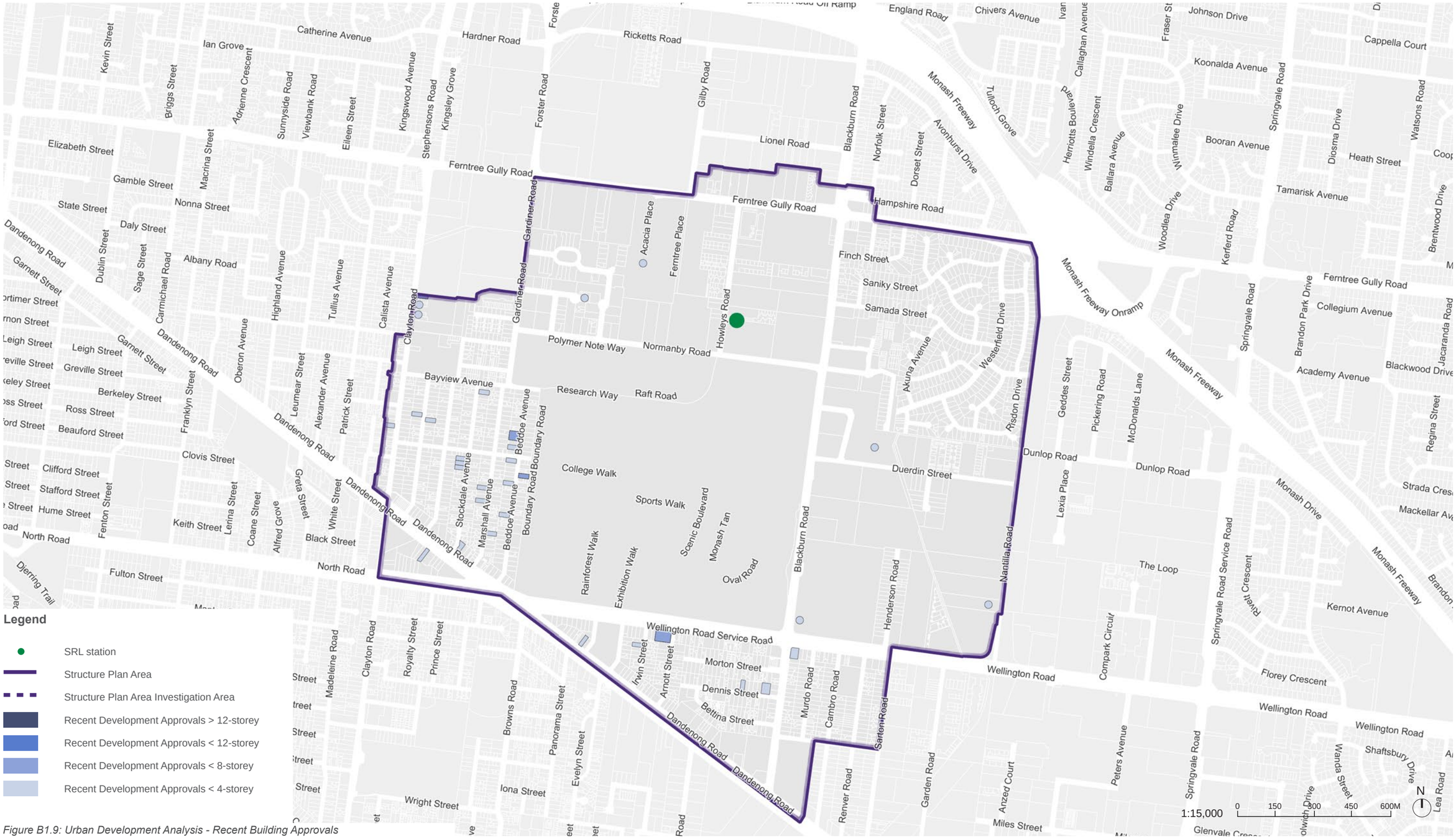


Figure B1.9: Urban Development Analysis - Recent Building Approvals

Slope

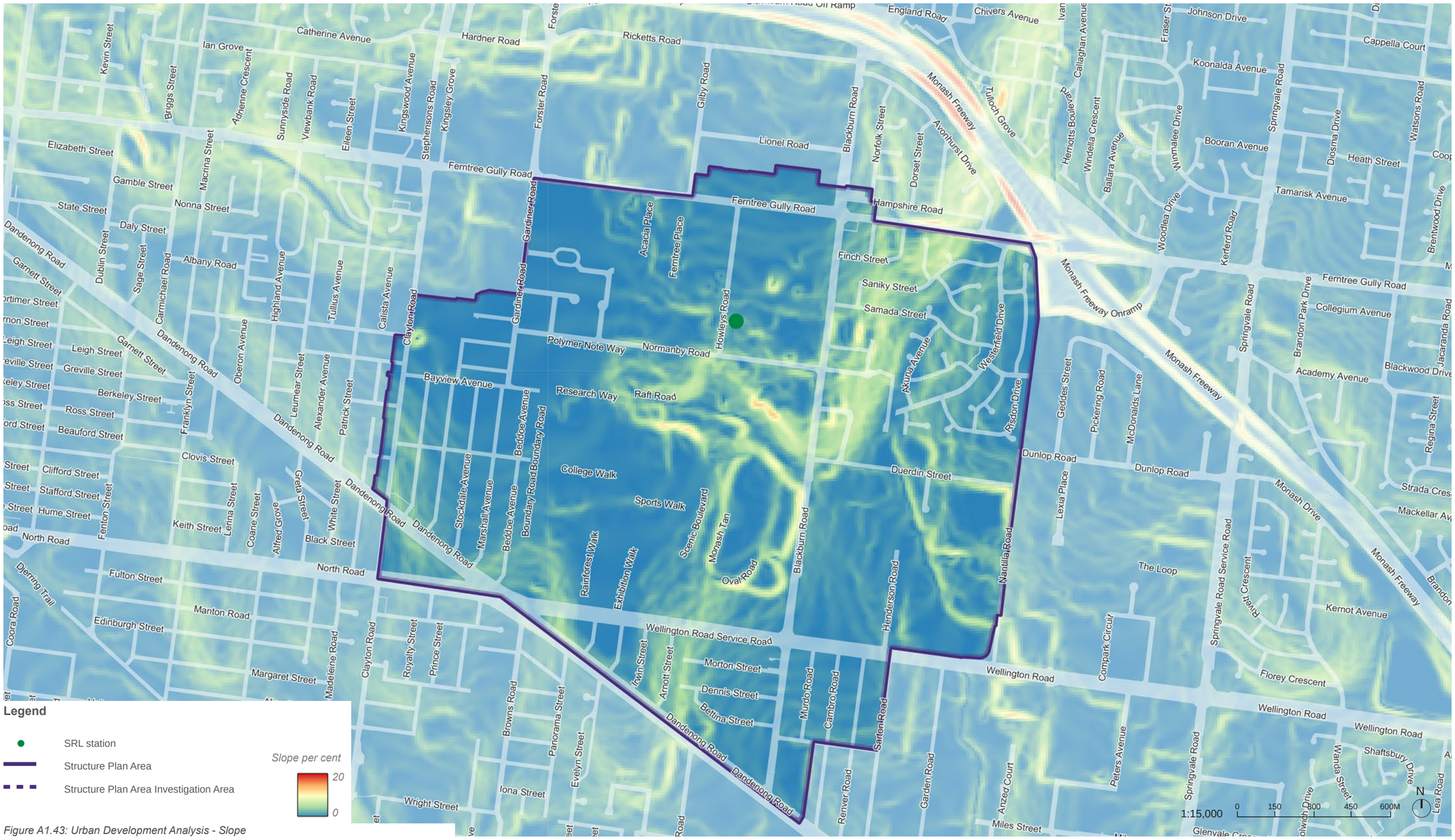


Figure A1.43: Urban Development Analysis - Slope

Appendix C

Street network and public realm quality analysis

Joint Venture

Street Network and Public Realm Quality Analysis to inform the Structure Planning Urban Design Report included:

- Public Space and Public Life Study - Urban Baseline Study (2023) by Gehl (see SRL East Structure Plan - Gehl Public Space and Life Study - Attachment B)
- Open Space Assessment (prepared by AJM Joint Venture for Suburban Rail Loop Authority 2024)
- Structure Planning Urban Design Report – street quality assessment.

These are discussed more below.

Alignment with the Gehl 'Public Space and Public Life Study'

In 2023 Gehl, a globally recognised urban design and research consultancy, completed in-depth public space and public life analysis on selected streets and spaces in the SRL East Structure Plan Areas.

The Gehl study provided an understanding of the public space quality and people's experience of selected key public spaces through data collection and analysis using a tool with a 12-quality criteria rating system.

The findings of this study can be found in SRL East Structure Plan - Gehl Public Space and Life Study - Attachment B.

Open Space Assessment (prepared by AJM Joint Venture for Suburban Rail Loop Authority 2024)

The Open Space Assessment report was prepared to inform structure planning. This report included a quality assessment of existing open spaces within the 1600 metre radius of the SRL station which considered the Gehl study findings.

Structure Planning Urban Design Report – street network quality analysis

To inform the findings of this report, research was undertaken of various standards for permeability, along with analysis of the walkability, street block perimeters, and bock lengths of the Structure Plan Area. Further quality site assessments were also conducted to rate every street within the Structure Plan Area. As this assessment used different criteria to the Gehl study, the results differ in nuance, but generally align with similar levels of quality.

The summary research and analysis is outlined in the sections following.

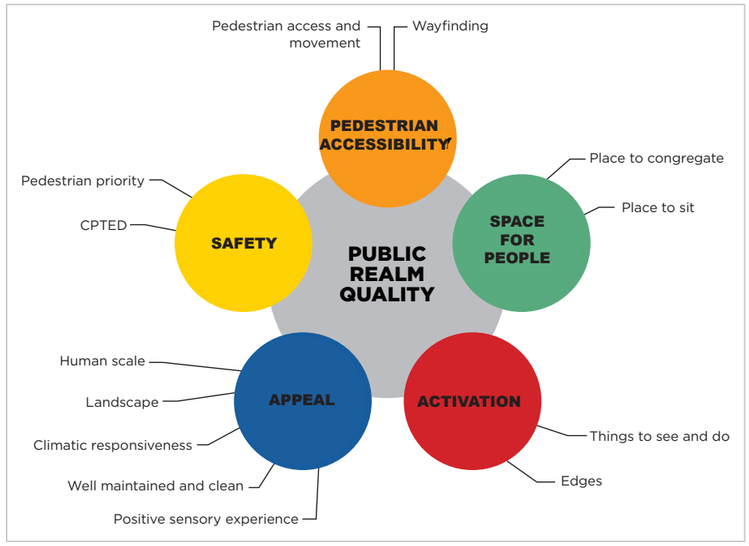


Figure C1.1: Streets and Public Realm Quality Assessment Research for this Report (see Appendix)

Protection
Without this, most people will not come

Protection against traffic and accidents - *feeling safe*
