Appendix H

Visual impact assessment

Visual Impact Assessment

Visual Impact Assessment

Client: The Trust Company Limited

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Prepared by

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Executive Summary

Project overview

Stockland Development Pty Ltd (Stockland) is seeking development consent to construct a data centre (the Project) at 11-17 Khartoum Road and 33-39 Talavera Road, Macquarie Park (the Site) as well as the establishment of Road 22. The Project is identified as State Significant Development (SSD) and is therefore subject to assessment and approval by the Minister for Planning under the NSW Environmental Planning and Assessment Act 1979 (EP&A Act).

AECOM have been engaged to develop an Environmental Impact Statement (EIS) as part of the approvals process, including a visual impact assessment (VIA) to assess the changes to views and visual amenity due to the Project. The purpose of this VIA is to identify potential impacts of the Project and to outline mitigation measures relating to changes in views from and visual amenity within the surrounding landscape at completion of the Project. This assessment also addresses the requirements of the Secretary of the Department of Planning, Industry and Environment (DPIE) (the 'Secretary's environmental assessment requirements' or SEARs).

The Project would be developed on the greater Stockland owned site (referred to hereafter as M_Park), which has approval for a commercial development including the building envelopes of five commercial offices, four retail and support pavilions and a central publicly accessible open space area. The concept approval included design parameters such as building envelopes, building layout, parking roads, open space, as well as staging of the future development on the site. The approval also gives consent for the demolition of the existing south-western building, construction of a 10-storey mixed use commercial and retail building with three levels of basement car parking, construction of a portion of the internal 14.5 metre private road connecting to Khartoum Road, and construction of a portion of the pedestrian through site link and associated landscaping.

This concept approval is being revised through the lodgement an Amending Development Application (amending DA) for the whole site. Part of that application would involve the amendment to the concept plan approval to reflect the new building use and envelope relating to this proposal. The amending DA seeks approval for:

- Three commercial office buildings and one storage premises (the data centre) building that would (apart from Building A on Khartoum Road) be subject to future DA approvals;
- A total floor space of 59,769 m2 comprising commercial office, data centre and retail uses; and
- Varying building heights up to 45 metres.

The proposed development is the construction and operation of a Data Centre. The built form of the Project would be a five-storey building up to 45 metres in height. Key elements of the Project would include:

- Ancillary offices and staff amenities
- Car parking
- Loading dock
- Security guard house
- New vehicular access
- Service infrastructure
- Diesel backup generators
- Landscaping
- A new access road between 11-17 Khartoum Road and 1-5 Khartoum Road (Road 22)
- Earthworks.

Methodology

Visual Impact Assessment (VIA) is a tool used to identify and assess the significance of and the effects of change resulting from development on people's views and visual amenity.

As there is no accepted national published guidance on VIA specific to Australia the industry typically refers to guidance from elsewhere for producing VIA reports. The method for this assessment has been developed with reference to *Guidelines for Landscape and Visual Impact Assessment, Third Edition* (2013) developed by the Landscape Institute and Institute for Environmental Management, UK (hereafter referred to as GLVIA3). GLVIA3 is widely recognised as comprising an example of 'best practice' in this field.

The methodology for this VIA is described in detail in Chapter 2.0 of this report.

Existing Environment

The Site is located in the suburb of Macquarie Park, which is part of the City of Ryde Local Government Area (LGA). It is located approximately 12 km north-west of the Sydney CBD, approximately 850 m south-east of Macquarie University, and 550 m south-east of Macquarie Shopping Centre.

The suburb has undergone significant development over the past 15 years, particularly since the construction of the Chatswood to Epping Rail line which included a stop at Macquarie Park that opened in 2009. The surrounding area is characterised by commercial buildings and land uses consistent with the character of Macquarie Park as a business precinct. Large multi storey commercial buildings within landscaped grounds are typical of the area, with onsite parking provided. Individual business parks with multiple large multi-use buildings are also common, such as the Talavera Corporate Centre at 26 Talavera Road, or Macquarie Square on Waterloo Road, which is under construction.

The Site itself is currently owned by Stockland and is occupied by two multi storey commercial and warehouse buildings leasing floor space to several businesses. The two buildings are located towards the centre of the Site, in a campus fashion, and surrounded by at-grade car parking. The largest footprint building is two storeys high, comprising office and warehouse spaces. The smallest footprint building is six storeys high containing mainly office spaces.

Vehicle access to the Site occurs in two driveways along Talavera Road, and three driveways along Khartoum Road. The car parking and external landscaped areas surrounding the buildings are dotted with mature landscaping trees and hedging. The trees form a buffer between the property and the adjacent roads, footpaths and cycle path.

The predominant land uses surrounding the Project are B7 Business Park, B4 Mixed Use and B3 Commercial Core, sandwiched between the M2 Motorway to the north-east and Epping Road to the south-west. This area is characterised by large development lots arranged within a wide street grid. Development lots typically contain several multi storey commercial buildings set within landscaped grounds with onsite parking provided.

Within the study area the vegetation varies. Streets are typically fringed by native canopy trees that lie both within private lots and within the road verge. Larger blocks of land with multi storey buildings and landscaped grounds provide more canopy cover with many large native trees. Many lots contain open lawn or car areas with large trees and some shrubs and groundcovers surrounding the open spaces.

Typical understorey plantings within the area comprise monocultures of native grasses and forbs, such as Lomandra or clipped hedges with accents of Gymea Lilies. Other developments feature exotic trees which create a canopy over formal monocultures of shrubs.

North-east of the M2 Motorway lies Lane Cove National Park, which is characterised by a large area of indigenous bushland vegetation.

Visibility of the Project

Due to the relatively flat topography of the site and surrounds, if no vegetation or built form were present the Project would potentially be seen from distances over 1.5 km. However, the landscape surrounding the Project is vegetated with mature trees along the streets, as well as several landmarks that would limit these distance views including the M2 Motorway, dense bushland within Lane Cove National Park, the Epping Road corridor, and taller developments within Macquarie Park.

Views from public areas to the Project would therefore be limited to the streets adjacent to the Project itself namely to Talavera Road and Khartoum Road (where views to the Project may be seen between the built form within the M_Park development).

Distance views to the Project from private residences may be seen from several locations.

Summary of visual impact

Changes to the view from public places due to the Project would only occur along Talavera Road and Khartoum Road within the vicinity of the Project. Four viewpoints were used to assess the impact to visual amenity due to the Project and found that the changes resulted in assessments between Negligible to Moderate to Low, as shown in Table i.

Table i Summary of visual impact assessment ratings

Viewpoint	Sensitivity	Magnitude	Overall rating	Qualitative assessment
Viewpoint 1: 8 Khartoum Road	Low	Low	Low	Neutral
Viewpoint 2: Intersection of Khartoum Road and Talavera Road	Low	Negligible	Negligible	Neutral
Viewpoint 3: 40-52 Talavera Road	Low	Moderate	Moderate to Low	Neutral
Viewpoint 4: Talavera Corporate Centre	Low	Low	Low	Neutral

The highest rating was returned from Viewpoint 3: 40-52 Talavera Road (refer Figure i and Figure ii). This was due to the higher magnitude of the change than the sensitivity of the receptors. The close proximity of the Project to the viewpoint (directly opposite the road) and the change in height of the Project built form from the existing built form on the site were important factors relating to this rating.

Figure i Panorama of the existing view looking west from the viewpoint towards the Project (Source: AECOM)

Figure ii A photomontage showing the change in the view due to the Project (subject to further detailed development) (Source: AECOM)

While the Project would be visible from several tall residential and commercial buildings within a 1 km radius of the Project, the change is considered to be minor due to the small proportion of the change within the overall views seen by these receptors, and the scale and form of the Project being similar to other buildings (primarily newer developments) in the area which would also be seen within these views.

The Project within the approved M_Park development

The change in design between the approved and proposed M_Park development includes the reduction of buildings from 5 to 4 and the reconfiguration of buildings within the site.

While the changes appear (particularly in plan) as an increase in the bulk and scale of built form within the site, from publicly accessible areas (i.e. Khartoum Road and Talavera Road) the change would be less apparent as the frontages of buildings remain similar between the two plans. It is considered that the change in building number and arrangement from the approved to proposed development design within M_Park would not result in a large change to the visual amenity of the site from the public realm.

M_Park within Macquarie Park

Macquarie Park has undergone steady development to become a commercial and economic hub within Sydney. Many corporate headquarters are located within the suburb resulting in the area having a reputation for its high-tech industrial business. The Macquarie Investigation Area is currently the focus of a study being conducted by the NSW Department of Planning, Industry and Environment to deliver a high-level strategic master plan, indicating that the area could be subject to further change.

The area surrounding the Project comprises large scale large development lots arranged within a wide street grid. Development lots typically contain several multi storey commercial buildings set within landscaped grounds with onsite parking.

The arrangement of large buildings within a landscaped ‘park’ setting is typical of existing campuses in Macquarie Park. While it is typically larger than the older buildings in the suburb, Building B positioned within M_Park is considered similar in scale and bulk to other newer developments, such as the Macquarie Square development on Waterloo Road (refer Figure 3.6). Within this context, the Project within the greater M_Park development is considered visually appropriate.

Mitigation measures

While the Project results in the addition of a feature within the landscape, the considerably low ratings of visual impact are related to the following:

- The retention of trees along Talavera Road assist in partially screening the proposed built form, helping to ‘bed down’ the data centre into the landscape and reduce the visual scale of the building;
- The inclusion of screening shrubs on Talavera Road reduce the visual prominence of the security fencing and partially screen and soften the building from the public realm;
- The provision of an elevated landscape structure along the northern side of the site, which would visually soften and screen the built form when viewed from the north (including from within M_Park) and reduce the scale of earthworks along the northern boundary when viewed from outside the site;
- Proposed landscaping along Road 22 includes trees that, when mature, will reduce the visual scale of the building from the public realm as well as from private properties surrounding the Project site;
- The articulated façade design reduces the visual scale of the building; and
- The lighting of the site at the boundary with downward facing lights focussed on hard surfaces surrounding the building reduces the visual prominence of the building at night.

Detailed design has not yet begun on Road 22. The inclusion of street trees on both sides of the 14.5 road (rather than one side as indicated within the amending DA documents) would further reduce the visual prominence of the proposed data centre and visually fit within the well treed streetscapes of the area.

Conclusion

The Project would be seen as one change within the greater M_Park development, which would overall comprise the replacement of one large, low commercial building with three taller buildings on the northern portion of the site and the proposed data centre on the southern, lower portion of the site. The proposed data centre would visually comprise its own element within M_Park due to the change in levels (the northern three buildings framing an internal landscaped open space are positioned at a higher level) and the security fencing preventing public access to the Project site.

With M_Park comprising the replacement of one building for four taller ones, the Project would visually result in the addition of an element within the existing view. However, due to the excavation of the Project (positioning the building at a lower level), the retention of trees surrounding the site, the position of the Project within a low point in the landscape and the high number of tall, mature trees in the area results in the Project having very few places where it can be seen from the public realm. The Project would only be seen from the public realm from Khartoum Road and Talavera Road, with the viewpoint directly opposite the Project on Talavera Road the only publicly accessible place that would get clear views to it. Once constructed, the Project would also be seen from the new public roadways: Road 01 and Road 22, but would not be a 'change in the view' from these locations as their construction is dependent on the construction of the overall M_Park development, within which the Project is positioned.

The Project is similar in scale and design to other developments within Macquarie Park, including the boxy form and security fencing of the development on the north-eastern corner of the intersection of Talavera Road and Khartoum Road, and the scale of buildings within Macquarie Square, which are under construction. Within this context the Project is considered visually acceptable within the business park.

Overall, the Project is considered to be appropriate with regard to potential effects on visual amenity.

1.0 Introduction

1.1 Project overview

Stockland Development Pty Ltd (Stockland) is seeking development consent to construct a data centre (the Project) at 11-17 Khartoum Road and 33-39 Talavera Road, Macquarie Park (the Site) as well as the establishment of Road 22. The Project is identified as State Significant Development (SSD) and is therefore subject to assessment and approval by the Minister for Planning under the NSW Environmental Planning and Assessment Act 1979 (EP&A Act).

1.2 Purpose of this technical report

AECOM have been engaged to develop an Environmental Impact Statement (EIS) as part of the approvals process, including a visual impact assessment (VIA) to assess the changes to views and visual amenity due to the Project. The purpose of this VIA is to identify potential impacts of the Project and to outline mitigation measures relating to changes in views from and visual amenity within the surrounding landscape at completion of the Project. This assessment also addresses the requirements of the Secretary of the Department of Planning, Industry and Environment (DPIE) (the 'Secretary's environmental assessment requirements' or SEARs).

1.3 Secretary's environmental assessment requirements

Urban design and visual amenity were considered key issues in the SEARs (refer Table 1.1). SEARs relating to visual impact are addressed in this report, which also take into consideration landscape design as documented as part of the concept design of the Project.

Table 1.1 Secretary's environmental assessment requirements

SEARs		Section addressed
Urban design and visual	A visual impact assessment (including photomontages and perspectives) of the development layout and design (buildings and storage areas), including staging, site coverage, setbacks, open space, landscaping, height, colour, scale, building materials and finishes, façade design, signage and lighting, particularly in terms of potential impacts on: • nearby public and private receivers; and • significant vantage points in the broader public domain.	Section 4.1 and 4.4
	Consideration of the layout and design of the development having regard to the surrounding vehicular, pedestrian and cycling networks.	Section 1.5
	Detailed plans showing suitable landscaping which incorporates endemic species.	Section 1.5

1.4 Background

The growth of digital technology brings with it a requirement for an increase in the physical infrastructure that underpins it. This growth has been largely facilitated by the remote hosting and centralised storage of data. This includes not only the hosting of websites and email, but a range of increasingly common personal and business tools and applications, including social media, file storage, mapping and navigation, video and audio conferencing, entertainment and a wide variety of e-commerce.

The proposed development seeks to provide a critical element of the expanding digital economy through the provision of a facility for the purposes of data storage. The Project would provide a clear benefit in society's ongoing digital transformation in that it would:

- Provide a secure location for the storage of data within the Sydney basin;

- Increase the speed of digital access to clients in Sydney and NSW generally;
- Contribute to the security of sensitive data by avoiding offshore hosting;
- Provide an additional location for the backup and redundancy of data stored elsewhere in NSW; and
- Increase global resilience by providing for distribution of data within a physical location that benefits from few major physical disruptors (such as natural disasters), as well as stable governance and social order.

In developing the Project Stockland seeks to:

- Provide data storage for customers located within the Sydney basin;
- Connect this data storage with other facilities worldwide to increase both the volume and redundancy of data storage;
- Maintain compatibility with the surrounding environment and local context; and
- Construct and operate the project in a sensitive and responsible manner. Including in relation to the health and safety of staff and the environment.

1.4.1 Relationship to M_Park Concept Development

The Project would be developed on the greater Stockland owned site (referred to hereafter as M_Park), which has approval for a commercial development including the building envelopes of five commercial offices, four retail and support pavilions and a central publicly accessible open space area. The concept approval included design parameters such as building envelopes, building layout, parking, roads, open space, as well as staging of the future development on the site. The approval also gives consent for the demolition of the existing south-western building, construction of a 10-storey mixed use commercial and retail building with three levels of basement car parking, construction of a portion of the internal 14.5 metre private road connecting to Khartoum Road, and construction of a portion of the pedestrian through site link and associated landscaping.

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Part of that application would involve the amendment to the concept plan approval to reflect the new building use and envelope relating to this proposal. The amending DA seeks approval for:

- Three commercial office buildings and one storage premises (the data centre) building that would (apart from Building A on Khartoum Road) be subject to future DA approvals;
- A total floor space of 59,769 m2 comprising commercial office, data centre and retail uses; and
- Varying building heights up to 45 metres (refer Figure 1.2).

