3 Vision

3.1 Vision

A vision was defined as part of the REF process for the Project. This vision has been refined to reflect the role of Country in the design process and the role of the interchange as a gateway not just to Wollongong but also to the greater South Coast.

"Through a Country led design the Project should create a strong identity as the northern gateway to Wollongong, the Illawarra region and the South Coast, establishing a safe and legible interchange, well integrated within its context"

3.2 Narrative

The design narrative has been further developed from the REF Appendix G Urban Design Concept. It is based on the vision, objectives and principles outlined in the Princes Highway Urban Design Framework (PHUDF) and the REF Urban Design Objectives but these have modified slightly to suit the current Project requirements prepared after the REF determination.

The focus of this narrative is on the topographic context of the site - a roadway that is juxtaposed between the escarpment and the water and explores themes which celebrate and acknowledge this unique setting. While the coast is nearby, the Project's design will not focus on this as there is separation between the Project and the coast at this point of the journey.

3.3 Statement of objectives and principles

3.3.1 Princes Highway Urban Design Framework Objectives

Table 1: Princes Highway UD Framework Objectives

Objective	Responses
1. Impart a 'connection to Country' through the journey experience	Connection to Country will form an integral element of the design response and is to be reflected in the landscape and built elements of the site based on a focused consultation and collaborative design process.
2. Create a dynamic interplay between formality and wildness	The celebration of wilderness is to be established through a concentration of vegetation where the built form is juxtaposed and set within the vegetated setting.
3. Emphasise the scale and scenic beauty of the natural landscape	The design response to the setting should seek to mitigate the scale and significance of the infrastructure.
4. Protect and enhance the unique characteristics, culture and heritage of the South Coast	The design response to the setting should seek to promote the natural above the built through the encapsulation of the corridor within.

Figure 31: Wollongong (Source: Dee Kramer Photography)

3.3.2   Project urban design objectives

Table 2: Project UD objectives

Objective	Design principles
1. To provide a highly **legible** and easy to navigate **interchange** with clear visual cues in relation to direction and destination within the interchange.	• Identify the visual hierarchy of structural elements and ensure the design of structures support legibility at the interchange. • Strengthen the visual cues to identify Mount Ousley Road as the northern entry to Wollongong city centre through suitable urban design treatments to retaining walls, noise walls and road safety barriers. • Landscape planting is to strengthen the road hierarchy and legibility, whereby providing visual cues for the M1 Princes Motorway alignment, Mount Ousley Road and entry to the University of Wollongong.
2. To provide **a unique experience through an understanding and response to Country for the entry into North Wollongong** and the CBD from the Motorway, as well as **the greater Illawarra Region and the South Coast**.	• Establish a clear identity for the interchange through the integrated design of the various structural elements and landscape. • Design of the interchange is to relate to, and be inspired by, the culture and history of Wollongong. • Promote the experience of place and maximise views east towards the Pacific Ocean and peripheral views to surrounding areas, which are naturally forested. • Landscape planting is to strengthen the road hierarchy, and legibility whereby providing visual cues for the M1 Princes Motorway alignment, Mount Ousley Road and entry to the University of Wollongong. • To promote a sense of journey and context for motorists. • Provide views out to the distant mountains and Pacific Ocean for pedestrians and cyclists where possible from shared path and bridges.
3. To ensure that **connectivity is enhanced** for pedestrians and cyclists between Mount Ousley, North Wollongong and Keiraville residential areas, and the key land uses of the University of Wollongong and TAFE Wollongong.	• Retain and enhance the accessibility and connectivity between surrounding communities for all users including pedestrians, cyclists and motorists. • Ensure enhanced connectivity to the local road and cycle network from new shared path and footpaths. • Urban design to incorporate Crime Prevention Through Environmental Design (CPTED) principles in the design of structures and planting near paths. • Maximise the visibility of shared paths from adjoining residential areas and from the road to provide passive surveillance. • Ensure the improved connections are safe and comfortable for people to use and respond to natural desire lines. • Optimise vehicle and pedestrian connectivity and legibility to the University of Wollongong and TAFE NSW Wollongong.