- Protection for pedestrians
- Eliminating fear of traffic

Protection against crime and violence - *feeling secure*
- Lively public realm
- Eyes on the street
- Overlapping functions day/night
- Good lighting

Protection against unpleasant sensory experiences
- Wind
- Rain/snow
- Cold/heat
- Pollution
- Dust, noise, glare

Comfort
Without this, most people will not stay

Opportunities to walk
- Room for walking
- Interesting facades
- No obstacles
- Good surfaces
- Accessibility for everyone.

There are places to stand for a rest
- Edge effect / attractive zones for standing / staying
- Supports standing / staying
- Facades with good details that invite staying

There are places to comfortably sit
- Zones for sitting
- Utilising advantages: View, sun, people
- Good places to sit
- Benches for resting

There are plenty of things to look at
- Reasonable viewing distances
- Unhindered views
- Interesting views
- Lighting (when dark)

There are opportunities to play or exercise
- Physical activity, exercise
- Play and street entertainment
- By day and by night
- In summer and winter

I could easily have a conversation
- Low noise levels
- Street furniture that provide 'talkscapes'

Enjoyment
The difference between a good place and a great place

The space relates to my (human) scale
- Buildings and spaces designed to human scale

The space allows me to enjoy the positive aspects of climate
- Sun/shade
- Heat/coolness
- Shelter from wind/breeze

I like the aesthetic qualities and sensory experiences
- Good design and detailing
- Good materials
- Fine views
- Trees, plants, water

Figure C1.2: Gehl Public Space and Public Life Study (2023) Criteria

AJM
Joint Venture

Permeability standards

The aspiration for walkability in SRL East station precincts is to:

- Support and enhance convenient and desirable access to everyday services, facilities and key destinations within a 20-minute walking distance from home including reducing walking distances to and from the station and within core urban zones.

This can be delivered through the following:

- Offering a fine-grain urban structure to provide a network of pedestrian connections
- Improving the current pedestrian linkages, streets and spaces in the station precincts and supplement these where required with high quality, activated and appealing linkages.

This will be achieved by identifying appropriate targets in terms of permeability and applying them with a practical lens by analysing current permeability in the Structure Plan Area.