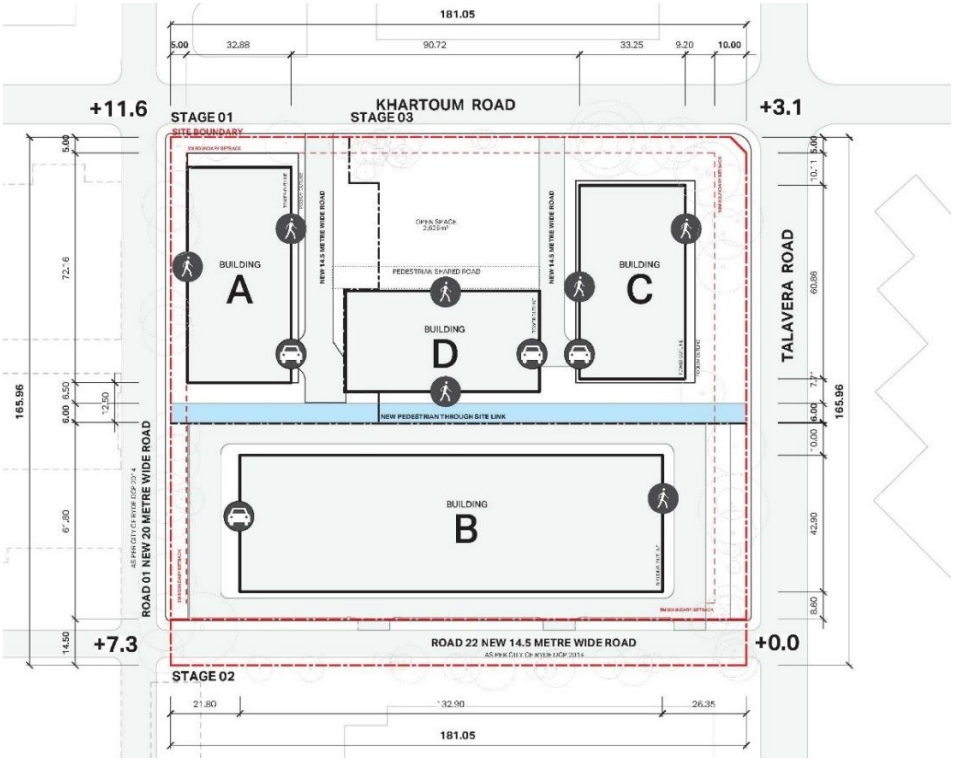

Figure 1.1 Site plan included in the amending DA (Source: M_Park architectural package for the amended DA)

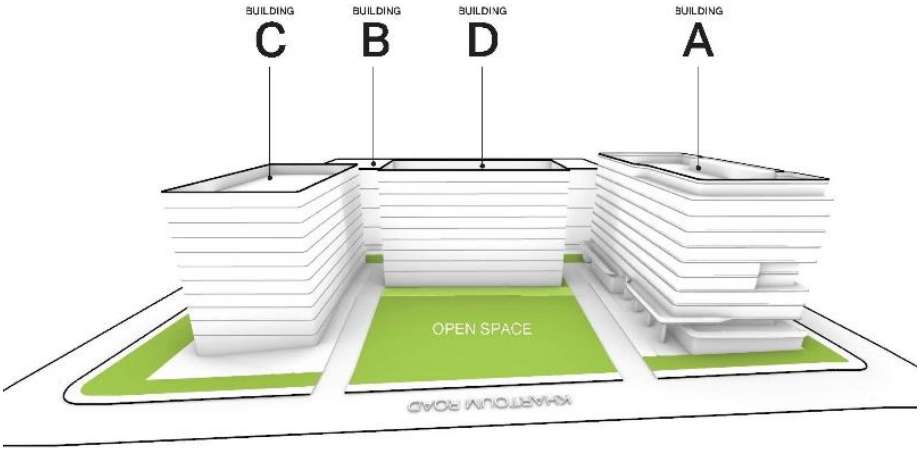

Figure 1.2 Massing diagram showing the heights of the three proposed commercial office buildings (buildings A, B and C) and the Project (building D) (Source: M_Park architectural package for the amended DA)

A landscape concept design for the whole site has been prepared (refer Figure 1.3). Key elements of this design include:

- A native plant buffer surrounding the site, reinforcing the character of the existing streetscape. Many trees within this street frontage are to be retained (refer Figure 1.4);
- An internal 'park' space fronting Khartoum Road featuring a grid of exotic flowering trees, large terraced lawn spaces, public art and feature tree plantings of figs;
- A through site pedestrian link connecting Future Road 01 to Talavera Road, including boundary planting
- An elevated landscape structure between Building B and the pedestrian link providing additional landscaping.

Figure 1.3 M_Park Landscape Concept (Source: Site Image Landscape Architects, September 2020).

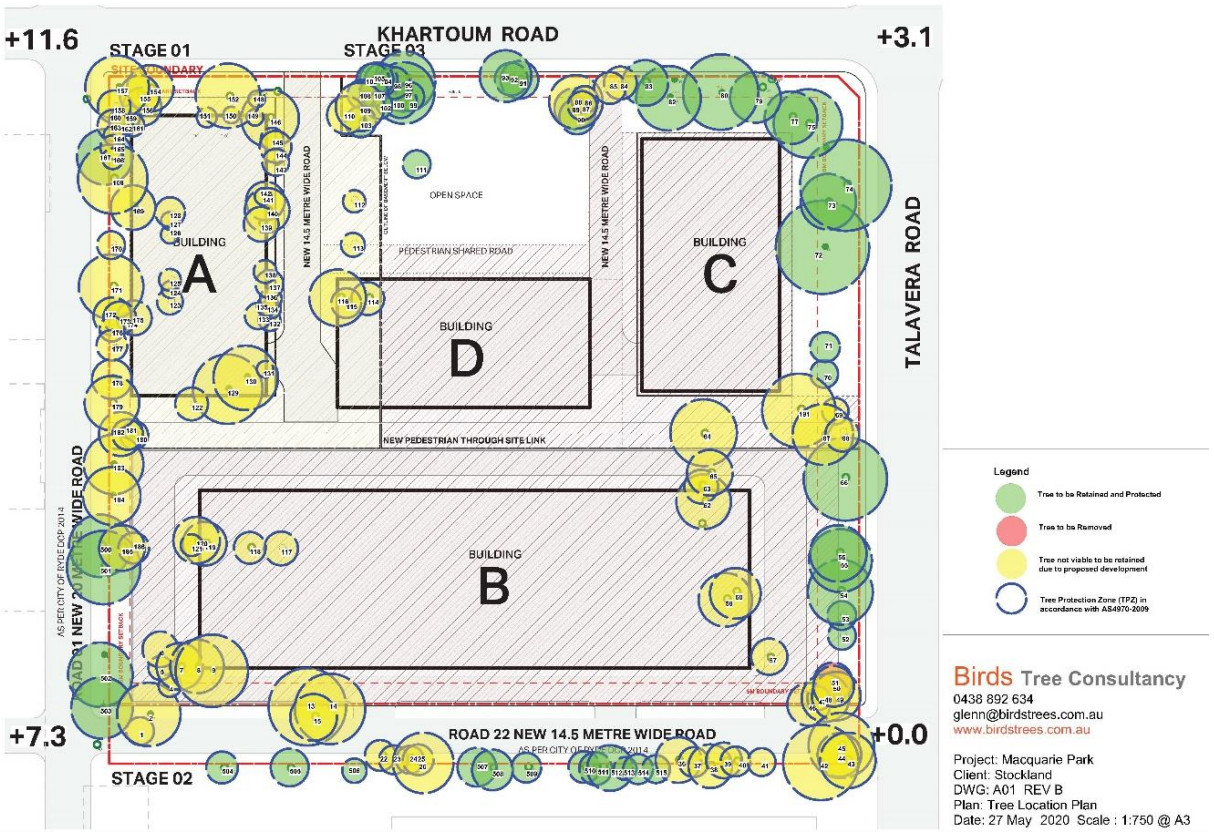

Figure 1.4 Tree location plan for M_Park showing trees to be retained and removed (Source: M_Park architectural package for the amended DA)

1.5 Project description

The proposed development is the construction and operation of a Data Centre (refer Figure 1.5). The built form of the Project would be a five-storey building up to 45 metres in height. Key elements of the Project would include:

- Ancillary offices and staff amenities
- Car parking
- Loading dock
- Security guard house
- New vehicular access
- Service infrastructure
- Diesel backup generators
- Landscaping
- A new access road between 11-17 Khartoum Road and 1-5 Khartoum Road (Road 22)
- Earthworks.

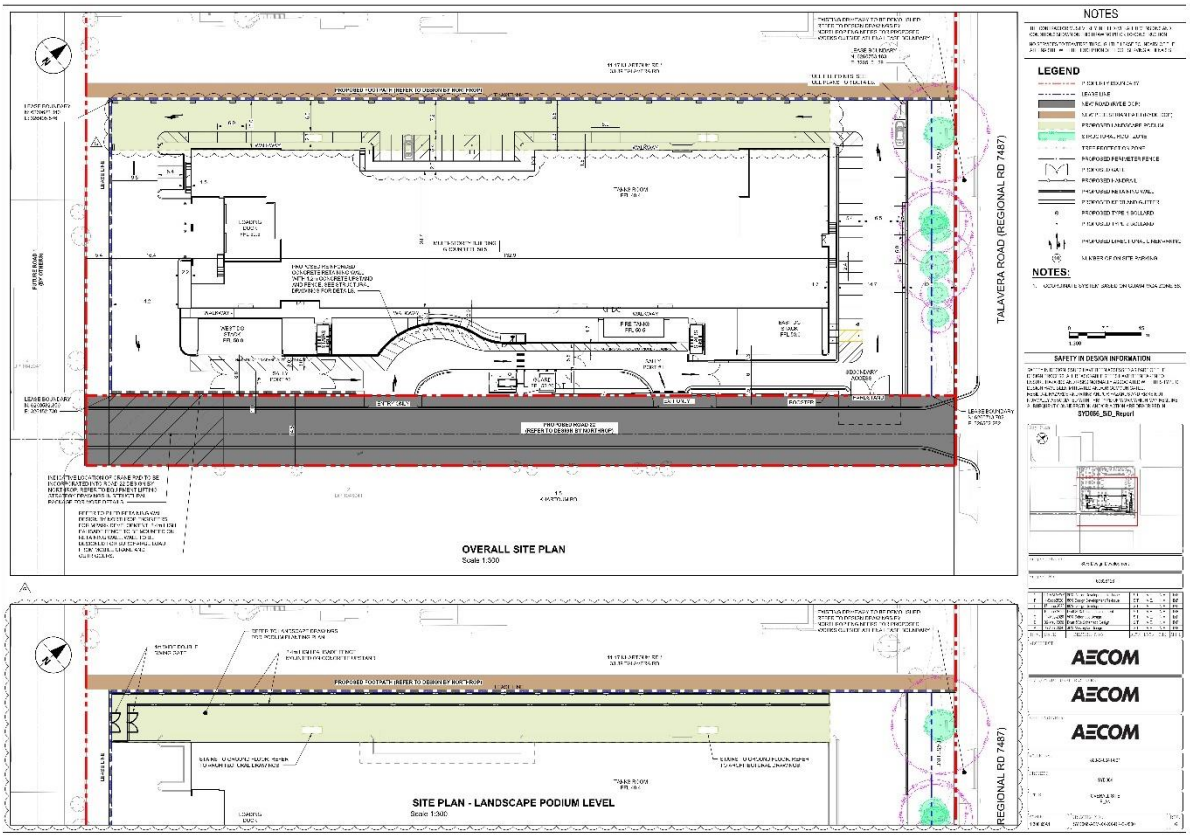

Figure 1.5 Indicative Project layout, note that pale green shading denotes a landscaped podium level (Source: AECOM).

The Project is orientated with the narrow end of the building fronting Talavera Road. Fire services are located along the eastern boundary, screened from the road by landscaping. Several trees have been retained on Talavera Road.

The proposed façade design comprises aluminium panelling and shading elements, brick cladding and aluminium weatherproof louvres (refer Figure 1.6). The materiality is designed to be warm, inviting,

ecofriendly and provide weather resistance, thermal, acoustic and fire resisting properties (refer Figure 1.7).

The upper portion of the building on the northern and southern facades would be clad in folded aluminium panels above the Level 1 awning, which would be constructed of the same aluminium material. Under the awning the facade would be clad in the Corium brick façade system, which would provide a warm base to the building, aiming to create a humanised scale to the street level.

The aluminium panels fixed to the northern and southern façade would be made with smaller modules of folded aluminium in matte white finish with some highlights of darker grey in pockets. Aluminium louvres would clad the eastern and western ends of the building, assisting in the internal functions of the building to allow airflow but protect equipment from wind driven rain.

Figure 1.6 3D perspective showing the proposed northern façade of the building (subject to further detailed development) (Source: AECOM)

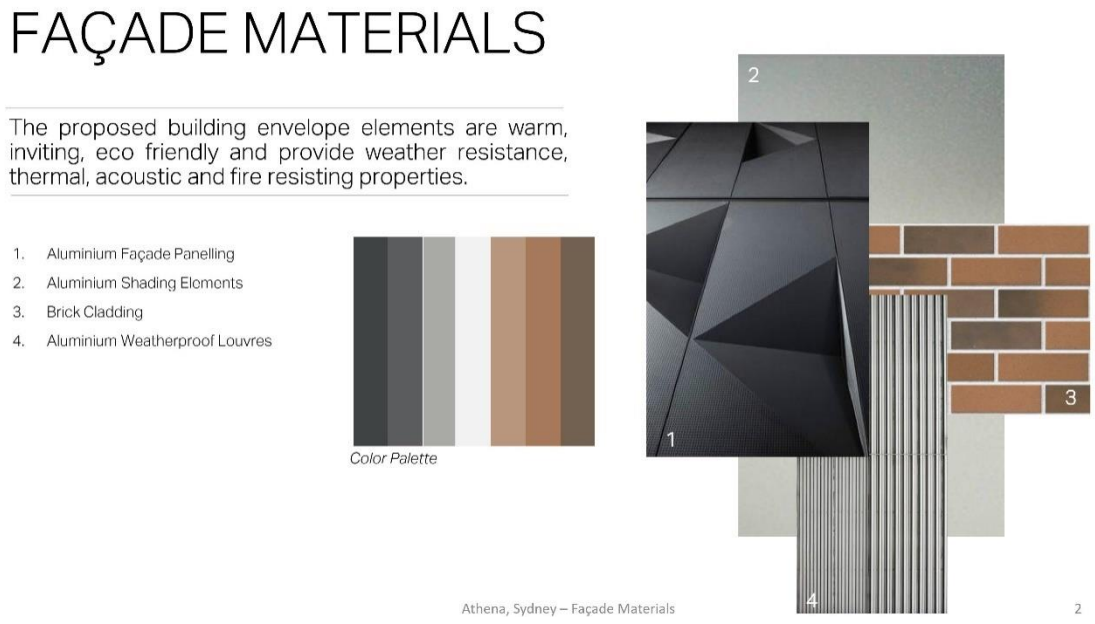

Figure 1.7 Façade materials as detailed in the design 'Mood board' for the proposed development (Source: AECOM)

The Project site would be lit by free standing lighting positioned at the perimeter of the site as shown in Figure 1.8. Four light poles are proposed along the Talavera Road frontage, positioned behind the existing trees to be retained and a landscaped strip between the road verge and the internal site. An example of the lighting is shown in Figure 1.9. Lighting comprises simple 7 m poles with lighting angled down towards the hardstand surfaces of the site.

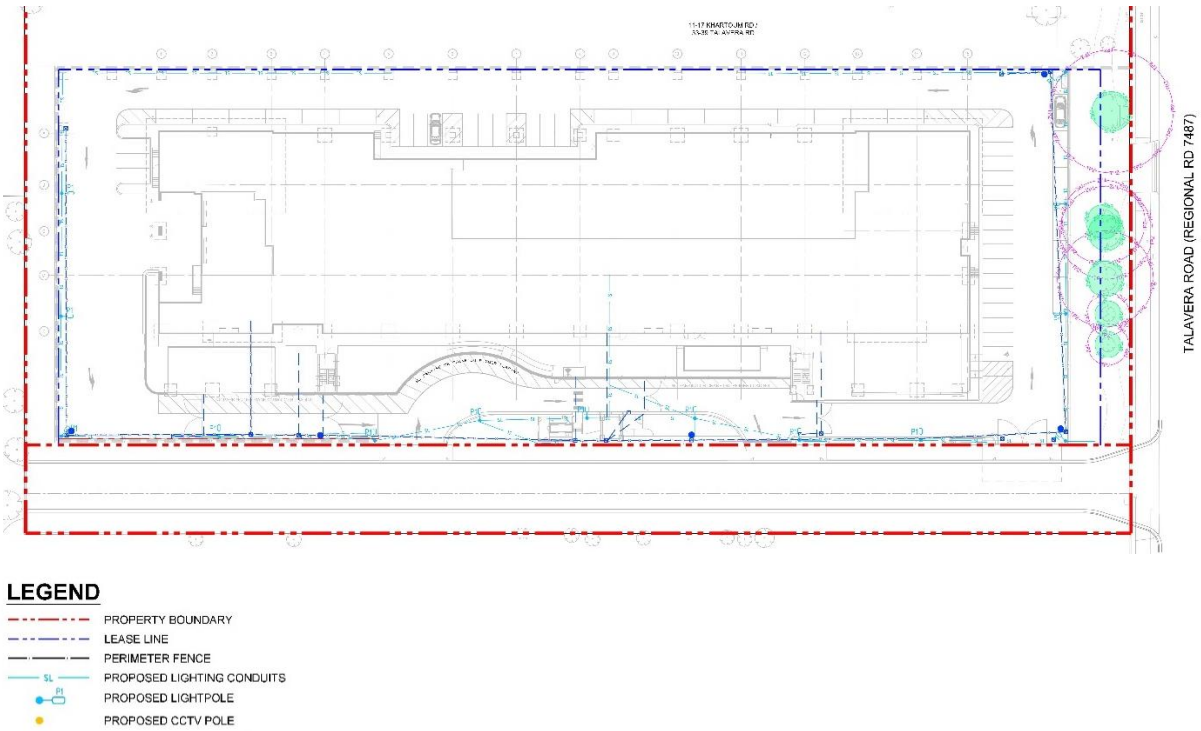

Figure 1.8 Lighting of the Project (Source: AECOM) Note: this plan shows the ground floor only and does not show the extent of the elevated landscape structure on the northern side of Building B

Figure 1.9 An example of light poles to be used within the Project (Source: WE-EF LIGHTING Pty Ltd)

A landscape plan has been prepared for the Project (refer Figure 1.10 and Figure 1.11 and Appendix C of the EIS for more detail). Landscaping on the ground floor of the site comprises retained trees with proposed underplanting on the eastern boundary (on Talavera Road), some planting near the proposed entry on the proposed Road 22, and some planting on the western boundary along the Proposed Road 01 (refer Figure 1.10).