Objective	Design principles
4. To ensure that the various **structural and functional elements** – retaining walls, noise walls, bridges, road safety barriers, gantries, fences and arrester beds – **are integrated in design** and contribute positively to the overall identity of the interchange.	• The design of the various structural elements of the interchange should support the overall design intent for the Project. • The design of various structures adjacent to each other should be considered in relation to each other and present an integrated design outcome. • Design of structures to assist in ensuring the road corridor design is self-explanatory, legible and easy to navigate.
5. To ensure that **visual impacts** on surrounding residents, as well as motorists, **are considered and mitigated**, as far as possible, in the design of structures and planting.	• Mitigate visual impacts on the public realm through the considered design of structural elements and the provision of new planting and retention of key established vegetation groupings, where possible. • Maximise space for planting adjacent to new noise walls to screen and soften their appearance and reinstate/reinforce a planted interface towards residential properties. • Rationalise the height and extent of retaining walls and noise walls to reduce the impact on the residential and institutional setting. • Views to the road are to be screened as far as possible from immediate residential areas. • Privacy to residential properties is to be considered in the design of shared paths.
6. To ensure that the character of the **interchange sits well within** the dramatic slopes and natural remnant forests of **the local area**.	• Enhance and reinstate indigenous vegetation - to integrate the Project with the existing setting, enhance the sense of place, restore ecological values and assist in biodiversity protection and recovery. • The design of bridges, noise walls and retaining walls are to maximise and encourage views to the surrounding environment and broader distant views. • Reinforce native planting to disturbed areas to reinforce the sense of place and natural setting. • Design major earthworks and embankments to integrate with the existing natural topography of the setting where feasible.

4 Developing a Connection with Country

4.1 Our Commitment to Country

The area surrounding the Project was originally inhabited by the Wodi Wodi people of the Dharawal Nation and language group.

Transport for NSW and Fulton Hogan recognise and celebrate the diversity of Aboriginal peoples and their ongoing culture, spiritual beliefs and connections to Country.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths on Country that our nation's First Peoples followed for tens of thousands of years.

We are committed to honouring Aboriginal peoples' cultural and spiritual connections to the land, waters and seas and their rich contribution to society.

Fulton Hogan's vision for reconciliation is for active, genuine and respectful engagement with Aboriginal and Torres Strait Islander communities and peoples to support social

and economic equality through employment and procurement in their infrastructure projects and operations. This vision builds upon their community foundations of "creating, connecting and caring for communities."

Figure 32: Celebrations of Country and the sharing of knowledge

4.2 Designing with Country

Infrastructure projects offer an opportunity to celebrate and acknowledge the Aboriginal Country, culture and people of the land on which the Project is delivered. We can acknowledge Country and Aboriginal history through project design including built elements, landscape design, signage, artwork, language and Storytelling.

The Project will significantly improve the appearance and function of a key link between Wollongong and the Illawarra region, and will implement elements to better express the unique character of the coast and escarpment in a 'gateway' experience. The interchange is an opportunity to create a connection with Country that is unique to this place and to this community.

Establishing a connection with Country through pattern, colour, and pictorial elements, integrated thoughtfully into the built environment will enrich the road user experience and contribute to a better understanding of place and culture. This will also be reflected in the Projects landscape design which will create and enhance a feeling of connect with the surrounding environment.

The Project will deliver an integrated strategy to provide a connection to Country includes working with local Aboriginal knowledge holders and groups to:

• Understand stories, Songlines and topographic elements to inform opportunities to interpret these with artwork in the design of structural elements (including retaining walls, noise walls and safety screens), landscape design and signage

• Identify the colours and textures of the landscape and geology for opportunities to incorporate in structural elements to complement and enhance the experience of the natural environment

• Inform the Project landscape design with consideration of the seasonal landscape, flowering times, sentinel trees and native species.

Worldwide, art in infrastructure has proven its value as a cultural connective tissue; enriching communities, generating identity, stimulating economic development, building cultural capital. In recent years Sydney has joined the growing list of cities realising these benefits from meaningful cultural place-making in infrastructure projects. Projects like Sydney Gateway, M4-M5 Link Tunnel Ventilation Building façade, and the Canal to Creek public art program (M5/M8) which have involved the curation of artwork by Cultural Capital. Cultural Capital have been integrated into the team, and will bring the benefit of this experience to the Project.