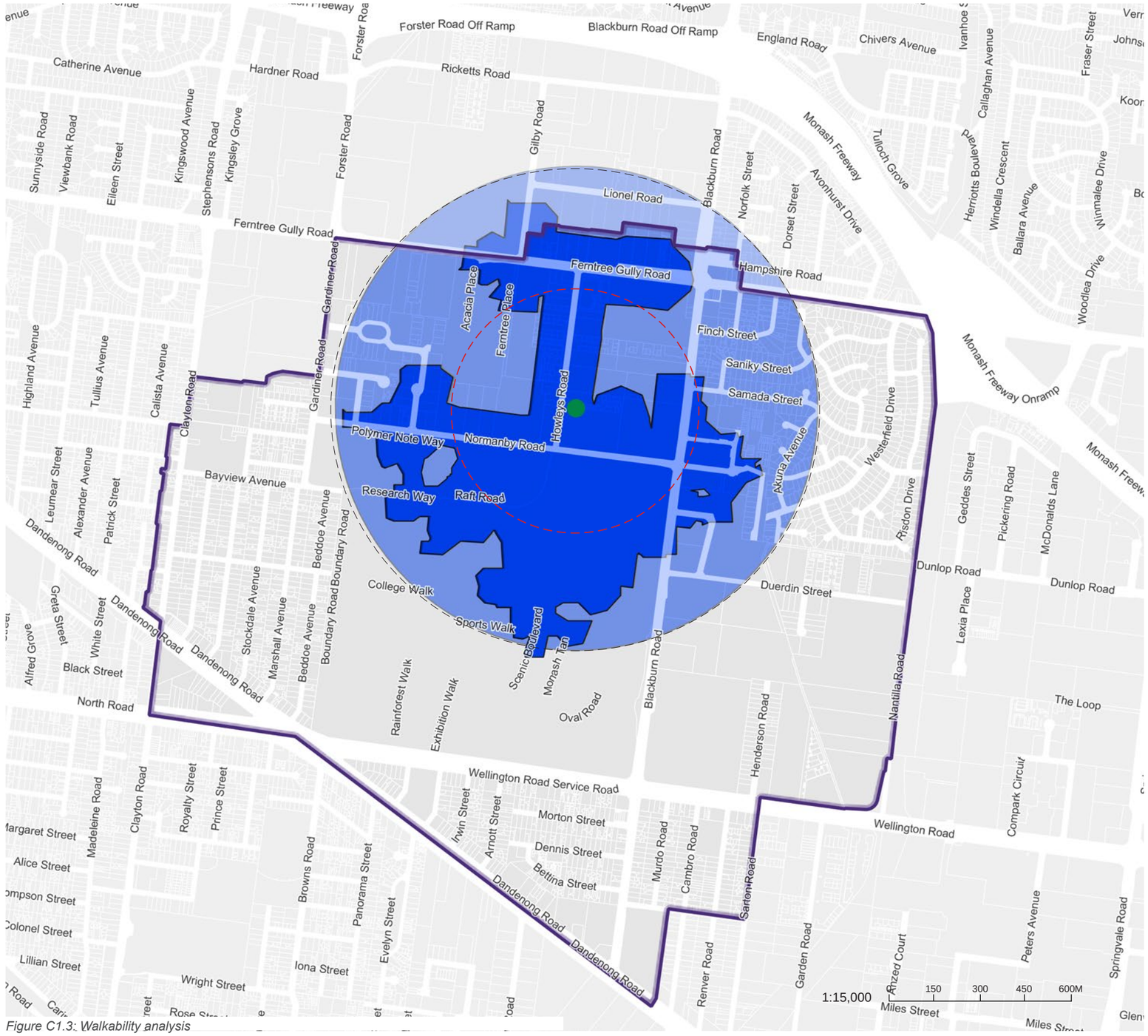
Research has been undertaken into best practice permeability standards which is summarised in the table adjacent.

Source	Standard	Applicability to SRL Structure Plan Areas
Urban Design Guidelines for Victoria	Create a permeable block layout with block dimensions ranging from 120 metres to 240 metres long and 60 metres to 120 metres wide.	Provides overarching parameters and maximum block length as a generic approach. Consideration of best practice targets for urban conditions below provide more applicable targets for SRL Structure Plan Areas.
	A block perimeter of around 600 metres provides for good pedestrian and vehicular access and an efficient subdivision pattern of the block. Smaller blocks may be appropriate in more intense urban areas.	Perimeter of 600 metres is too large to ensure pedestrian permeability adjacent to new stations.
Melbourne Planning Scheme DD01	100 metres maximum block length Within 100 metres of rail station pedestrian connections less than 70 metres apart	Urban condition applicable to some areas within SRL East precincts subject to ultimate land use and density outcomes. A 100-metre maximum block length provides optimal outcome in areas surrounding rail station to maximise permeability.
City North Structure Plan and Melbourne DDO61	Pedestrian through block connections should be provided where the average length of a street block exceeds 100 meters. For street blocks exceeding 200 metres long at least 2 connections should be provided	Urban condition applicable to some areas within SRL East precincts subject to ultimate land use and density outcomes. 100-metre maximum block length provides optimal outcome in areas surrounding rail station to maximise permeability.
NSW Movement and Place – Network Planning in Precincts Guide	'Create a permeable network with a grid-like structure, short block length and high intersection density' Less than 250 metres block lengths with a recommended block length of 120 to 180 metres	A good benchmark for consideration within SLR East precincts which provides a range in block length to respond to desired outcomes and conditions.
Westbrook PSP (completed May 2022)	Street block lengths should not exceed 240 metres	Urban condition not comparable to SRL East precincts given provision of transit.
Case studies	**Dimensions**	**Applicability to SRL Structure Plan Areas**
Melbourne CBD	600-metre perimeter: 100 x 200 metres with minimum 1 pedestrian through connection.	Pedestrian through-connection increases permeability, but not consistently activated, resulting in some "back-of-house" pedestrian experiences and poor perceived pedestrian safety.
Fitzroy, VIC	Approximately 75 x 80 metres blocks	Fine-grain and highly walkable with a variety of land use and density outcomes.

Table 1-1 Permeability research findings

Walkability analysis

The walkability analysis and measure has been derived from a comparison of the 800 metres walkable catchment vs an 800 metres radial catchment. For the purpose of this study the walkable catchment has been derived using GIS by measuring a 800 metres distance along walkable paths from station entrances. The 800 metres radius represents an 'as the crow flies' distance from the centre of the station. A comparison of these areas gives an indication of the level of permeability achieved within the station precinct. It is noted that a 100 per cent outcome is not achievable in a logical urban block arrangement that is comprised of a gridded system.



Legend

- SRL station
- Structure Plan Area
- 400 metres radial catchment (from centre of station)
- 800 metres walkable catchment from station entries
- 800 metres radial catchment

Figure C1.3: Walkability analysis

Street block perimeter analysis

The following street block perimeter analysis shows the distance to walk around an urban block. This is an indicator of urban grain and demonstrates the areas that lack permeability.