Landscaping along Talavera Road and the proposed Road 22 would be outside the site boundary of the Project but would help soften the development when viewed from the streets with the use of

retained and proposed native trees, shrubs and groundcovers. A central band of mixed native shrubs would provide some screening of the built form and fencing from Talavera Road. A new tree planted near the entry on Road 22 would assist in reducing the scale of the building from the road corridor.

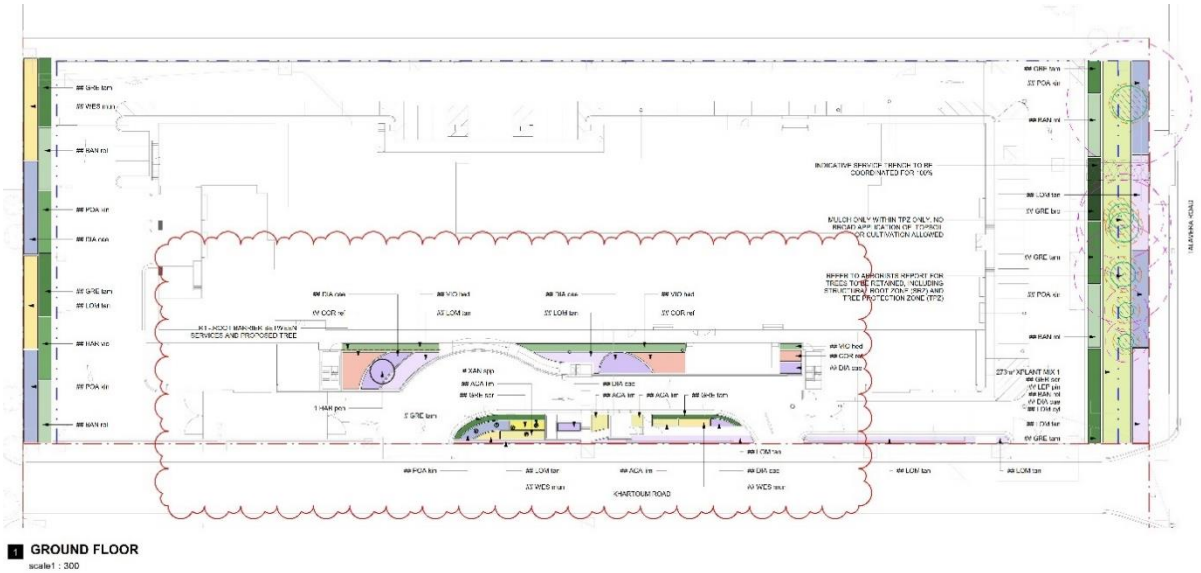

Figure 1.10 Draft landscape concept design plan for the ground floor (Source: AECOM). Refer Appendix C of the EIS

An elevated landscape structure running the length of the building on the northern side of the site would be positioned at the level of the pedestrian pathway within M_Park to the north (refer Figure 1.11 and Figure 1.12). This elevated landscape structure provides a planted zone level with the adjacent M_Park pedestrian pathway, softening views to the Project from within M_Park to the north. Planting mixes comprising native plants of differing forms and heights would provide interest and habitat within the site.

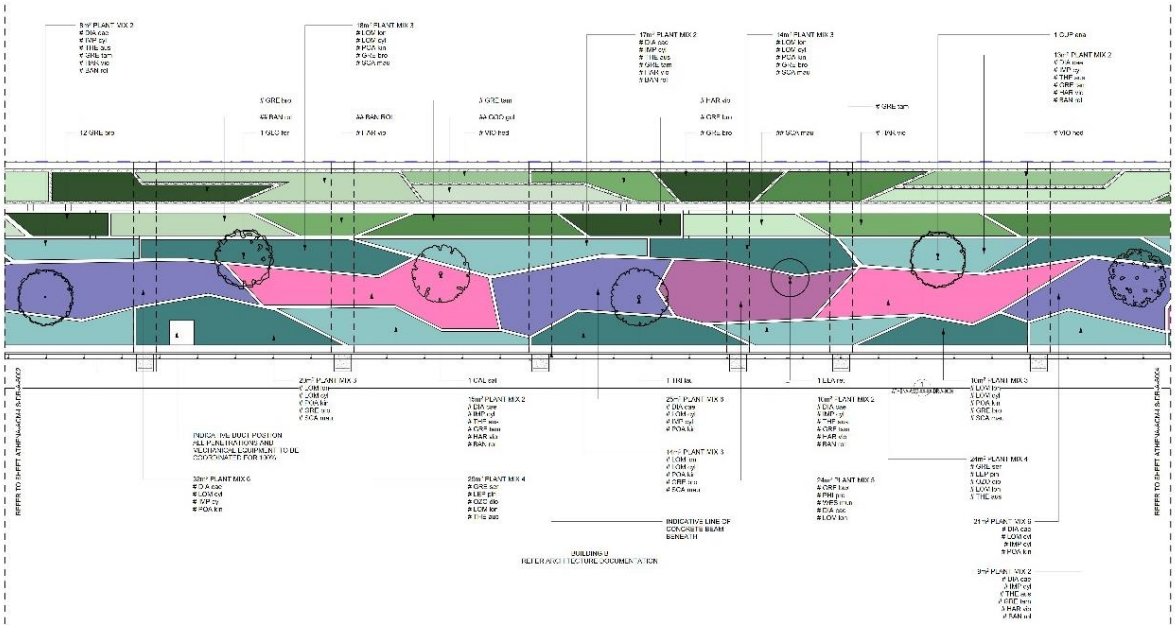

Figure 1.11 Draft plan showing planting concept on the elevated landscape structure running along the northern edge of the building (Source: AECOM). Refer Appendix C of the EIS

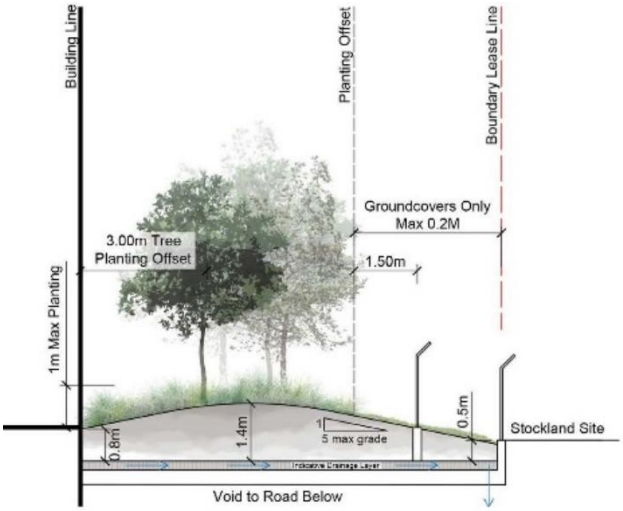

Figure 1.12 Proposed planting detail for the elevated landscape structure along the northern side of the building (Source: AECOM). Refer Appendix C of the EIS

Species chosen for planting within the Project are natives, with an emphasis on plants for aesthetic appeal and habitat creation (refer Figure 1.13). Trees up to 10 m in height would be planted along the elevated landscape structure, with an understorey of shrubs and groundcovers. Species selection may be subject to change on consultation with the Metropolitan Local Aboriginal Land Council as recommended in the Aboriginal Heritage Due Diligence Assessment (refer Appendix K of the EIS).

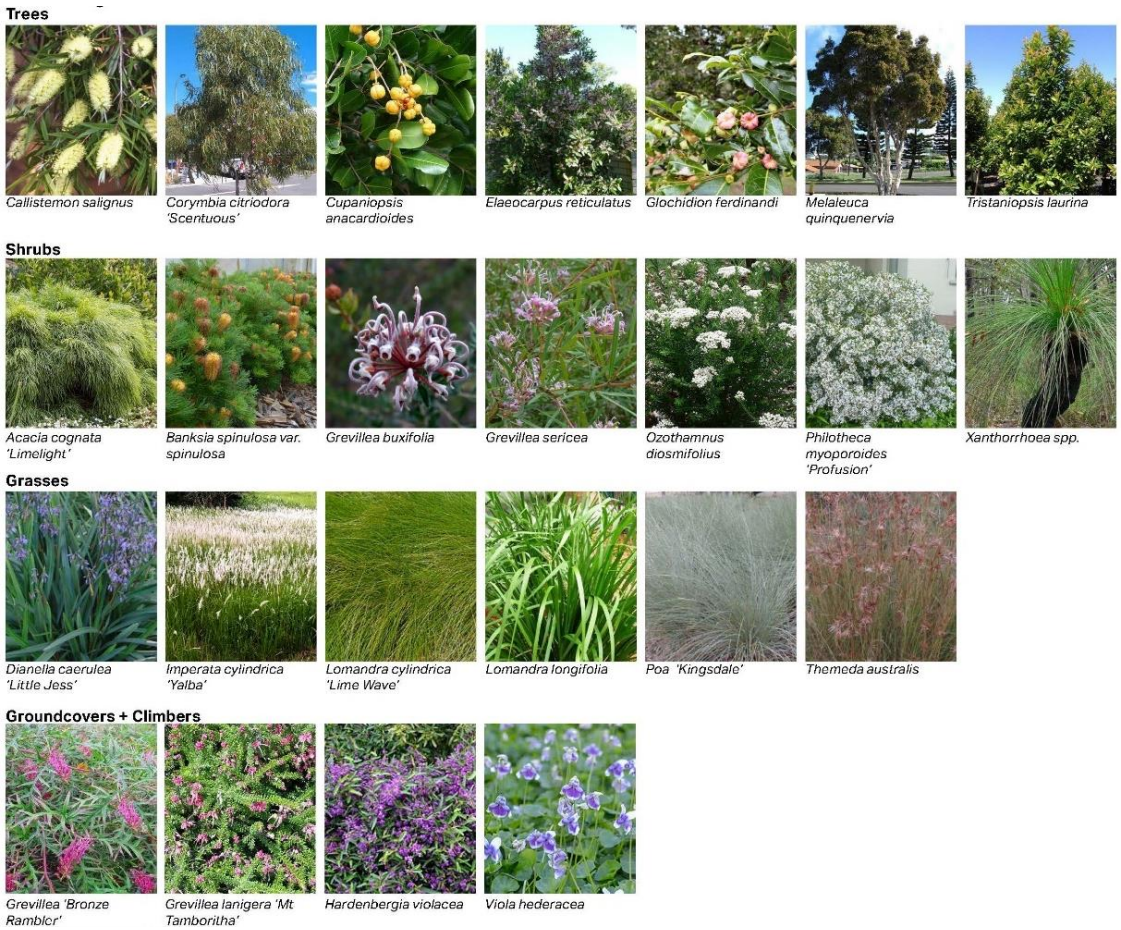

Figure 1.13 Proposed plant species (Source: AECOM). Refer Appendix C of the EIS

The project boundary is fenced with a black 2.4 m tall security fence (refer Figure 1.14). This fencing type is used surrounding other properties within the surrounding area, such as at the intersection with Khartoum Road and Talavera Road (refer Figure 1.15).

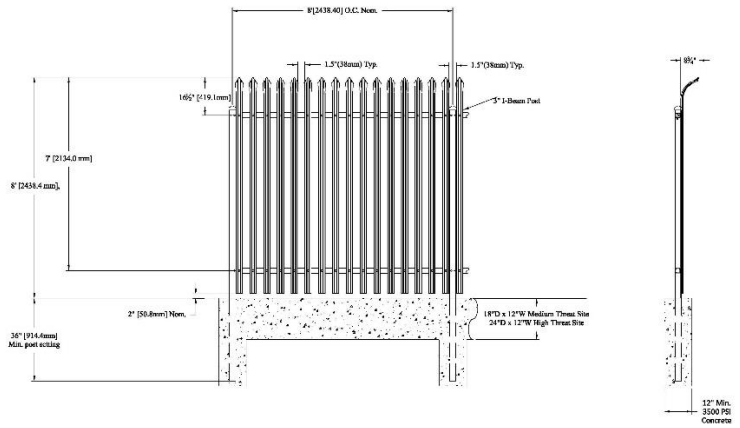

Figure 1.14 Proposed fencing detail (Source: AECOM)

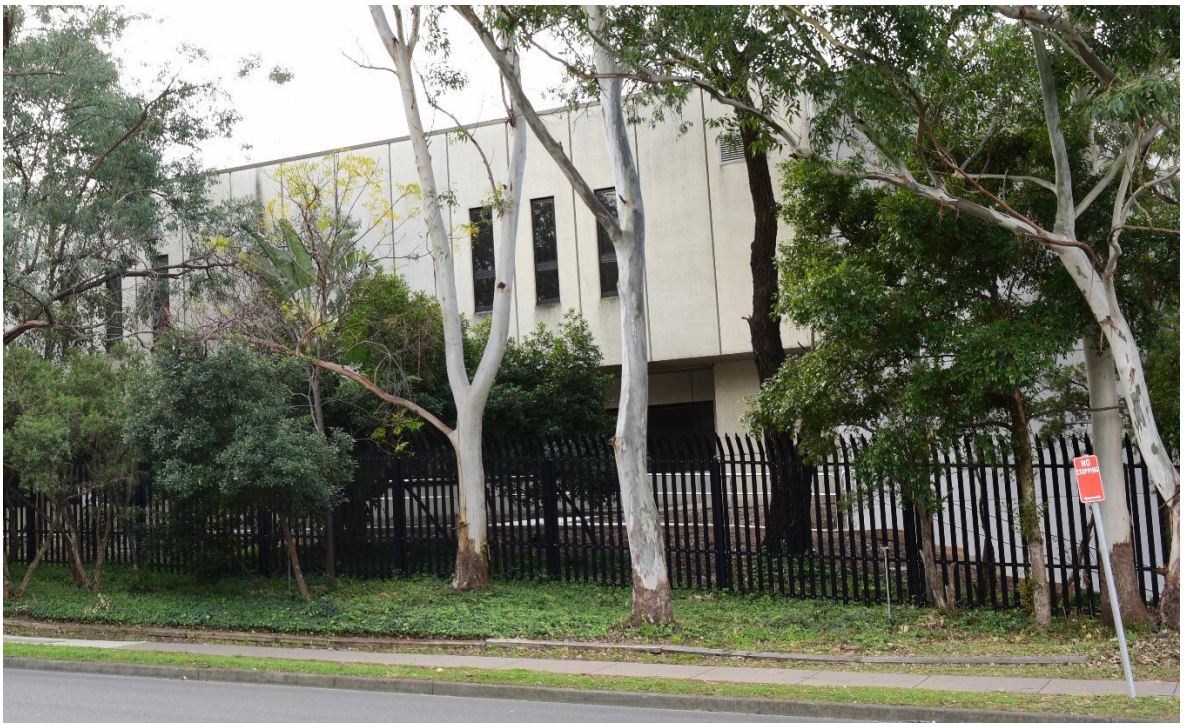

Figure 1.15 Existing fencing at the intersection of Khartoum Road and Talavera Road, similar to that proposed for the Project (Source: AECOM)

The site would not be open to the public, however, the site planning of the greater M_Park development has integrated the proposed development within the existing road and footpath network and increased the permeability of the site to pedestrian and vehicular traffic. The proposed Road 22 (as required by the Ryde Development Control Plan (DCP) 2014) would contribute to this integration, joining up with the proposed Road 01 which would pass to the west of M_Park. A new pedestrian pathway running to the north of the Project (refer Figure 1.5) assists in pedestrian permeability of the greater development site.

While detailed designs for Road 22 and the pedestrian link have not been developed, indicative sections have been provided in the amending DA for M_Park (refer Figure 1.16).

Figure 1.16 Indicative sections showing proposed vehicular and pedestrian linkages within M_Park (Source: M_Park architectural package for the amended DA)

2.0 Methodology

Visual Impact Assessment (VIA) is a tool used to identify and assess the significance of and the effects of change resulting from development on people's views and visual amenity.

As there is no accepted national published guidance on VIA specific to Australia the industry typically refers to guidance from elsewhere for producing VIA reports. The method for this assessment has been developed with reference to *Guidelines for Landscape and Visual Impact Assessment, Third Edition* (2013) developed by the Landscape Institute and Institute for Environmental Management, UK (hereafter referred to as GLVIA3). GLVIA3 is widely recognised as comprising an example of 'best practice' in this field.