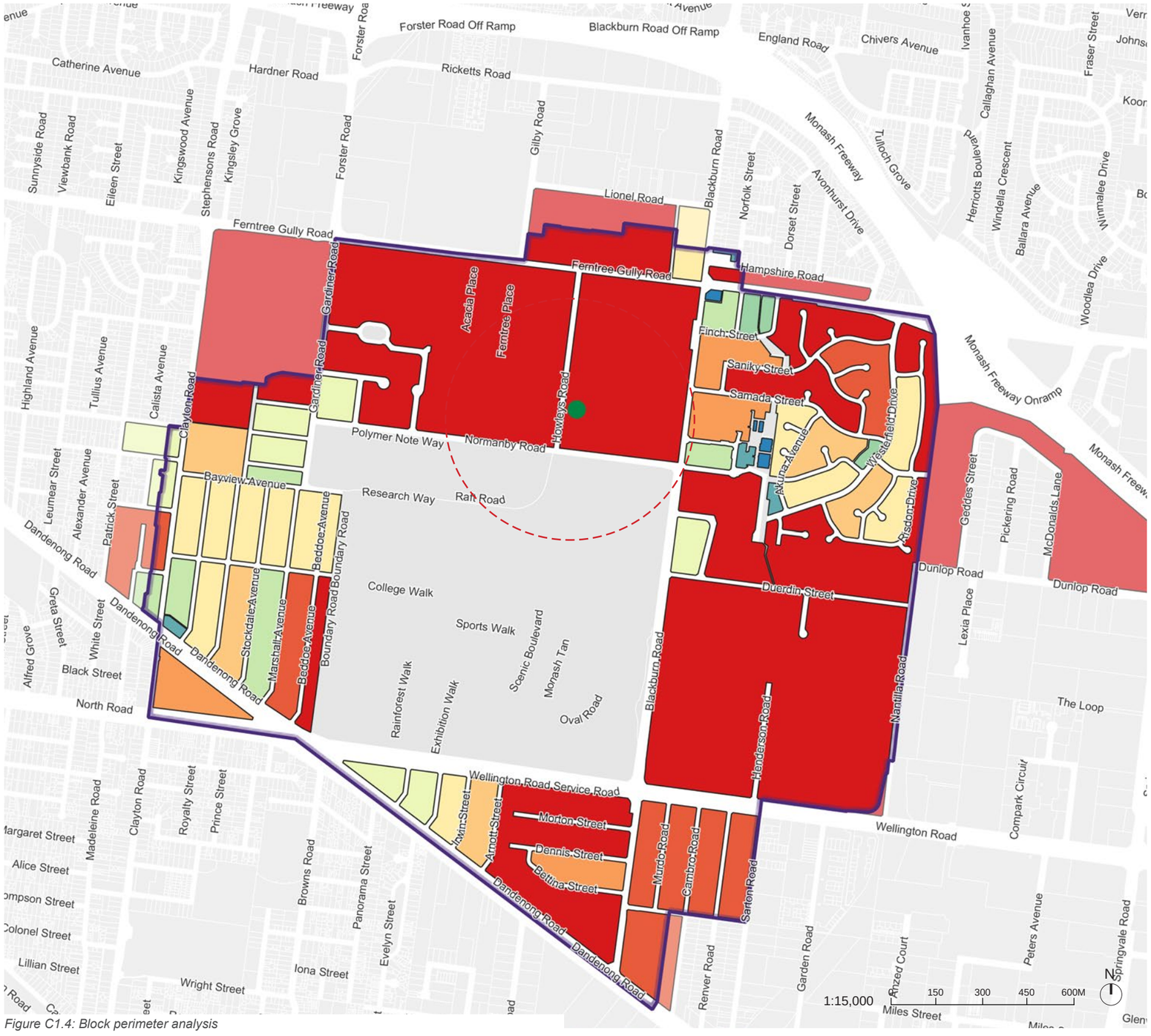


Figure C1.4: Block perimeter analysis

Legend

- SRL station
- Structure Plan Area
- 400 metres radial catchment

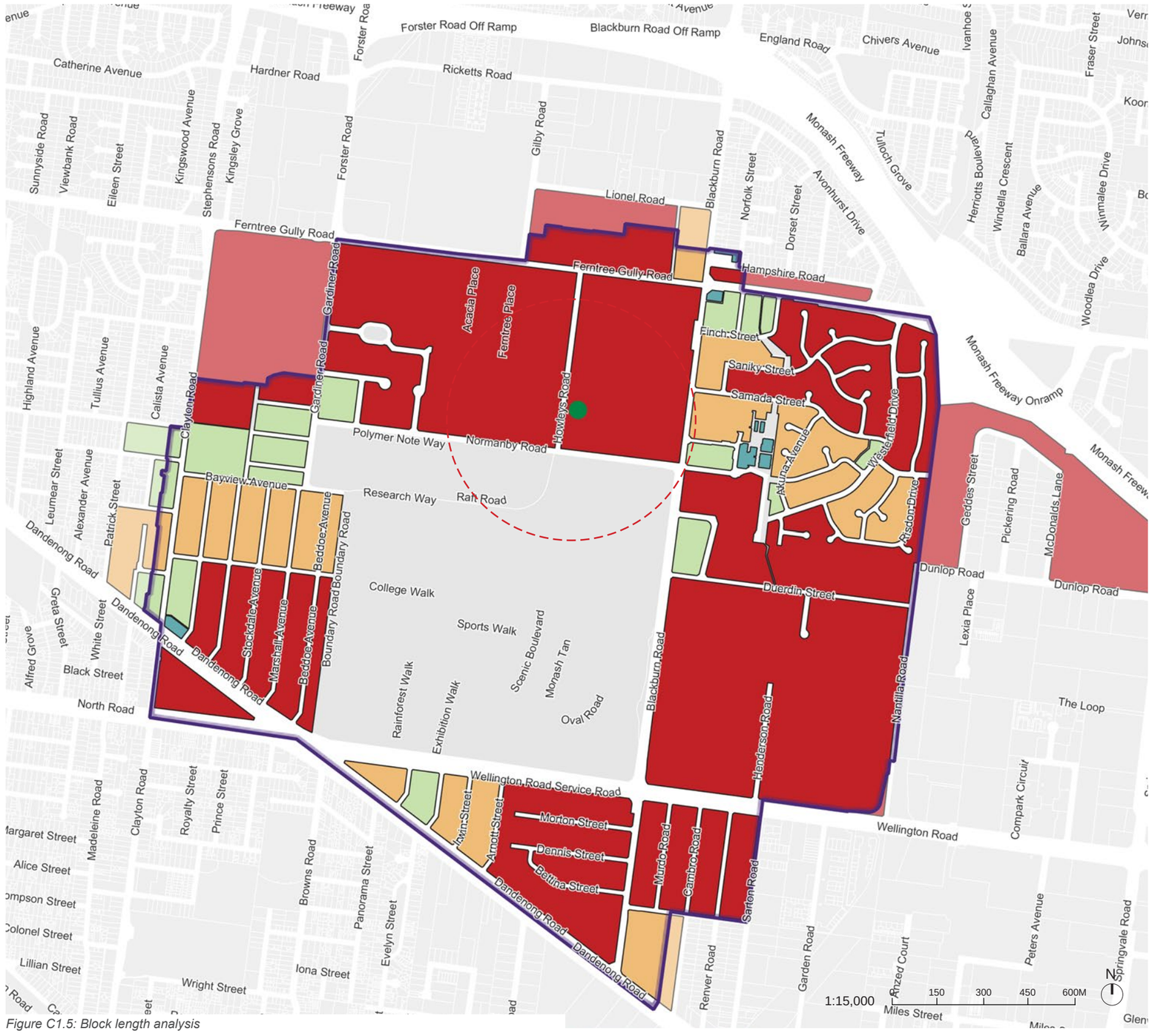
Street block perimeter length

- 0 - 200 metres
- 200 - 300 metres
- 300 - 400 metres (5 minute walk)
- 400 - 500 metres
- 500 - 600 metres
- 600 - 700 metres
- 700 - 800 metres (10 minute walk)
- 800 - 900 metres
- 900 - 1000 metres
- 1000+metres (>12 minute walk)

Block length analysis

The following analysis highlights the existing urban block length within the structure planning area. Areas with urban block length in excess of the agreed targets present barriers to walkability and create issues to be considered within the public realm strategy.

Note: privatised / internal pedestrian linkages (not open 24 hours) exist currently which are not represented for the purpose of this mapping



Legend

- SRL station
- Structure Plan Area
- 400 metres radial catchment
- Block length 0 - 100 metres
- Block length 100 - 200 metres
- Block length 200 - 300 metres
- Block length 300 metres +

Figure C1.5: Block length analysis

Public realm quality standards

The following analysis focuses on assessing the quality of the public realm with a focus on the pedestrian experience. This assessment provides the following:

- A rating against 5 themes with reference to 12 criteria for all streets and spaces within the study area that records performance under the assessment values identified below
- An overview of the current performance of streets and spaces within the context of the current land use pattern. It does not assess against the future intended use
- Land use factored into the assessment through the score provided. Retail streets will score a higher degree of activation than residential streets. It does not offer separate rating scales for street typologies
- Spaces that do not have a pedestrian function or are privatised have been excluded from the assessment
- Functionality of open space does not form part of the assessment. Open space is assessed against the experience for a pedestrian, not performance against community needs.

Public realm quality criteria

A set of criteria have been developed to assess public realm quality focusing on the pedestrian experience. These have been derived with reference to established public realm quality criteria including:

- The Public Life Diversity Toolkit, Gehl Institute
- Public space site-specific assessment, UN Habitat
- Pedestrians first, Institute for Transportation and Development Policy.

The criteria offer themes and issues for consideration by the urban design team to assess the quality of the public realm within the Structure Plan Area. This will provide a baseline position to understand what areas require upgrades to optimise outcomes for the structure plan.

The following pages spatially map the findings of the public realm quality assessment across a range of themes.

Methodology

The assessment of the public realm was conducted through site visits to each precinct. These visits aimed to evaluate the quality of streetscapes and public open areas based on the criteria established. During these precinct site visits, an assessment was conducted for every street, road, activity centre, and public space encompassed within the Structure Plan Area.

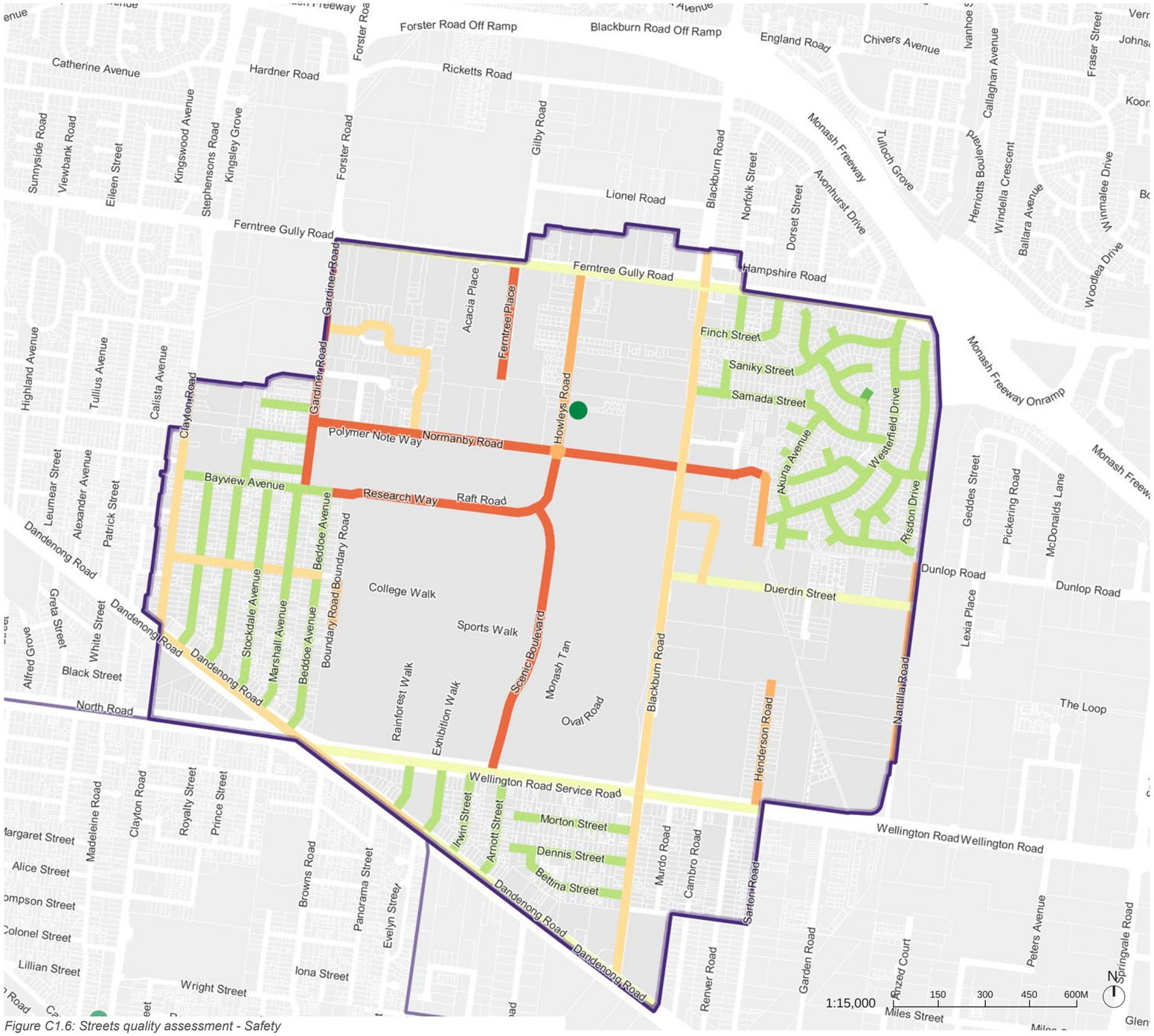
Streets and public realm quality assessment research