2.1 VIA methodology

2.1.1 Environmental baseline

Existing data was gathered and reviewed, including:

- Project architectural and landscape design information;
- Design information for M_Park Concept Development (refer Section 2.2 for assumptions used during assessment);
- Base information on existing environmental conditions, including GIS mapping;
- Available information on sensitive visual receptors and surrounding receptor locations;
- Reporting on heritage items and issues in the surrounding area; and
- Google Earth and Google Street View information.

Using this data, a preliminary desktop assessment of the visual resource was undertaken and used to inform the site inspection.

2.1.2 Site inspection

A site inspection was undertaken on the 29th of June 2020. The purpose of the inspection was to:

- Identify views from sensitive visual receptors within publicly accessible locations; and
- Undertake site photography and to record key views.

2.1.3 Existing environment

The above information was summarised into a broad description of the landscape within which the Project is located, and identification of elements and features relevant to assessment of the Project, including site setting, topography, land use and heritage values.

2.1.4 Zone of theoretical visibility

Using GIS technology a Zone of Theoretical Visibility (ZTV) map was produced. This uses contour information and the height of the Project to map out the theoretical area that could view the Project. Importantly it does not consider vegetation and surrounding built form which could screen the development from the ground plane.

The mapping typically shows 'worst case', i.e. some receptors may only see a small portion of the Project, while other receptors may view a more substantial part of the Project.

2.1.5 Visual effects

Assessment of visual impact deals with the effects of change on the views available to people and their visual amenity. It assesses how the surroundings of individuals or groups of people (visual receptors) may be specifically affected by changes in the context and character of views as a result of the change or loss of existing elements of the landscape and/or the introduction of new elements (GVIA3). Visual effects are assessed at operation.

Visual receptors have been considered in terms of the views they are likely to obtain from locations within proximity of the Project, including consideration of any key vantage points, e.g. sites where there is particular interest in the view.

The evaluation of potential effects on visual amenity is based on the sensitivity of the viewpoint (and the visual receptors it represents) to change, and the magnitude of change arising from the Project that is likely to occur.

The sensitivity of each viewpoint is a function of:

- The occupation or activity of the people experiencing the view at particular locations;
- The extent to which their attention or interest may therefore be focussed on the views and the visual amenity they experience at particular locations, e.g.:
    - People who are engaged in outdoor recreation where their attention or interest is likely to be focused on views and the visual amenity they experience, are likely to be more sensitive to a proposed change in that view rather than;
    - People at their place of work whose attention may be focused on their work, not on their surroundings, and where the setting is not important to the quality of working life.
- Value attached to the view experienced, e.g.:
    - In relation to heritage assets, or through planning designations; or
    - Indicators of value attached to views, e.g. through appearing on tourist maps, or provision of facilities for their enjoyment (such as parking places, sign boards and interpretative material).

The magnitude of change to views and visual amenity depends on the:

- Size or scale of change in the view regarding the:
    - Loss or addition of features in the view and changes in its composition;
    - Degree of contrast or integration of any new features with the existing landscape, in terms of form, scale and mass, line, height, colour and texture; and
    - Nature of the view of the proposed development in terms of amount of time it would be experienced, and whether the views would be full, partial or glimpses.
- Geographical extent of the visual effect with different viewpoints including the:
    - Angle of view in relation to the main activity of the receptor;
    - Distance of the viewpoint from the proposed development; and
    - Extent of area over which the changes would be visible.
- Duration and reversibility of visual effects, e.g.:
    - Duration in terms of short term (0-5 years), medium term (6-15 years) or long term (16-30+ years); and
    - Reversibility with regard to the prospects and practicality of a proposed change being reversed in say a generation, e.g. housing can be considered permanent, but wind energy developments for example are often argued to be reversible since they have a limited life, and could eventually be removed and the land reinstated (GVIA3).

The extent of sensitivity and magnitude are each assessed and graded as being High, Moderate, Low or Negligible.

A matrix is used to combine the ratings for sensitivity and magnitude to provide an overall ‘Significance of Visual Effects’ rating, described as being High, High-Moderate, Moderate, Moderate-Low, Low or Negligible in relation to the existing environment (refer Table 2.1).

An informal professional judgement has been made as to whether the visual effects are deemed 'Adverse', 'Neutral' or 'Beneficial' from each viewpoint to give a qualitative rating to the assessment.

This judgement is based on whether the changes would affect the quality of the visual experience of visual receptors, given the nature of the existing views.

Table 2.1 Visual impact assessment matrix

Sensitivity \ Magnitude	High	Moderate	Low	Negligible
High	High	High to Moderate	Moderate	Negligible
Moderate	High to Moderate	Moderate	Moderate to Low	Negligible
Low	Moderate	Moderate to Low	Low	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

2.1.6 Photos and photomontage

Photographs of the view from each viewpoint were used to assist in providing a baseline from which to assess changes arising from the Project.

An artist's impression was produced to illustrate the proposed changes from viewpoints. These were prepared by overlaying a 3D model of the Project over an existing photograph, removing any structures to be replaced using graphic software.

Viewpoints from which photomontages were produced were selected based on a professional judgement on the visual impact from each location. Artists impressions were created from viewpoints that:

- had particularly sensitive receptors; and/or
- would be likely to receive views from close proximity or uninterrupted views with little screening from existing built form, vegetation or topography; and/or
- had existing sensitivities surrounding views or visual amenity such as heritage value, recreational value, scenic or tourist destination values or other values that increased the importance of the view either too the Project or from the viewpoint.

Refer section 4.3 for reasoning behind selection of viewpoints from which artists impressions were produced.

2.1.7 Mitigation measures

Where practicable mitigation measures have been recommended to reduce the impact of the Project on the surrounding landscape or views.

2.2 Study area

The study area is determined based on several factors, including:

- topography of the surrounding landscape;
- the number and complexity of land uses surrounding the Project; and
- the visual containment of the Project due to the scale of the Project in comparison to surrounding built form and vegetation.

A study area of 1 km from the boundary of M_Park has been selected within which to assess the visual impacts of the Project. This distance is considered conservative given the relatively flat site and surrounds and the high level of visual screening provided by the adjacent buildings and mature trees.

2.3 Assumptions

The Projects relationship with the greater M_Park development is described in Section 1.4.1. The Project would be constructed within the M_Park development site within stage 3 of the development; therefore, assessment of visual impact must consider these changes rather than assessing the data centre as an individual change within the existing site.

This VIA will be undertaken with the following assumptions:

- Stage 1 and 2 of the overall M_Park project involves the construction of Building A and surrounds and Road 22 (refer Figure 1.1). However, it is undecided in which order the built form and landscaping within stage 3 would be constructed (including buildings B, C and D and landscaping). The VIA will assume that on completion of the Project (building B) all of M_Park would have been completed.
- While the detailed design of M_Park is ongoing, for the purposes of VIA assessment the Project will be assessed as per the architectural and landscape design included in the amended DA package and any updated information provided (e.g. Landscape concept provided by Site Image Landscape Architects).
- It is unknown how much of Stage 1, 2 and 3 would overlap in construction, therefore visual receptors have been selected based on those existing in the surrounding landscape under existing conditions. Receptors within the proposed M_Park development will not be used to assess visual impact of the Project as it is assumed the Project would be constructed concurrently with other M_Park buildings.
- It is assumed that landscaping (including trees) would be included on at least one verge of the proposed Road 22, as per the Ryde DCP 2014.
- The visual impact of the Project will be assessed within the public domain only. It is acknowledged that there are several high-rise developments within the surrounding area, particularly with the ongoing development of Macquarie Park. Theoretical change in views from nearby high-rise developments are briefly discussed but not assessed.

3.0 Existing Environment

3.1 Site context

The Site is located in the suburb of Macquarie Park, which is part of the City of Ryde Local Government Area (LGA). It is located approximately 12 km north-west of the Sydney CBD, approximately 850 m south-east of Macquarie University, and 550 m south-east of Macquarie Shopping Centre (refer Figure 3.2).

The suburb has undergone significant development over the past 15 years, particularly since the construction of the Chatswood to Epping Rail line which included a stop at Macquarie Park that opened in 2009. The surrounding area is characterised by commercial buildings and land uses consistent with the character of Macquarie Park as a business precinct. Large multi storey commercial buildings within landscaped grounds are typical of the area, with onsite parking provided. Individual business parks with multiple large multi-use buildings are also common, such as the Talavera Corporate Centre at 26 Talavera Road (refer Figure 3.1), or Macquarie Square on Waterloo Road (refer Figure 3.6), which is under construction.

The Site itself is currently owned by Stockland and is occupied by two multi storey commercial and warehouse buildings leasing floor space to several businesses. The two buildings are located towards the centre of the Site, in a campus fashion, and surrounded by at-grade car parking. The largest footprint building is two storeys high, comprising office and warehouse spaces. The smallest footprint building is six storeys high containing mainly office spaces.

Vehicle access to the Site occurs in two driveways along Talavera Road, and three driveways along Khartoum Road. The car parking and external landscaped areas surrounding the buildings are dotted with mature landscaping trees and hedging. The trees form a buffer between the property and the adjacent roads, footpaths and cycle path.

Figure 3.1 The vehicular entry to the Talavera Corporate Centre on Talavera Road (Source: AECOM)

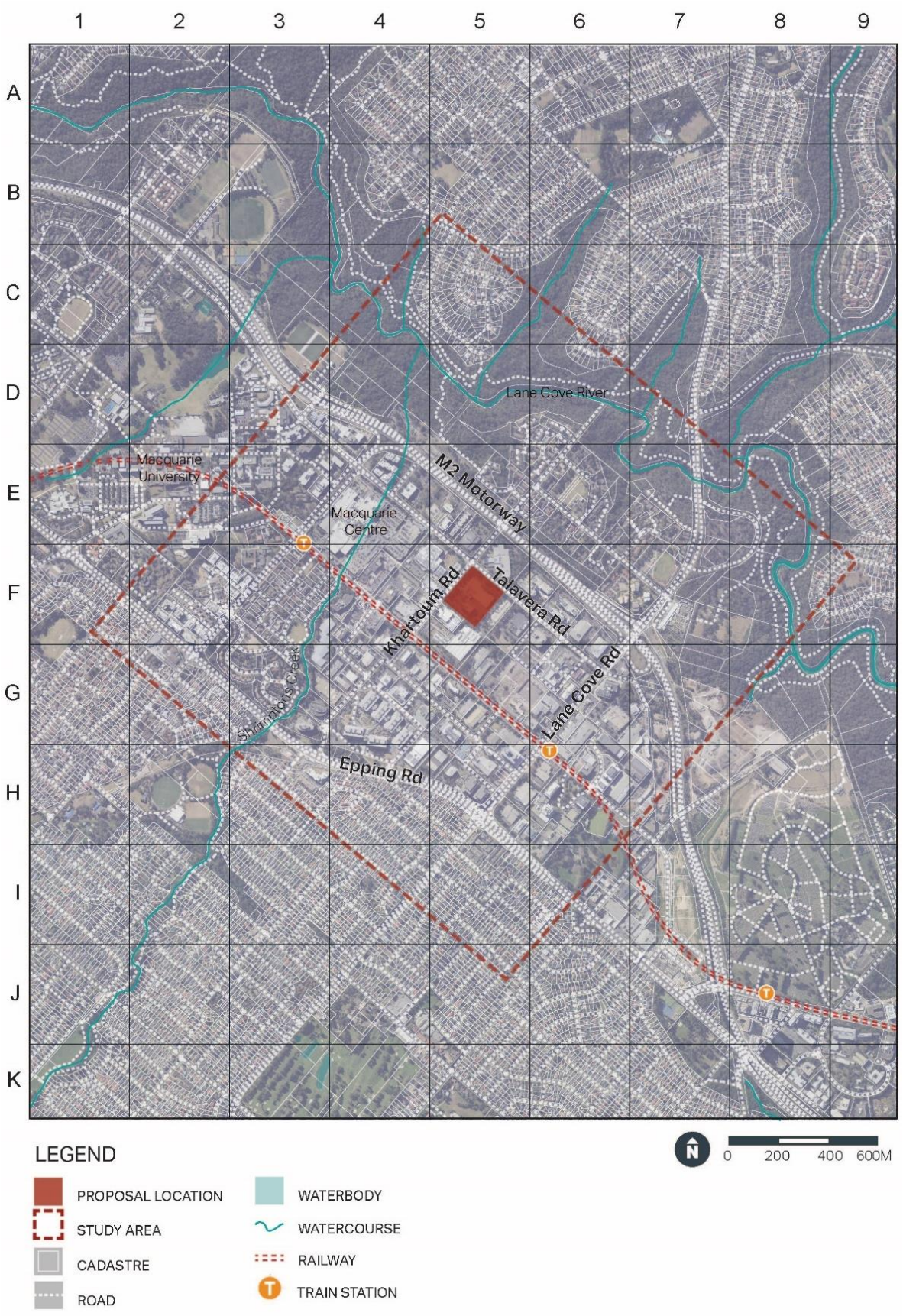

Figure 3.2 Site context map (Source: AECOM)

3.2 Topography and hydrology

The Site slopes gently from west to east, from a level of approximately 59 m AHD to approximately 48 m AHD with a constant slope gradient between these points. The surrounding land morphology generally slopes down towards the east and the Lane Cove River, which is located approximately 900 m north-east of the Project (refer Figure 3.5).

Shrimptons Creek passes north-west of the site draining to the Lane Cove River within the Lane Cove National Park. A minor unnamed drainage corridor also originates in a narrow portion of bushland to the north-east of the Project on Talavera Road and drains to Lane Cove River. The Project lies close to a low point on Talavera Road associated with this unnamed drainage corridor (refer Figure 3.3).

Within the study area two high points lie to the west of the Project, south-west of Epping Road. Three major road corridors within the study area: Epping Road; Lane Cove Road; and the M2 Motorway. While Epping Road and Lane Cove Road follow the existing contours of the landscape, the M2 Motorway has been constructed using cuttings and bridges to flatten the road pavement and allow access to and from the motorway at key intersections (refer Figure 3.4).

Figure 3.3 The view looking north along Talavera Road to a localised low point near the Project (Source: AECOM)

Figure 3.4 The view looking east along Khartoum Road, with the M2 Motorway passing over the road in the background (Source: AECOM)

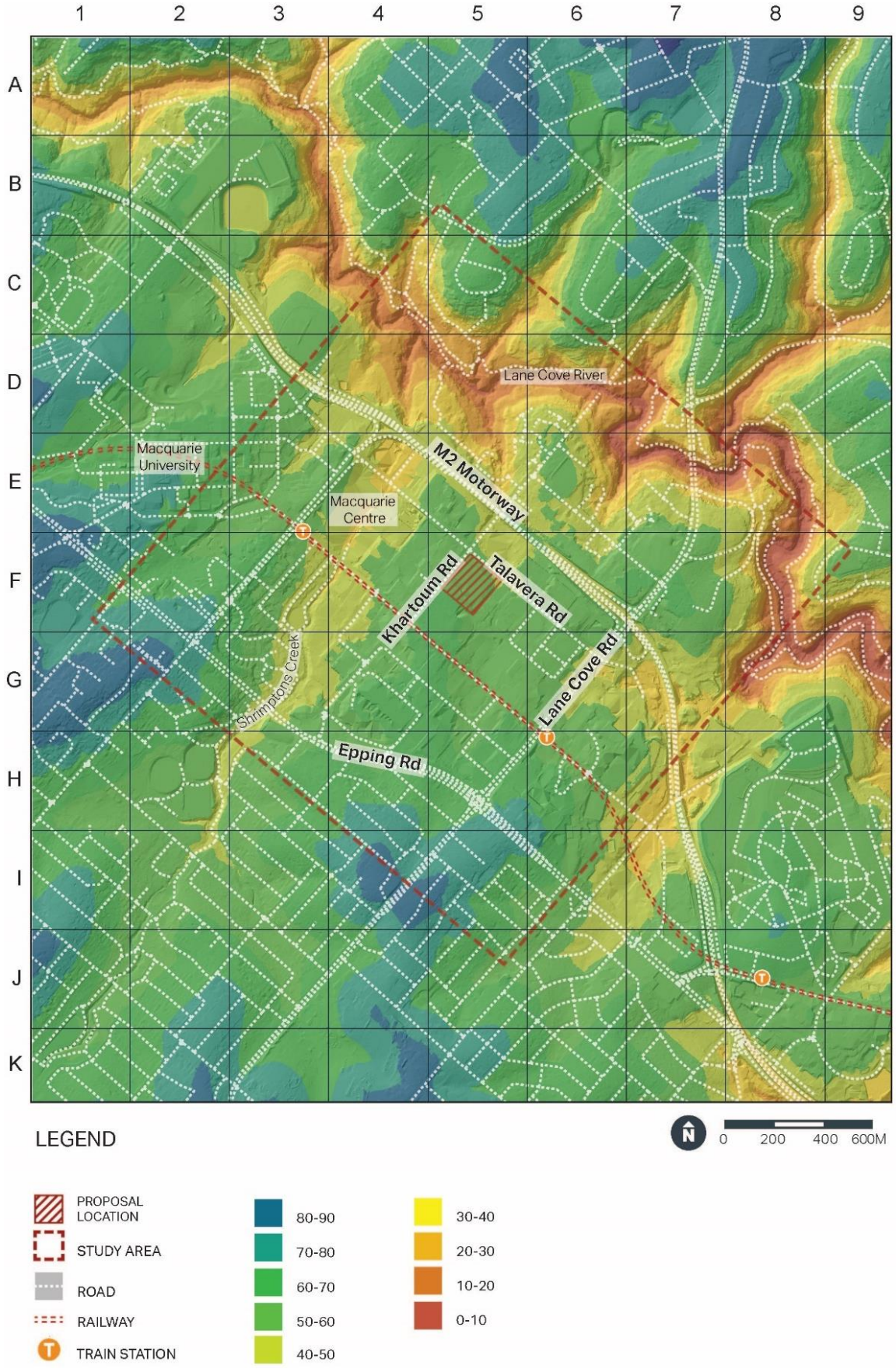

Figure 3.5 Topography within the study area (Source: AECOM)

3.3 Land use

The predominant land uses surrounding the Project are B7 Business Park, B4 Mixed Use and B3 Commercial Core, sandwiched between the M2 Motorway to the north-east and Epping Road to the south-west (refer Figure 3.7). This area is characterised by large development lots arranged within a wide street grid. Development lots typically contain several multi storey commercial buildings set within landscaped grounds with onsite parking provided.