Table 1-1 Streets and public realm quality assessment checklist

1. SAFETY	2. PEDESTRIAN ACCESSIBILITY	3. SPACE FOR PEOPLE	4. ACTIVATION	5. APPEAL
Pedestrian priority • Are pedestrians protected from traffic? • Are there safe opportunities for pedestrians to cross? **CPTED – perception of safety** • Is there adequate lighting? • Are there 'eyes on the street/space' (such as windows / balconies / ground level entries / passing traffic)? • Are there any entrapment points?	**Pedestrian access and movement** • Is it easy to get around as a pedestrian? • Are pathways clear from obstruction? **Wayfinding** • Is legibility intuitive and can people find their way around easily? • Is their adequate provision of signage and wayfinding?	**Variety of places** • Is there space to stand / linger / lean? • Where appropriate, are there places to sit or gather? • Are there opportunities for human interaction? • Does the public realm support a diverse range of community activities and needs?	**Activities / things to engage with / look at** • Are there engaging things to look at / public art? • Where appropriate, are there things to do (such as play equipment in parks)? **Edges** • Are edges engaging (active frontage /lots of entries and elements / blank walls)?	**Human scale** • Are there any overbearing structures? Appropriate street wall height? • Is it a highly-exposed / over-scaled space? **Landscape** • Are there street trees and planting? • Balance of hardscape and soft scape? **Climatic responsiveness** • Can you enjoy the positive aspects of climate? • Is there protection from sun in summer / wind and rain protection? **Well maintained / clean** • Are there public rubbish bins? Is there a lack of rubbish in the public realm? • Is the planting maintained / cared for (no weeds, lawn mowed)? • Are the footpaths and surfaces in good condition? **Positive setting / sensory** • Are there no unpleasant noises dust, pollution or smells?

Streets quality assessment - Safety

The safety of streets is assessed through the lens of the pedestrian experience and includes factors such as the protection from traffic and provision of safe crossing opportunities. Safety also includes CPTED factors such as the provision of adequate lighting and the degree of passive surveillance and lack of entrapment points.



Legend

- SRL station
- Structure Plan Area

Poor — Lacking — Satisfactory — Reasonable — Good

Figure C1.6: Streets quality assessment - Safety

Streets quality assessment - Pedestrian accessibility

Pedestrian accessibility provides an assessment of the ease of pedestrian movement and the provision of adequate pedestrian paths and circulation. Pedestrian pathway widths are a factor as well as the inclusion of signage and intuitive wayfinding.

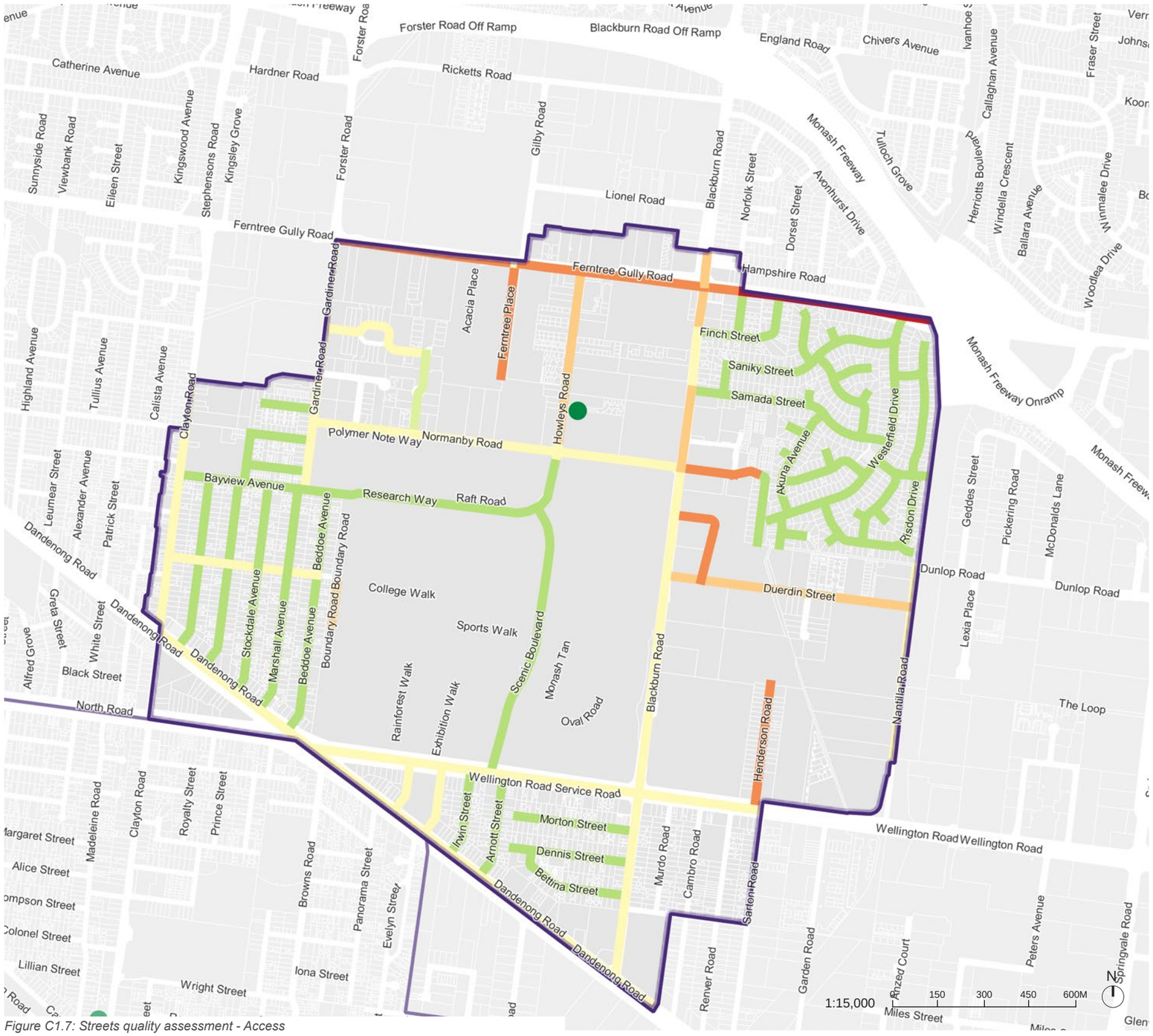


Figure C1.7: Streets quality assessment - Access

Legend

- SRL station
- Structure Plan Area

Poor — Lacking — Satisfactory — Reasonable — Good

Streets quality assessment - Space for people

Space for people relates to the opportunity for people to sit, stand or gather, fostering human interaction and creating an environment for social engagement. This includes the provision of urban furniture items such as benches and chairs as well as providing areas where people can pause and interact without creating an obstruction in the street.

Legend

- SRL station
- Structure Plan Area

Poor — Lacking — Satisfactory — Reasonable — Good

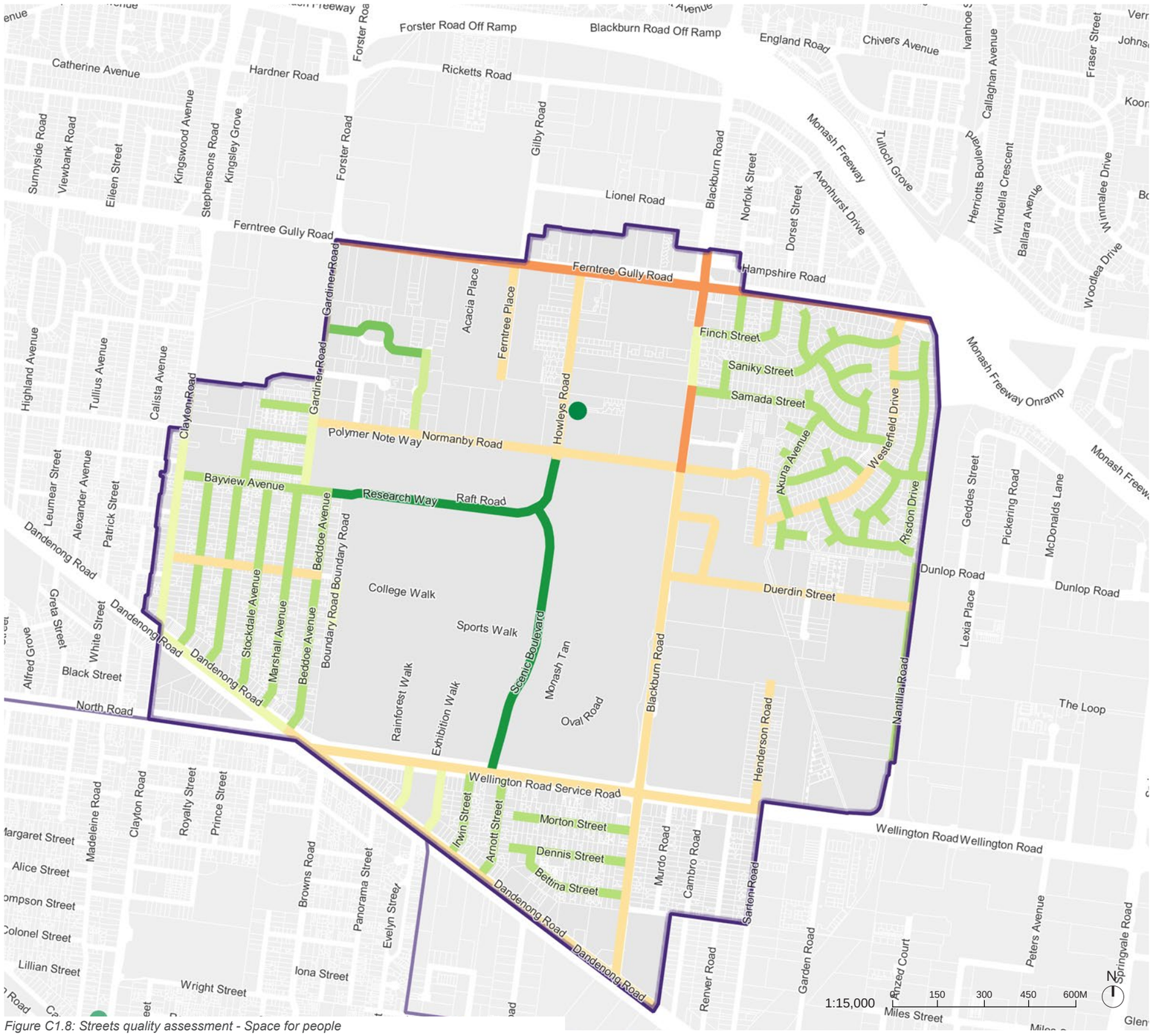
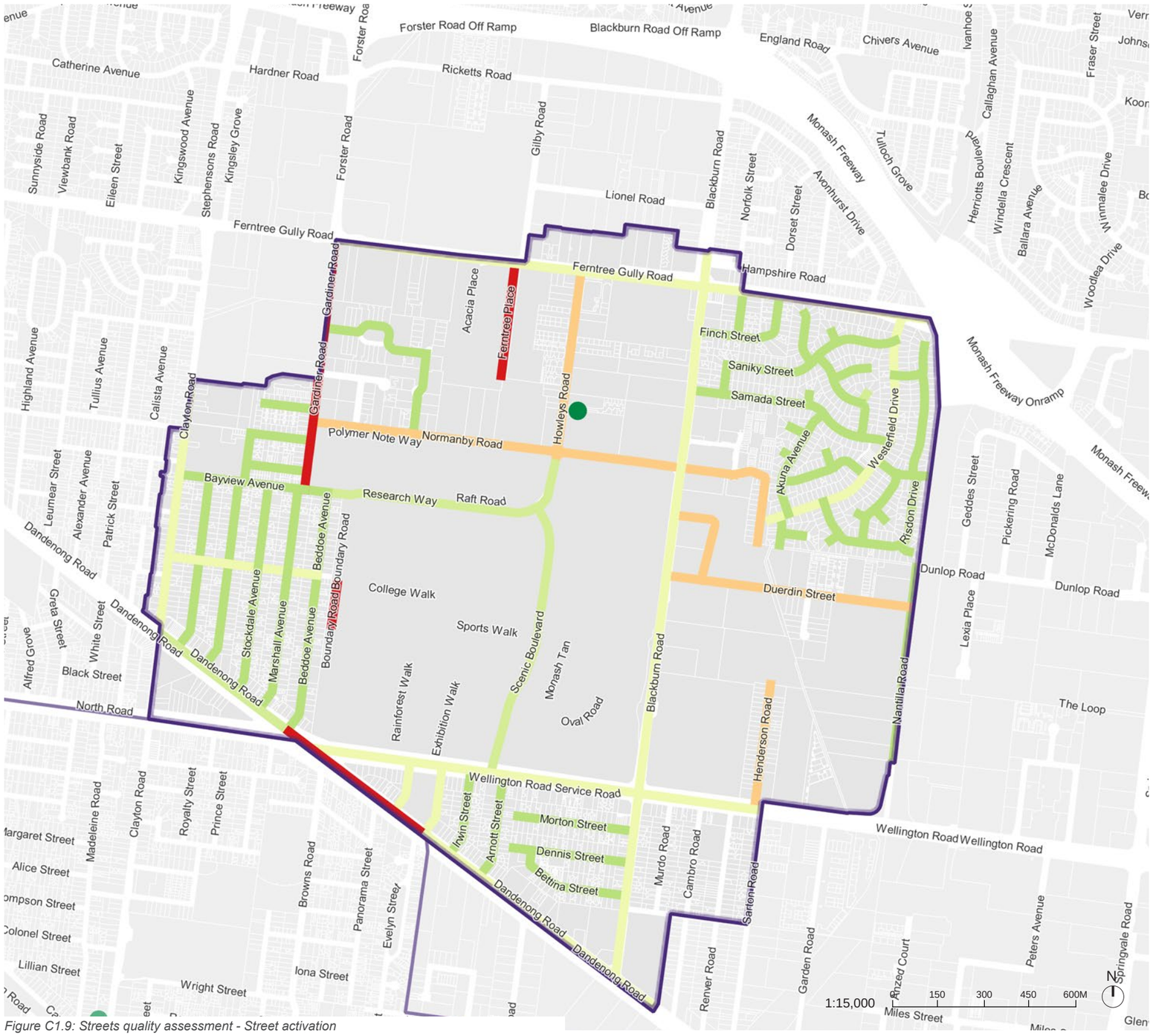