Macquarie Centre lies approximately 350 m north-east of the Project, with Macquarie University to the north-east of that. South-west of Epping Road is characterised by R2 Residential development. North-east of the M2 Motorway lies a pocket of R4 High Density Residential land. This residential is predominantly 3 and 4 storey apartment buildings set within a densely treed landscape setting. Four taller apartment blocks are positioned on the corner of Lane Cove Road and the M2 Motorway. The Lane Cove National Park, which is zoned E1 National Parks and Nature Reserves, lies to the north east of this development and to the M2 Motorway, steeply sloping down to the Lane Cove River.

There is very little public open space between the M2 Motorway and Epping Road within the study area. Some public space is positioned along the Shrimptons Creek Corridor and is visually contained due to the slope of the land and fringing creek vegetation. A block of land zoned RE1 Public Recreation is positioned on Waterloo Road approximately 300 m south of the Project. This lies within the Macquarie Square development (refer Figure 3.6) which is currently under construction.

The Macquarie Park area is subject to ongoing development. As per the Ryde DCP (2014) a finer road network is being constructed with each new development (including the proposed Road 22 and Road 01 adjacent to the Project). A high level strategic plan is being developed by the NSW Department of Planning, Industry and Environment for the Macquarie Park Investigation Area, within which the Project lies.

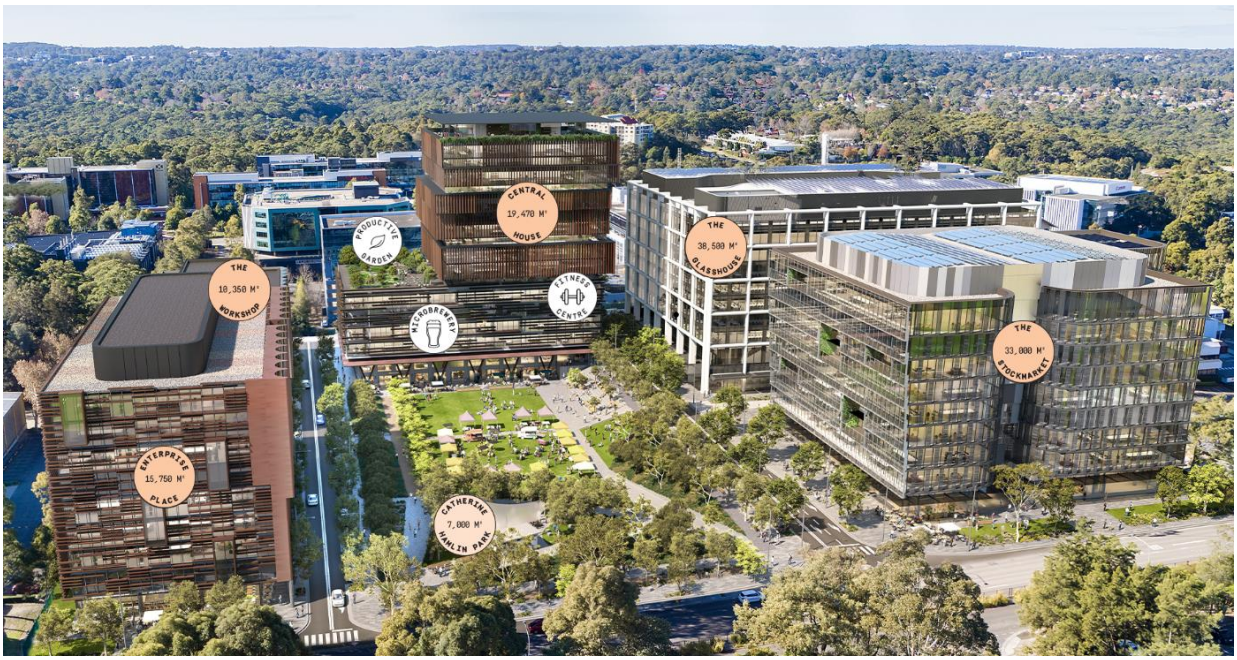

Figure 3.6 The Macquarie Square development is currently under construction and will provide public open space on completion of the project (Source: John Holland, macquariesquare.com.au)

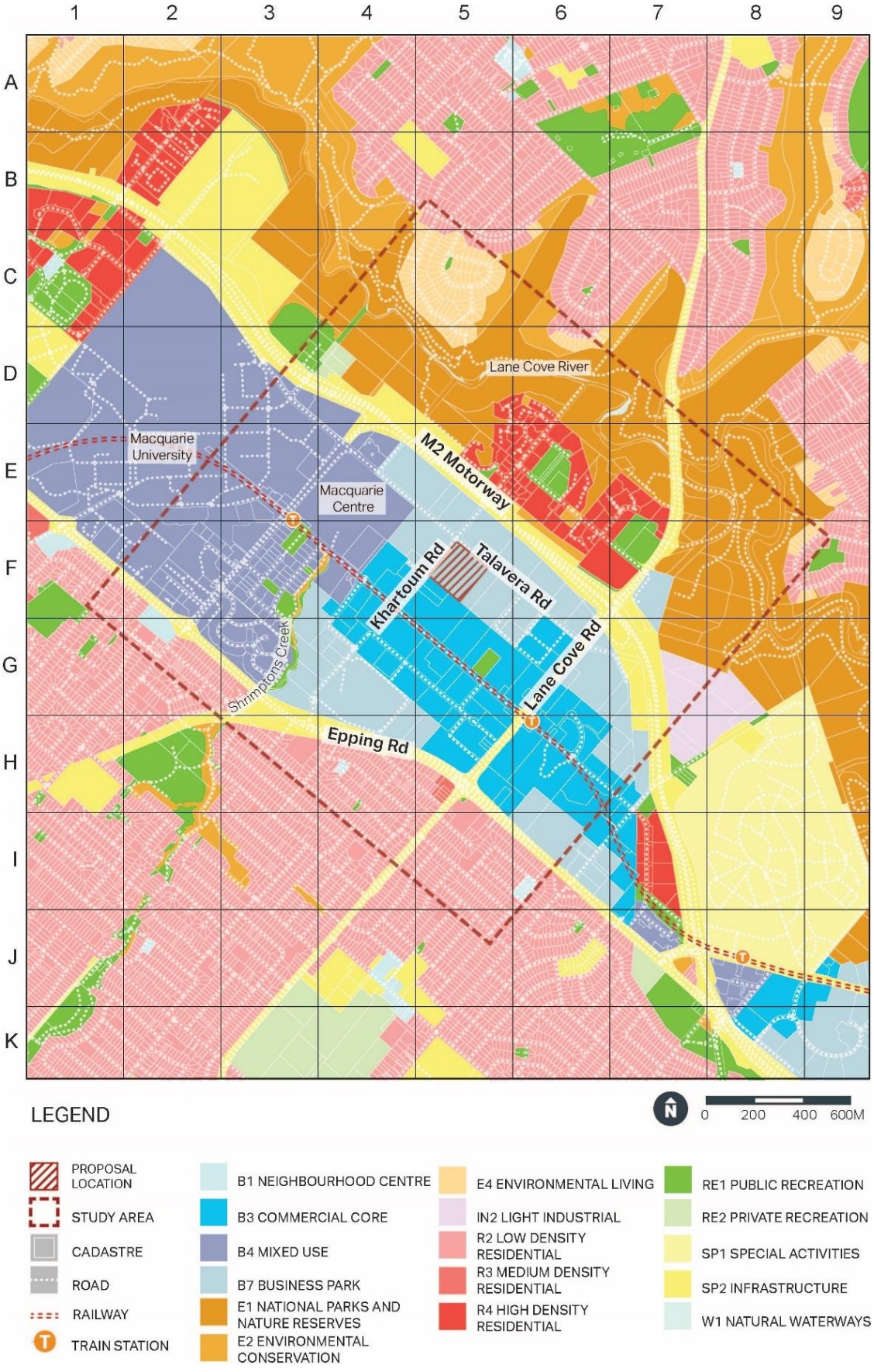

Figure 3.7 Land zoning within the study area (Source: AECOM)

3.4 Heritage

There is one local heritage item located within the study area. This is within the Macquarie University grounds and comprises the ruins of a stone walled shed. The Project is not visible from this item. The local heritage item to the south west of the Project is the Northern Suburbs Cemetery, and no views to the Project would be seen from this item.

The state listed heritage item along the eastern boundary of the study area is the Lane Cove National Park. The Project is not visible from the park.

No non-Indigenous items were identified to occur on the Project or surrounding properties according to Ryde LEP 2014 and or the NSW State heritage register.

No Aboriginal Sites or places were identified within the Project site. Given the already developed and highly disturbed nature of the Project Site and surrounds, there is considered to be low potential for previously unidentified Aboriginal artefacts to occur within the Site. Potential impacts to Aboriginal heritage would be assessed in the EIS for the Project.

Heritage items are identified in Figure 3.8.

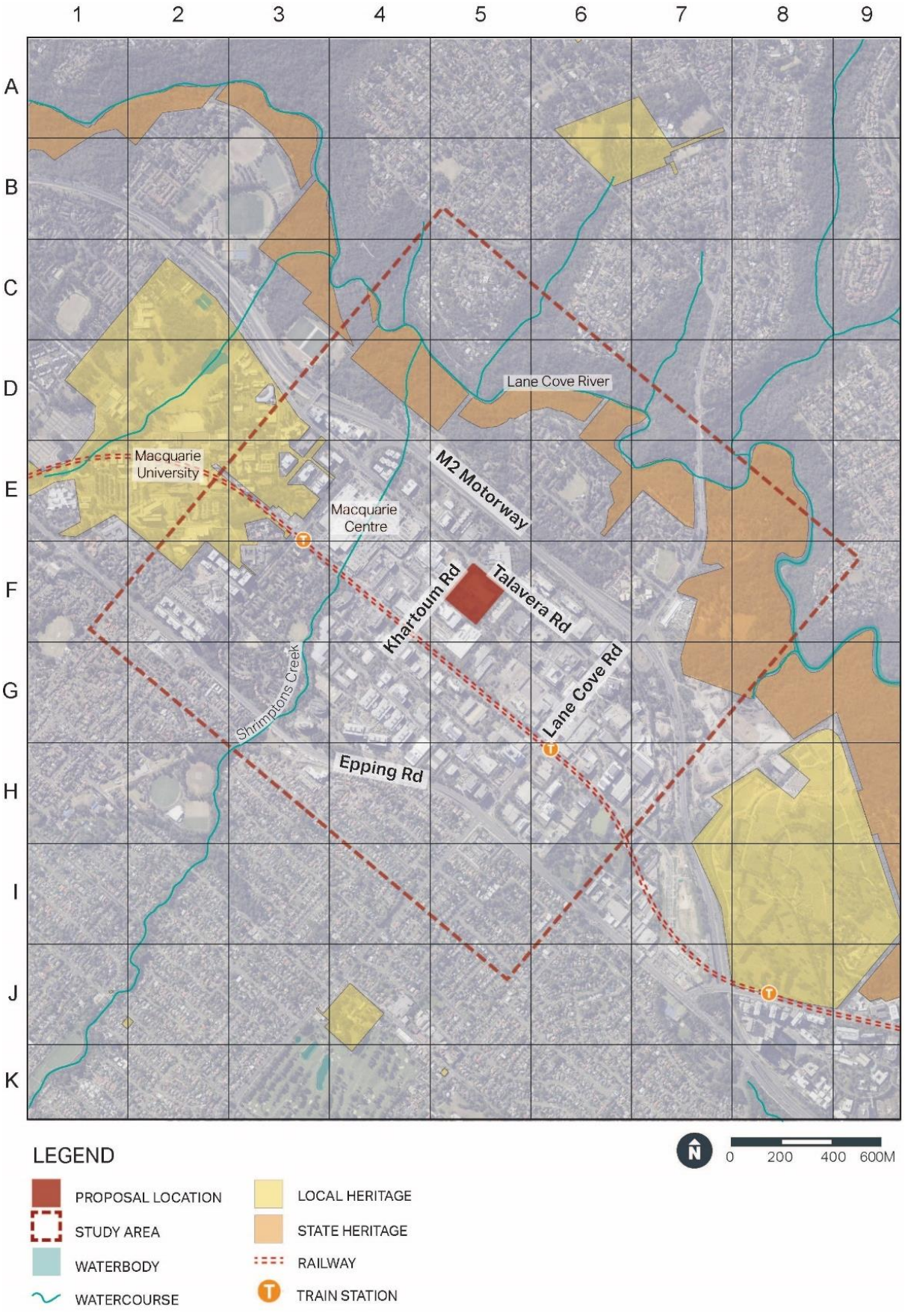

Figure 3.8 Heritage items within the study area (Source: AECOM)

3.5 Vegetation

Within the study area the vegetation varies (refer Figure 3.11). Streets are typically fringed by native canopy trees that lie both within private lots and within the road verge. Larger blocks of land with multi storey buildings and landscaped grounds provide more canopy cover with many large native trees (refer Figure 3.9). Many lots contain open lawn or car areas with large trees and some shrubs and groundcovers surrounding the open spaces.

Typical understorey plantings within the area comprise monocultures of native grasses and forbs, such as Lomandra, or clipped hedges with accents of Gymea Lilies. Other developments feature exotic trees which create a canopy over formal monocultures of shrubs (refer Figure 3.10).

North-east of the M2 Motorway lies Lane Cove National Park, which is characterised by a large area of indigenous bushland vegetation.

Figure 3.9 Vegetation within the streetscapes comprises a canopy of native trees with varying understorey plants (Source: AECOM)

Figure 3.10 Clipped understorey monocultures of shrubs with an exotic canopy (Source: AECOM)

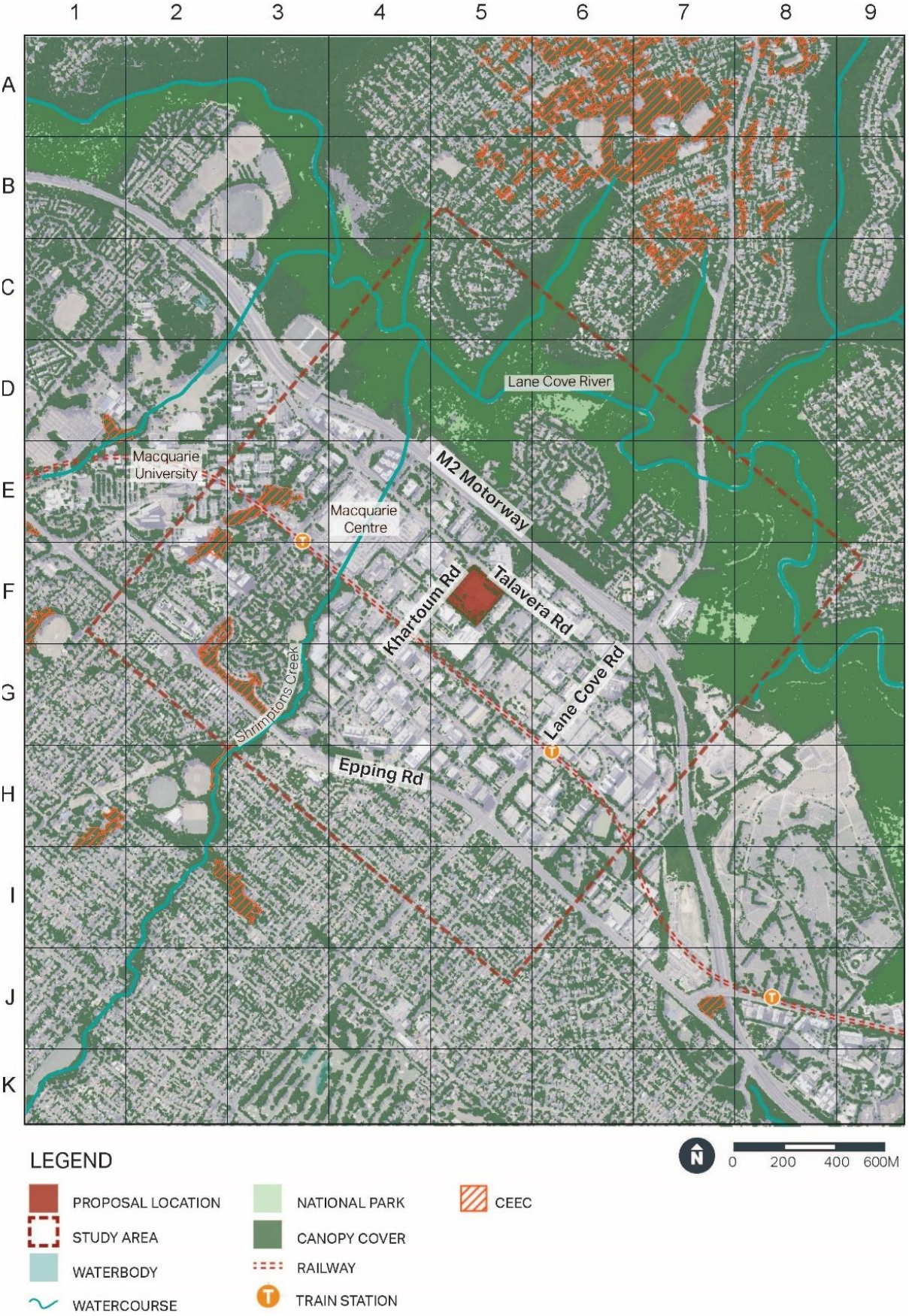

Figure 3.11 Vegetation within the study area (Source: AECOM)

4.0 Visual Impact Assessment

4.1 Visibility of the Project

Figure 4.2 shows the theoretical zone of visibility (TZV) of the Project. Due to the relatively flat topography of the site and surrounds, if no vegetation or built form were present the Project would potentially be seen from distances over 1.5 km. However, the landscape surrounding the Project is vegetated with mature trees along the streets, as well as several landmarks that would limit these distance views. These landmarks include:

- The M2 Motorway is fringed by vegetation and noise walls which would limit any views from public spaces from the east and north-east;
- The dense vegetation associated with the Lane Cove National Park would limit any views east of the Lane Cove River;
- Epping Road has several areas where the road corridor is raised above the surrounding landscape in order to cross other road corridors, such as Lane Cove Road. In these areas views to the Project would be screened by the road corridor; and
- Within Macquarie Park there are several taller developments where built form would screen views to the Project from publicly accessible areas. This, along with mature streetscape vegetation, would limit views to the Project.