Figure C1.8: Streets quality assessment - Space for people

Streets quality assessment - Activation

Activation relates to the presence of engaging things to look at, elements to interact with, and edges that help drive a sense of activity, such as retail frontages, building entrances and facades that have visual interest. Inactive edges and dead zones negatively affect activation.



Legend

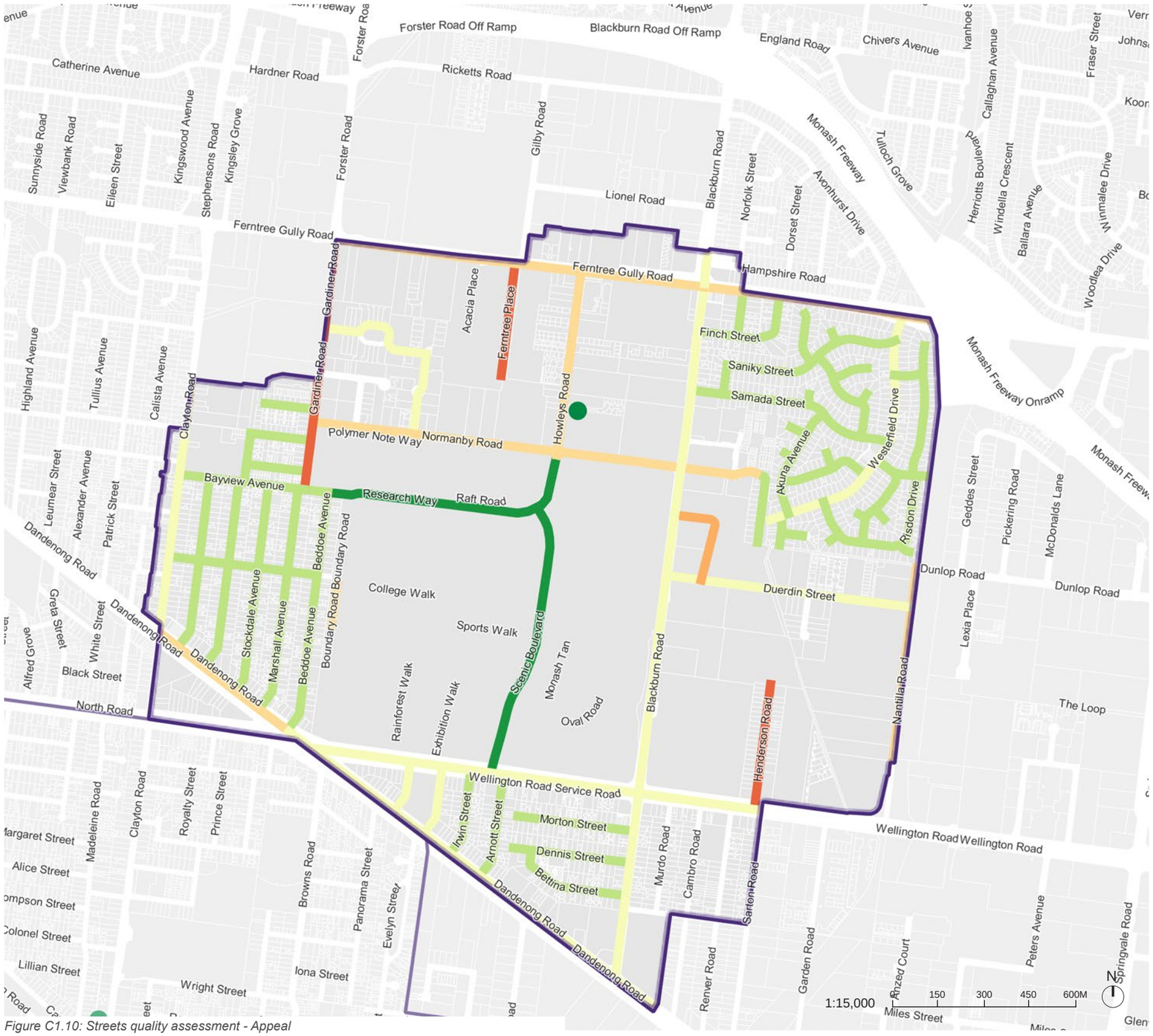
- SRL station
- Structure Plan Area

Poor — Lacking — Satisfactory — Reasonable — Good

Figure C1.9: Streets quality assessment - Street activation

Streets quality assessment - Appeal

Appeal relates to attractiveness of built form, the presence of vegetation and street trees, the use of high quality and well-designed materials, and the maintenance and upkeep of a space. Appeal relates to the senses with poor amenity relating to smell, sound or sight negatively affecting the rating. The degree of human scale or sense of exposure also relates to appeal, which concerns the presence of overbearing structures, spaces of refuge, as well as protection from climatic factors such as sun, wind and rain.



Legend

- SRL station
- Structure Plan Area

Poor — Lacking — Satisfactory — Reasonable — Good

Figure C1.10: Streets quality assessment - Appeal

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