Views from public areas to the Project would therefore be limited to the streets adjacent to the Project itself, namely to Talavera Road and Khartoum Road (where views to the Project may be seen between the built form within the M_Park development).

Distance views to the Project from private residences may be seen from several locations. Figure 4.4 shows the maximum building height within the study area where views to the Project may be seen. In addition to these areas there are several tall residential towers in the area that might see changes to their views due to the Project. A discussion on potential changes in the view from these locations can be found in Section 4.4.5.

Figure 4.1 Views within the streetscapes are limited from the footpath by mature vegetation and surrounding built form (Source: AECOM)

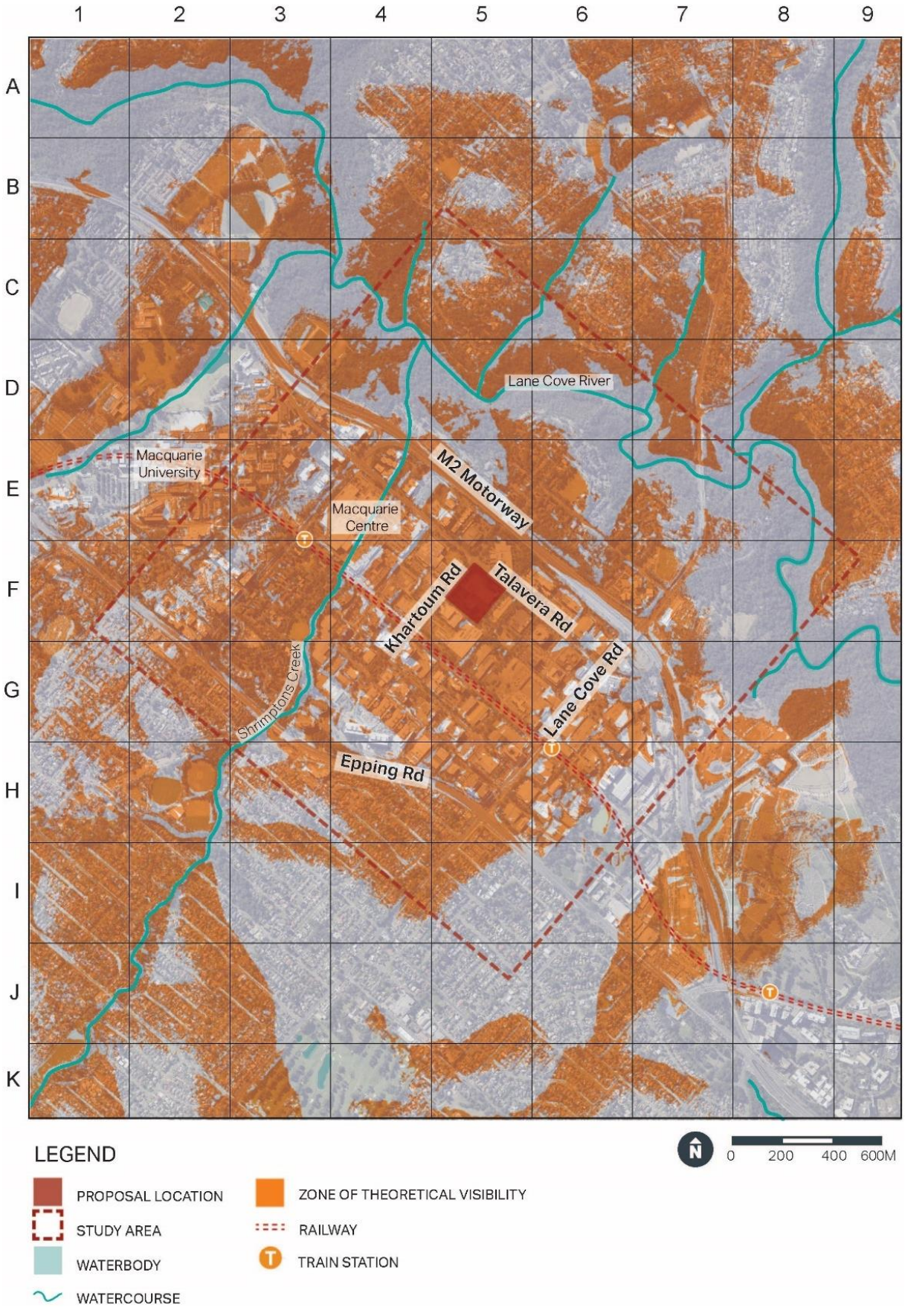

Figure 4.2 Theoretical Zone of Visibility map (Source: AECOM)

4.2 Visual receptors

Visual effects of the Project are assessed for the following key visual receptors:

- Pedestrian and vehicular traffic passing the Project on Talavera and Khartoum Road; and
- Employees and visitors to mixed use commercial buildings surrounding the site.

A high-level discussion regarding the change in views from residential receptors in apartment blocks or workers in high rise commercial buildings is also included in Section 4.4.5.

4.3 Representative viewpoints

Four viewpoints have been chosen to represent the change in views from publicly accessible areas due to the Project. These are shown in Figure 4.4. The rationale for choice of viewpoints is as follows:

- **Viewpoint 1: 8 Khartoum Road**
  This viewpoint was selected to represent the change in views seen from the footpath in front of 8 Khartoum Road. The viewpoint also approximates views seen from this building, which is the head office of Fuji Xerox and also houses a bakery café at street level.
- **Viewpoint 2: Intersection of Khartoum and Talavera Roads**
  This viewpoint was selected to illustrate the change seen by pedestrians on Khartoum and Talavera Roads.
- **Viewpoint 3: 40-52 Talavera Road**
  This viewpoint was selected to represent the change in views seen from the footpath adjacent to the Gate A entry to 40-52 Talavera Road. The viewpoint also approximates the view seen from within the property, which contains several commercial enterprises such as Edwards Lifesciences and a childcare centre.
- **Viewpoint 4: Talavera Corporate Centre**
  This viewpoint was selected to assess the change in view from the footpath at 26 Talavera Road adjacent to the pedestrian entry to the site. The viewpoint will also approximate the change in views seen from within the centre, which houses several commercial offices.

Of the above viewpoints, one was selected from which to produce an artists impression of the changes (Viewpoint 3). This viewpoint lies directly opposite the street frontage of the Project and would receive views to the changes from close proximity. It is anticipated that views to the Project from the other viewpoints would be substantially screened by built form and vegetation (both existing and approved within M_Park). Receptors from all viewpoints were not anticipated to be particularly sensitive, and no increased sensitivities or values (examples of which are listed in Section 2.1.6) were identified which would have required the creation of artists impressions to illustrate the changes.

There are no parks or public recreational locations that would see changes in the view to the Project. While receptors at other locations may potentially see changes, these would be from private property rather than from public areas. These locations include:

- From within buildings to the south and west of the Project, e.g. the Kennards Self Storage centre (refer Figure 4.3);
- From upper floors of tall residential apartment blocks within the study area; and
- From upper floors of tall commercial developments within the study area.

A general discussion of potential changes to views from these locations is included in Section 4.4.5.

Figure 4.3 The eastern façade of the Kennards Self Storage centre which faces the Project (Source: M_Park architectural package for the amended DA)

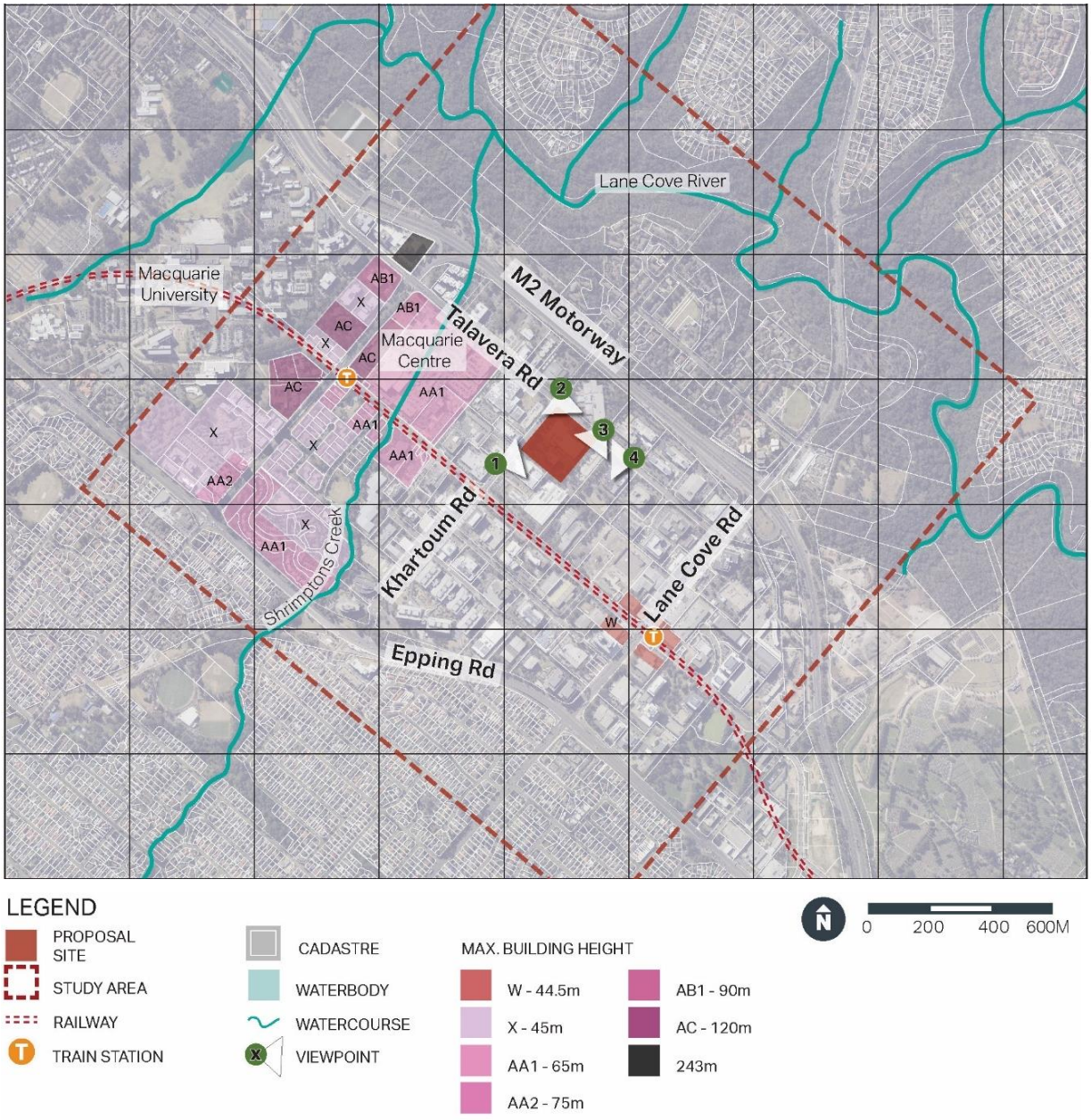

Figure 4.4 Representative viewpoints for visual impact assessment and nearby building height (Source: AECOM)

4.4 Assessment of viewpoints

4.4.1 Viewpoint 1: 8 Khartoum Road

Receptors

Receptors at this location include:

- commuters and passers-by (pedestrians, cyclists, motorists) on Khartoum Road; and
- employees and visitors to 8 Khartoum Road, a 6-storey commercial building with a café at street level.

Existing view

This view is taken from the south-eastern corner of 8 Khartoum Road, Macquarie Park, looking south towards the Project (refer Figure 4.5). Key elements within the view include:

- The Khartoum Road corridor. The verge comprises a concrete footpath with turf. No street trees lie within the public road corridor, but rather within private lot frontages. The road verge also contains signage, parking meters, street lighting and a bus stop;
- The road pavement on Khartoum Road, comprising a single traffic lane in either direction with cars parked on either side of the road;
- The existing commercial development on the southern side of the road (Macquarie Technology Park), including landscaped grounds with mature trees (predominantly Eucalypts), clipped hedging of different foliage colours and accent plants (Gymea Lily) positioned within the clipped hedges;
- Entry driveways to private roads within the lots include access to internal parking areas. Signage and advertising banners are positioned close to the verge, while fencing, minor signage and boom gates are positioned back from the street frontages; and
- Commercial buildings are set back from the road and comprise multi-storey buildings (2-storey and over) set within the landscaped grounds. The built form is partially screened by informally positioned mature trees and garden beds within the front setbacks of the lots.

Figure 4.5 The existing view south towards the Project from the viewpoint (Source: AECOM)

Sensitivity

Factors contributing to the sensitivity of receptors from this location would include:

- Receptors experiencing the view at this location would be passers-by on Khartoum Road and employees or visitors to 8 Khartoum Road. The bakery café situated within 8 Khartoum Road is positioned below street level of Khartoum Road, fronting onto the side street;
- Receptors at this location are unlikely to have their attention focussed on the view from this viewpoint, as they would be passing the location on foot or by vehicle or would be entering or exiting the nearby commercial building;

- People at their place of work are more likely to have their attention focussed on their daily activities rather the landscape of their surroundings;
- The value attached to the view experienced is anticipated to be low as this area is a business park. It does not have recreational or heritage value;
- The visual amenity of landscape within private lots in the area is of a high quality, with mature trees and shrubs being the primary element within the views along the roads. This mature landscaping visually minimises the built forms within this area, providing receptors with a softened, green street outlook.

For the reasons outlined above, the sensitivity of visual receptors to the proposed change in this view, are assessed to be Low.

Anticipated change in view

The view to the Project from this viewpoint would change significantly once M_Park has been developed. However, this change would primarily be due to the overall M_Park built form and landscaping positioned to the north of the Project rather than due to the Project itself.

The M_Park development would be seen on the opposite side of the road replacing the existing Macquarie Technology Park, with some mature trees to the left of the existing driveway preserved on site. The viewpoint is positioned opposite a proposed 14.5 m wide road between Building A and the central landscaped area north of Building C, where a view along this roadway and through to the Project could be obtained (refer Figure 4.6).

A small portion of the Project would be seen in the background of the view and only along this proposed road corridor. Most of the bulk of the built form of the Project would be screened from view by Building A, Building C and D, and landscaping along the 14.5 m road, within the central courtyard and along the pedestrian pathway north of the Project within the M_Park development. Additional landscaping (including trees) would be seen on the elevated landscape structure of the Project along the northern edge of the building. This would further reduce the bulk of the building seen from this observer location and provide additional greenery seen along the Project boundary edge.

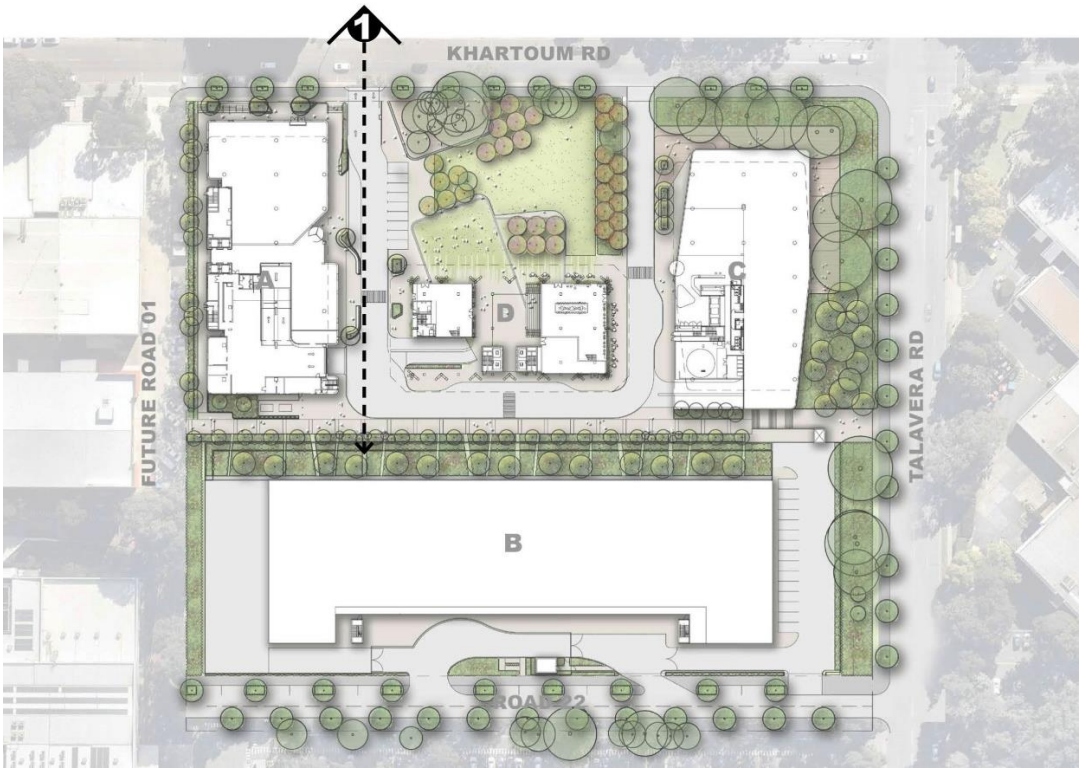

Figure 4.6 The Project would be seen along the proposed 14.5 m wide road corridor in M_Park (Base image source: Site Image Landscape Concept for M_Park, amended by AECOM to show approximate viewpoint location)

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the Project include:

- The scale of the Project would be larger than the scale of the existing built form within Macquarie Technology Park but would be similar in size to the proposed buildings within M_Park. The Project would comprise the replacement of an existing building within the view;
- The Project would be mostly screened by built form and landscaping within M_Park and would be seen in the background of the view. It would not comprise a visually dominant element within the view from this location;
- The change would be only visible within a small proportion of the view and would be difficult to see by receptors passing the site at speed;
- Receptors seeing the view from upper storeys of 8 Khartoum Road would receive similar views to the Project as receptors on the ground as the building is shorter than that proposed within M_Park (i.e. receptors would not see over M_Park buildings A, C and D to the roof of the Project);
- The duration of the change would be long term with no chance of reversibility.

Due to the above, the magnitude of change for this viewpoint has been assessed as Low.

Overall Assessment

Overall, the change in the view seen by receptors from this viewpoint has been assessed as Low (Neutral). The Project would comprise a small portion of the view, with glimpse views seen between buildings and landscaping within M_Park. The change is deemed Neutral as the Project would not increase nor decrease the quality of the visual amenity from the viewpoint.

4.4.2 Viewpoint 2: Intersection of Khartoum and Talavera Roads

Receptors

Receptors at this location include commuters and passers-by (pedestrians, cyclists, motorists) travelling southwards on Talavera Road.

Existing view

From this viewpoint the receptor gets views both south along Talavera Road and west along Khartoum Road (refer Figure 4.7). The foreground of the view includes the intersection of these two roads, including the road pavement, traffic lights and passing traffic. The turfed verge and footpath are visible in the middle ground, including signage and light poles.

The blocks on the southern side of the intersection each contain a business park development with a large, low, multi-storey building set within landscaped grounds. Each have informal scattered native trees (predominantly eucalypts and casuarinas) with an understorey of shrubs and grasses.

The view along both Talavera Road and Khartoum Road is fringed with mature native trees within the private lots rather than the road reserve. These trees and associated landscaping within each block create a ‘bushy’ character, helping to screen the built form within each block.

Figure 4.7 The existing view from the viewpoint looking south along Talavera Road (left of frame) and west along Khartoum Road (right of frame) (Source: AECOM)

Sensitivity

Factors contributing to the sensitivity of receptors from this location would include:

- Receptors experiencing the view at this location would be passers-by on Talavera Road and Khartoum Road at this location;
- Receptors at this location are unlikely to have their attention focussed on the view from this viewpoint, as they would be passing the location on foot or by vehicle. They would get views from this location as they passed;
- The value attached to the view experienced is anticipated to be low as this area is a business park. It does not have recreational or heritage value;
- The visual amenity of landscape within private lots in the area is of a high quality, with mature trees and shrubs being the primary element within the views along the roads. This mature landscaping visually minimises the built forms within this area, providing receptors with a softened, green street outlook.

For the reasons outlined above, the sensitivity of visual receptors to the proposed change in this view, are assessed to be Low.

Anticipated change in view

As experienced at Viewpoint 1, the view to the Project from this viewpoint would change significantly once M_Park has been developed. However, this change would be due to the overall M_Park built form and landscaping positioned to the north of the Project rather than due to the Project itself.

The M_Park development would be seen on the opposite side of the intersection replacing the existing Macquarie Technology Park. Mature trees on the corner of the block would be retained and integrated into the landscaped edge surrounding Building C, which would be the closest building within M_Park to this viewpoint (refer Figure 4.8). Views to the built form of the Project would be screened by Building C and proposed landscaping along Talavera Road (including the retained existing trees).

Due to the height of Building C and the lower level on which the Project would be constructed, it is unlikely that even the roof of the Project would be seen from this location. Landscaping along Talavera Road adjacent to the Project (including the retention of existing mature trees) would appear as a continuation of the green landscaped edge along the road corridor and would not be discernible as a new feature within the landscape.

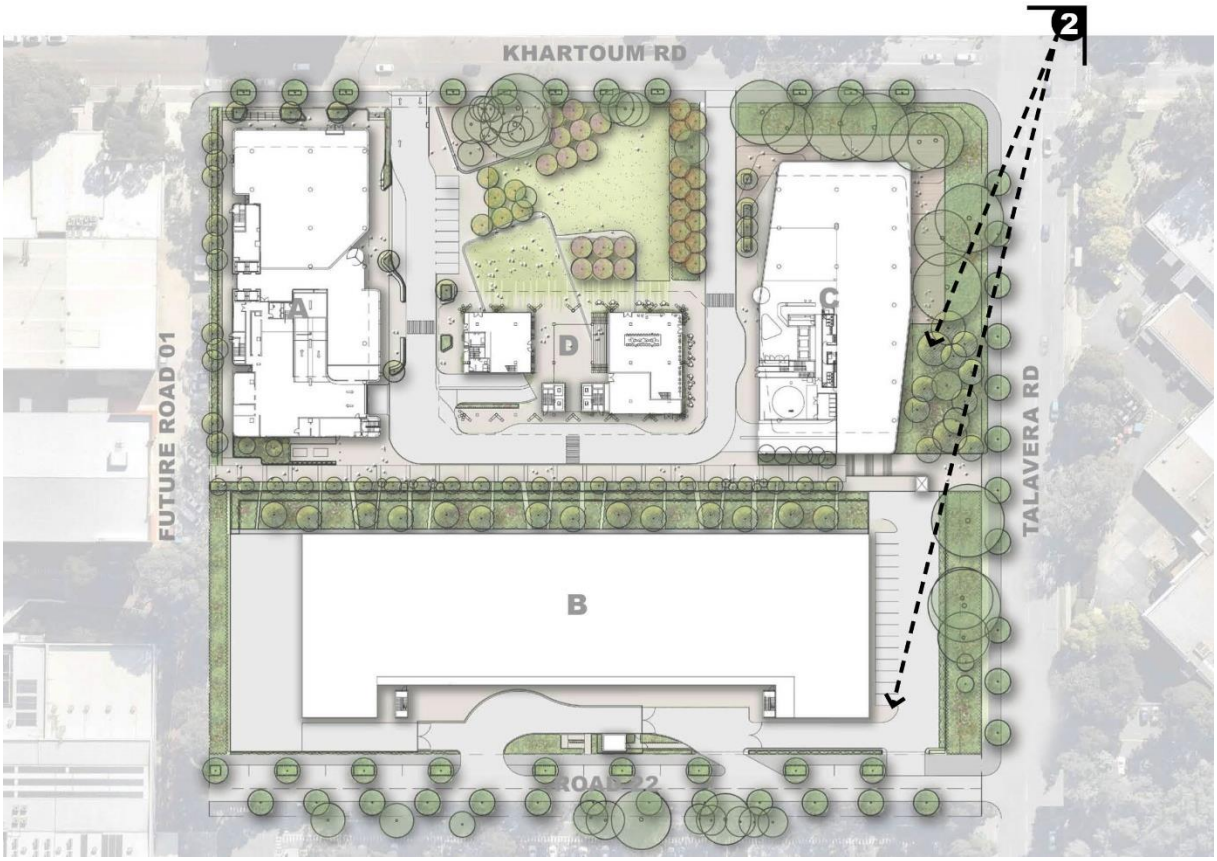

Figure 4.8 The view to the Project would predominantly be screened by Building C within M_Park and landscaping (including retained trees on Talavera Road) (Base image source: Site Image Landscape Concept for M_Park, amended by AECOM to show approximate viewpoint location)

Magnitude of change

As the built form of the Project would not be seen from this location and the landscaping would appear as a replacement of similar green edging to the road corridor, the magnitude of change is considered Negligible from this viewpoint.

Overall Assessment

Overall, the change in the view seen by receptors from this viewpoint has been assessed as Negligible. The built form of the Project would not be seen from this viewpoint and the retention of trees and replacement of landscape adjacent to the Project would not be noticeable from the viewing distance. The change is deemed Neutral as the Project would not change the quality of the visual amenity from the viewpoint.

4.4.3 Viewpoint 3: 40-52 Talavera Road

Receptors

Receptors at this location include:

- commuters and passers-by (pedestrians, cyclists, motorists) on Talavera Road; and
- employees and visitors to 40-52 Talavera Road, which includes several businesses within the single large building on the site.

Existing view

This viewpoint is positioned adjacent to Gate A leading into 40-52 Talavera Road and is the closest public viewpoint to the Project. The view west from the eastern footpath includes the road corridor and verge in the foreground (refer Figure 4.9). The road comprises two through lanes with metered parking on either side.

The vehicular entry point to the site is positioned opposite the viewpoint, the driveway provides a view along the internal road south of the existing building.

Landscaping is seen in the middle ground of the view, with a border of clipped hedges and accent plants (Gymea Lily) adjacent to the road verge. Mature trees are scattered throughout the site providing shade within the car park between the landscaped edge and the building, and partially screening the building from view.

The building is seen within the site and appears as a long, low form. Hedging is seen banding the batter up to the ground floor of the building.

Figure 4.9 Panorama of the existing view looking west from the viewpoint towards the Project (Source: AECOM)

Sensitivity

Factors contributing to the sensitivity of receptors from this location would include:

- Receptors experiencing the view at this location would be passers-by on Talavera Road and employees or visitors to 40-52 Talavera Road. The commercial building within the site has several office windows that overlook Talavera Road, although the building is set down from the street level and the landscape contains mature trees that may partially screen the view to the road corridor and beyond;
- Receptors at this location are unlikely to have their attention focussed on the view from this viewpoint, as they would be passing the location on foot or by vehicle or would be entering or exiting the nearby commercial building;
- People at their place of work are more likely to have their attention focussed on their daily activities rather the landscape of their surroundings;
- The value attached to the view experienced is anticipated to be low as this area is a business park. It does not have recreational or heritage value;
- The visual amenity of landscape within private lots in the area is of a high quality, with mature trees and shrubs being the primary element within the views along the roads. This mature landscaping visually minimises the built forms within this area, providing receptors with a softened, green street outlook.

For the reasons outlined above, the sensitivity of visual receptors to the proposed change in this view, are assessed to be Low.

Anticipated change in view

From this location the Project would be clearly seen on the opposite side of Talavera Road to the viewpoint. A view along Road 22 would be seen, with landscaping along the southern side of the road (refer Figure 4.10 and Figure 4.11). The dark palisade fencing and entry point, signage, lighting and landscaping would be seen replacing the existing open landscaped site, with the data centre building rising from within the hardstand area inside the site.

The built form is much taller than the existing development but would be partially screened by existing trees preserved within the frontage.

To the north of the Project would be the remainder of the M_Park development. Landscaping would be seen along Talavera Road, including mature trees preserved along the property boundary partially screening the proposed Building C. Building C and the Project would screen Buildings D and A from view from this location.

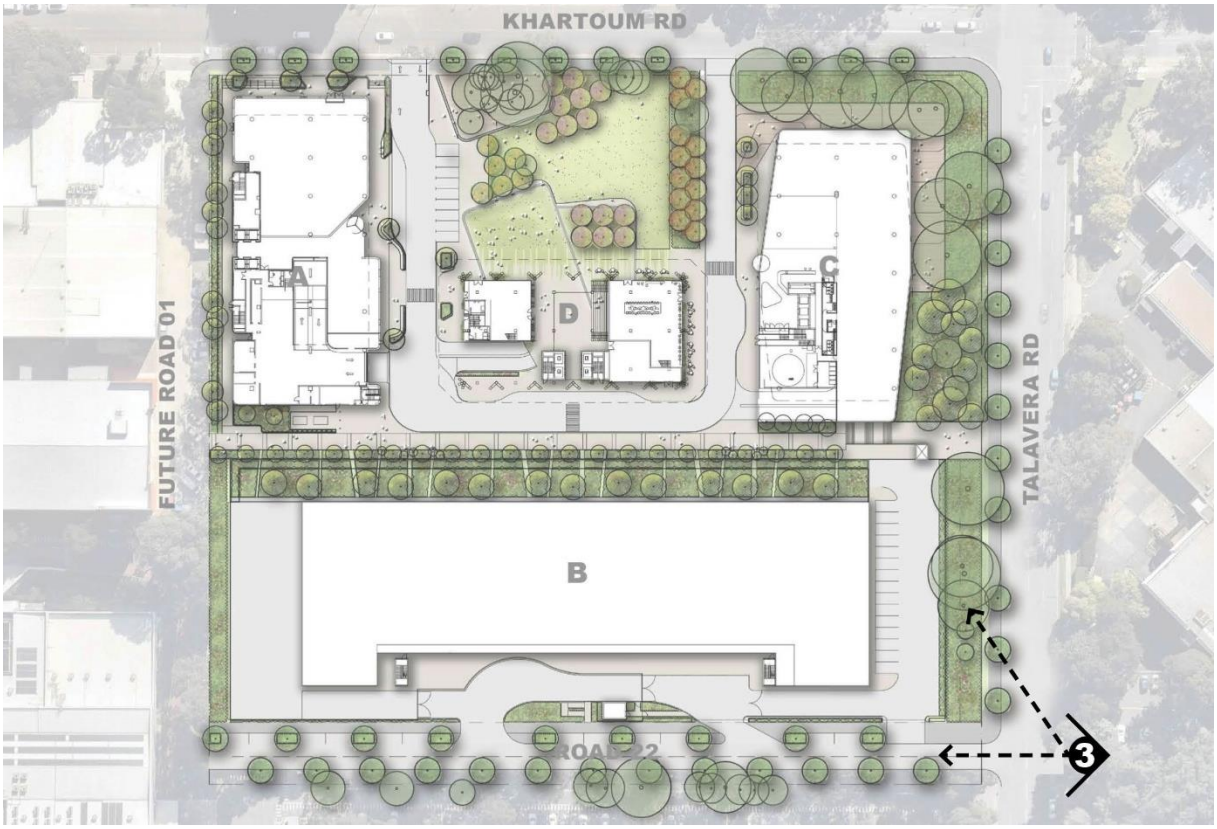

Figure 4.10 The Project would be seen from close proximity but be partially screened by retained trees on Talavera Road. (Base image source: Site Image Landscape Concept for M_Park, amended by AECOM to show approximate viewpoint location) Refer Figure 1.10 for landscape plan showing taller shrub planting on Talavera Road frontage

Figure 4.11 A photomontage showing the change in the view due to the Project (subject to further detailed development) (Source: AECOM)

This viewpoint is the only viewpoint where lighting within the site would be clearly seen at night. Tall, directional lighting would light the hardstand area surrounding the site rather than up-lighting the façade. This would result in the bulk of the building visually receding at night, but the parking area surrounding the building being illuminated similar to that within other commercial properties within Macquarie Park.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the Project include:

- The size of the built form of the Project would be taller than the existing development, resulting in the addition of a feature to the landscape. This proposed bulk and scale of the building would be similar to that within M_Park and also to that of other newer developments in the area, including built form within Macquarie Square, currently under construction;
- The Project would be visibly separated by security fencing around the perimeter of the site with less landscaping than existing developments in the area. The dark palisade security fencing would be a change to the open, unfenced existing condition, but would be positioned behind planting and an existing row of trees, which would reduce the visibility of the fencing from the street. The fencing, while a new element along this site frontage, already exists in the surrounding area, including a development on the north-eastern corner of the intersection of Talavera Road and Khartoum Road and the development two properties south of the proposed site. In both instances the fencing is set back from the road verge with landscaping (refer Figure 1.15 and Figure 4.12);
- Due to the height of the Project, the built form would be less easily screened by trees (both existing retained trees and proposed trees within the frontage of the site) than the existing built form;
- The Project would be viewed at close range by receptors, however, receptors that would get the closest views to the Project at this viewpoint would be passing the site either on foot or by car and would therefore only get a short view of the changes;
- The Project is not unlike many newer developments within the area, which tend to be taller than existing older developments;
- The Project would take up a substantial proportion of the view seen by passers-by, but a smaller portion of the view from within 40-52 Talavera Road, which would also be screened by perimeter vegetation within the development;
- The duration of the change would be long term with no chance of reversibility.

Due to the above, the magnitude of change for this viewpoint has been assessed as Moderate.

Overall Assessment

Overall, the change in the view seen by receptors from this viewpoint has been assessed as Moderate to Low. The Project would be seen as a new element within the view at this location. The scale of the building is larger than the existing building on the site and would (unlike the existing development) be fenced with security fencing and contain little landscaping within the boundary. However, the scale of the Project would not be unlike other newer developments within the area, would be situated within a low point on Talavera Road, and would be partially screened by some mature trees retained along the boundary. Landscaping within the building frontage would screen part of the development from the road corridor.

The change is deemed Neutral as the Project would not increase nor decrease the quality of the visual amenity from the viewpoint.

4.4.4 Viewpoint 4: Talavera Corporate Centre

Receptors

Receptors at this location include:

- commuters and passers-by (pedestrians, cyclists, motorists) on Talavera Road; and
- employees and visitors to Talavera Corporate Centre, which includes several businesses within several large buildings on the site.

Existing view

The view from this viewpoint comprises a view along Talavera Road to the north (refer Figure 4.12) towards the Project from the footpath adjacent to the pedestrian entry to Talavera Corporate Centre.

The road corridor, including the footpath and turfed verge, road pavement and opposite verge, comprise the foreground of the view. Opposite the viewpoint on the western side of Talavera Road a commercial property is seen, with the landscaping (a mix of mature and juvenile trees and understorey planting of grasses) partially screening the view to the building. The building is a large, approximately three storey boxy form with few windows and a large blue feature wall fronting the road corridor. Black security fencing surrounding the site is set back from the road verge behind a landscaped strip and partly engulfed by a Syzygium hedge. The hedge reduces the visual prominence of the fencing from the street.

The view along Talavera Road to the north is framed by large mature trees and landscaped lot frontages. The Project site lies close to a low point in the road.

Talavera Corporate Centre is similar to the M_Park development in that it contains several large commercial buildings set within the site, although the M_Park development provides more landscaped open space while the Talavera Corporate Centre provides more at-grade parking opportunities.

Figure 4.12 The existing view from the viewpoint north along Talavera Road (Source: AECOM)

Sensitivity

Factors contributing to the sensitivity of receptors from this location would include:

- Receptors experiencing the view at this location would be passers-by on Talavera Road heading north and employees or visitors to the Talavera Corporate Centre at 26 Talavera Road. Buildings within the centre are set back from the road by landscaping and car parking;
- Receptors at this location are unlikely to have their attention focussed on the view from this viewpoint, as they would be passing the location on foot or by vehicle or would be entering or exiting the nearby commercial buildings;
- Receptors in the top floors of the buildings within the centre are likely to have clear views over the tree tops to the Project due to the elevation of and orientation of the buildings, however people at their place of work are more likely to have their attention focussed on their daily activities rather the landscape of their surroundings;
- The value attached to the view experienced is anticipated to be low as this area is a business park. It does not have recreational or heritage value;
- The visual amenity of landscape within private lots in the area is of a high quality, with mature trees and shrubs being the primary element within the views along the roads. This mature landscaping visually minimises the built forms within this area, providing receptors with a softened, green street outlook.

For the reasons outlined above, the sensitivity of visual receptors to the proposed change in this view, are assessed to be Low.

Anticipated change in view

Looking north along the road corridor receptors are likely to seen the addition of the Project building behind a large amount of existing (retained) tall vegetation both on Talavera Road and within the neighbouring commercial properties (refer Figure 4.13).The top of the project building would be potentially seen poking out above the canopy of the trees.

The front façade of the proposed building would be unlikely to be seen along Talavera Road due to the retention of trees and the proposed landscaping fronting the Project, with the landscaping seen as a continuation of the band of trees and shrubs along Talavera Road.

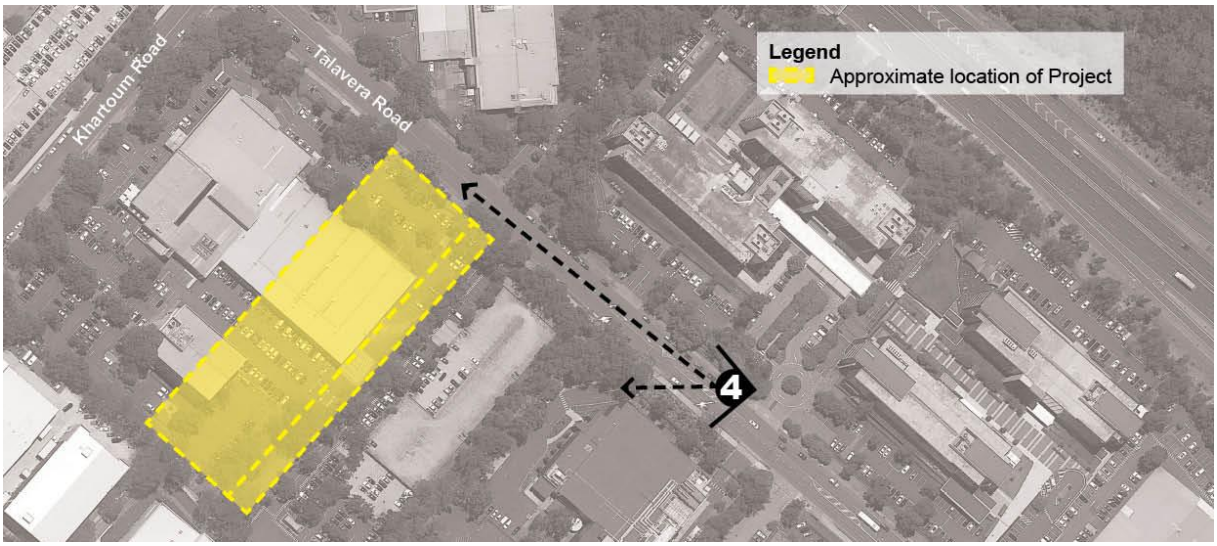

Figure 4.13 The Project would be seen partially screened by existing (retained) trees on Talavera Road and surrounding neighbouring properties (Source: AECOM)

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the Project include:

- The scale of the Project would be larger than the scale of the existing built form within Macquarie Technology Park. The Project would comprise a new building within the view, however, only the top portion of the building would be seen poking above the existing trees on Talavera Road and within neighbouring commercial properties;
- The Project would be mostly screened by built form and landscaping within M_Park and would be seen in the middle to background of the view. It would not comprise a visually dominant element within the view from this location;
- The change would be only visible within a small proportion of the view and would be difficult to see by receptors passing the site at speed from this location;
- Receptors seeing the view from upper storeys of the Talavera Commercial Centre would potentially receive clear views to the Project over the treetops. These views would be seen from moderate distances and within the context of the greater business park surrounding the Project. It would not be an unusual addition to the view in terms of building form or scale;
- The duration of the change would be long term with no chance of reversibility.

Due to the above, the magnitude of change for this viewpoint has been assessed as Low.

Overall Assessment

Overall, the change in the view seen by receptors from this viewpoint has been assessed as Low. The Project would comprise a new element but within a small portion of the view, with glimpse views seen above the existing tree line from the public footpath. The Project would be more clearly seen from upper storeys of buildings within the Talavera Corporate Centre but would not be an unusual built form or scale within the context of the overall Macquarie Park business park area. The project would be

seen from a moderate distance. The change is deemed Neutral as the Project would not increase nor decrease the quality of the visual amenity from the viewpoint.

4.4.5 Views from nearby private high-rise developments

Within Macquarie Park there are several areas where tall mixed use and residential developments have been constructed. These areas typically lie at the outskirts of the Macquarie Park area: along the Epping Road corridor, along the M2 Motorway, and along Herring Road. These buildings lie within 500 m and 1 km of the Project.

Residents and workers within apartments and offices orientated towards the Project would get views to the Project, with the built form of the Project seen poking above the surrounding mature trees within and around the site.

Receptors viewing the Project from the north would likely as not only see the roof of the proposed data centre as the building would predominantly be screened by the rest of the built form within the M_Park development.

Receptors viewing the Project from the south would get a clearer view of the top of the southern façade of the building poking above the existing tree line and the remainder of the M_Park development behind the building.

All receptors seeing views to the project would be viewing this change in the view from moderate to far distances away. The Project would be a small change within the greater view and would only occupy a very small portion of that view due to viewing distance and potential elevation of the receptor. The Project would be seen as a new building similar in scale to a number of new buildings within the view, such as buildings within Macquarie Square development on Waterloo Road (refer Figure 3.6), which are currently under construction.

The change in view due to the Project seen by these receptors is considered to be minor given the above considerations.

5.0 Summary and Mitigation of Impact

5.1 Summary of visual impact

Changes to the view from public places due to the Project would only occur along Talavera Road and Khartoum Road within the vicinity of the Project. Four viewpoints were used to assess the impact to visual amenity due to the Project and found that the changes resulted in assessments between Negligible to Moderate to Low, as shown in Table 5.1.

Table 5.1 Summary of visual impact assessment ratings

Viewpoint	Sensitivity	Magnitude	Overall rating	Qualitative assessment
Viewpoint 1: 8 Khartoum Road	Low	Low	Low	Neutral
Viewpoint 2: Intersection of Khartoum Road and Talavera Road	Low	Negligible	Negligible	Neutral
Viewpoint 3: 40-52 Talavera Road	Low	Moderate	Moderate to Low	Neutral
Viewpoint 4: Talavera Corporate Centre	Low	Low	Low	Neutral

The highest rating was returned from Viewpoint 3: 40-52 Talavera Road. This was due to the higher magnitude of the change than the sensitivity of the receptors, the close proximity of the Project to the viewpoint (directly opposite the road) and the change in height of the Project built form from the existing built form on the site were important factors relating to this rating.

While the Project would be visible from several tall residential and commercial buildings within a 1 km radius of the Project, the change is considered to be minor due to the small proportion of the change within the overall views seen by these receptors, and the scale and form of the Project being similar to other buildings (primarily newer developments) in the area which would also be seen within these views.

5.1.1 The Project within the approved M_Park development

The change in design between the approved and proposed M_Park development includes the reduction of buildings from 5 to 4 and the reconfiguration of buildings within the site (refer Figure 5.1).

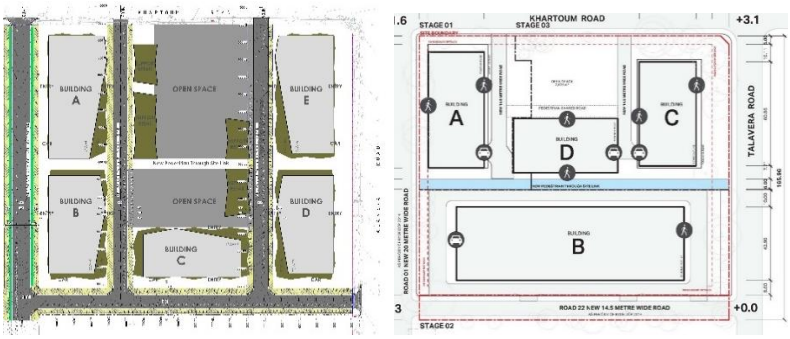

Figure 5.1 The comparison in the approved building arrangement of M_Park (left) with the proposed (right) (Source: Stockland)

While the changes appear (particularly in plan) as an increase in the bulk and scale of built form within the site, from publicly accessible areas (i.e. Khartoum Road and Talavera Road) the change would be less apparent and comprise the following:

- from Khartoum Road the frontages of buildings in the north east and north west corners of the site remain, separated by an internal open space;
- the open space between these buildings would be visually 'shortened' when viewed from Khartoum Road by the shifting of the building in the central portion of the site northwards, resulting in the placement of Building D in the proposed plan;
- Building B in the proposed plan would be predominantly screened by Buildings A, D and C from Khartoum Road and a landscape buffer along the northern edge of Building B, as discussed in section 5.1;
- from Talavera Road the building frontages seen would be similar in both approved and proposed plans, with the majority of the bulk of the proposed Building B positioned behind the 'short' façade of the building (i.e. the building is viewed along its shorter frontage);
- Building B is positioned further back from Talavera Road than the approved plan, resulting in the retention of existing mature trees which would partially screen the building from the road and visually reduce the bulk and scale of the building.

For these reasons, it is considered that the change in building number and arrangement from the approved to proposed development design within M_Park would not result in a large change to the visual amenity of the site from the public realm.

5.1.2 M_Park within Macquarie Park

Macquarie Park has undergone steady development to become a commercial and economic hub within Sydney. Many corporate headquarters are located within the suburb resulting in the area having a reputation for its high-tech industrial business. The Macquarie Investigation Area is currently the focus of a study being conducted by the NSW Department of Planning, Industry and Environment to deliver a high-level strategic master plan, indicating that the area could be subject to further change.

The area surrounding the Project comprises large scale large development lots arranged within a wide street grid. Development lots typically contain several multi storey commercial buildings set within landscaped grounds with onsite parking.

The arrangement of large buildings within a landscaped 'park' setting is typical of existing campuses in Macquarie Park. While it is typically larger than the older buildings in the suburb, Building B positioned within M_Park is considered similar in scale and bulk to other newer developments, such as the Macquarie Square development on Waterloo Road (refer Figure 3.6). Within this context, the Project within the greater M_Park development is considered visually appropriate.

5.2 Mitigation measures

While the Project results in the addition of a feature within the landscape, the considerably low ratings of visual impact are related to the following:

- The retention of trees along Talavera Road assist in partially screening the proposed built form, helping to 'bed down' the data centre into the landscape;
- The inclusion of screening shrubs within the frontage of the building on Talavera Road reduce the visual prominence of the security fencing and partially screen and soften the building from the public realm;
- The provision of the elevated landscape structure along the northern side of the site, which would visually soften and screen the built form when viewed from the north (including from within M_Park);
- Proposed landscaping along Road 22 and Talavera Road includes trees that, when mature, will reduce the visual scale of the building from the public realm as well as from private properties surrounding the Project site;
- The articulated façade design reduces the visual scale of the building; and
- The lighting of the site at the boundary with downward facing lights reduces the visual prominence of the building at night.

Detailed design has not yet begun on Road 22. The inclusion of street trees on both sides of the 14.5 road (rather than one side as indicated within the amending DA documents) would further reduce the visual prominence of the proposed data centre.

5.3 Conclusion

The Project would be seen as one change within the greater M_Park development, which would overall comprise the replacement of one large, low commercial building with three taller buildings on the northern portion of the site and the proposed data centre on the southern, lower portion of the site. The proposed data centre would visually comprise its own element within M_Park due to the change in levels (the northern three buildings framing an internal landscaped open space are positioned at a higher level) and the security fencing preventing public access to the Project.

With M_Park comprising the replacement of one building for four taller ones, the Project would visually result in the addition of an element within the existing view. However, due to the excavation of the Project (positioning the building at a lower level), the retention of trees surrounding the site, the position of the Project within a low point in the landscape and the high number of tall, mature trees in the area results in the Project having very few places where it can be seen from the public realm. The Project would only be seen from Khartoum Road and Talavera Road, with the viewpoint directly opposite the Project on Talavera Road the only publicly accessible place that would get clear views to it. Once constructed, the Project would also be seen from the new public roadways: Road 01 and Road 22, but would not be a ‘change in the view’ from these locations as their construction is dependent on the construction of the overall M_Park development, within which the Project is positioned.

The Project is similar in scale and design to other developments within Macquarie Park, including the boxy form and security fencing of the development on the north-eastern corner of the intersection of Talavera Road and Khartoum Road, and the scale of buildings within Macquarie Square, which are under construction. Within this context the Project is considered visually acceptable within the business park.

Overall, the Project is considered to be appropriate with regard to potential effects on visual amenity.