Through thoughtful engagement of local Aboriginal artists and designers, Cultural Capital will facilitate a creative co-design process with the urban design team that will ensure connection with Country is embedded through the journey experience and can be enjoyed by road users and the community.

The team will engage with local Aboriginal knowledge holders and stakeholder groups, including but not limited to:

- Illawarra Aboriginal Corporation (IAC)
- Coomaditchie United Aboriginal Corporation (CUAC)
- Illawarra Local Aboriginal Land Council (ILALC)
- Illawarra Koori Mens Shed (IKMS)
- Wollongong City Council
- Wollongong University
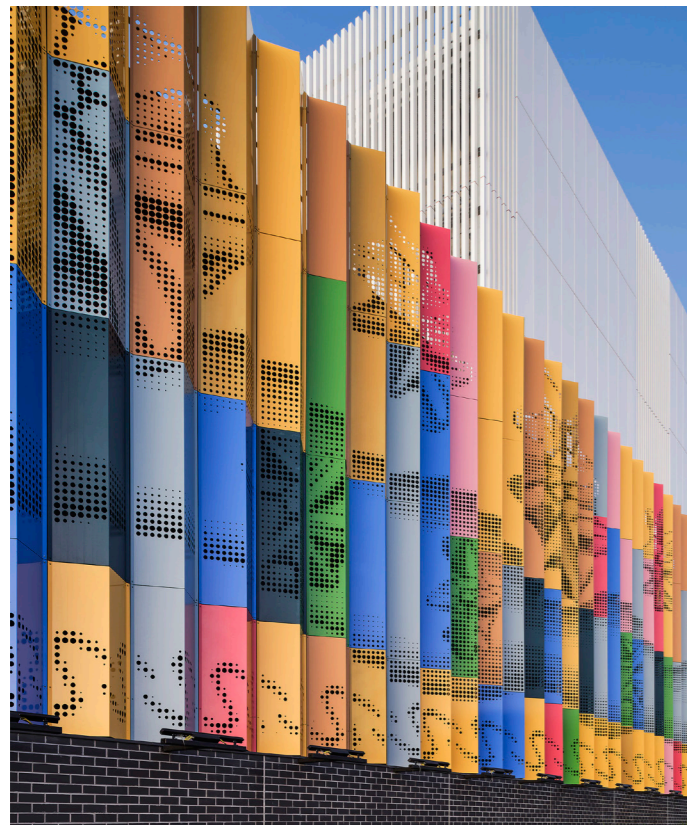- Landcare Illawarra and Wollongong Botanic Gardens.

Figure 33: Campbell Road Ventilation Facility(M4/M5)

4.3 Methodology of integration of Connection to Country

To understand the opportunities which may exist on the Project, we initially need to understand - What is Country and how this may be acknowledgement. This includes:

- Listening and learning
- Expression through landscape responses to heal the land
- Understanding about materiality and its source
- Physical expression of ideas, themes and stories

In developing a methodology for imparting a connection to Country it is first necessary to understand what is Country and how its community wish it to be acknowledged and explored. Flexibility in the implementation of the integrated strategy will be important to ensure that it considers project and operational constraints.

4.2.1 Produce Consultative Integrated Art and Cultural Themes Report

The first step will involve connecting with knowledge holders to listening and learn about the history and culture of the local area and community. Cultural Capital will lead this process.

The team will produce a Cultural Themes Report that summarises the inputs gleaned through consultation with local Aboriginal knowledge holders to clearly document culturally relevant themes, stories, symbols, colours, and textures which are of importance to the community and

may represent an opportunity for interpretation and expression within the Project.

Once themes are recorded a review of these will be undertaken to identify the key themes to be taken forward as part of the design development.

From this point the opportunity to take these ideas and themes forward into the design, their means of expression, and locations will all be agreed. The means of expression forms a critical element of this phase as some ideas and themes may be recorded where others may wish to be implemented as part of the Project in either its built form/elements, landscape design, signage or as an standalone artwork.

4.2.2 Artist Selection and Engagement for co-design process

The team will seek advice from the local Aboriginal knowledge holders and stakeholder groups about potential artists and designers to be invited to tender for this Project. The team will develop a list of local artists and designers through both consultation and independent curatorial research who will be invited to express there interest in the Project by submitting an artist profile and completion a short submission application.

A panel of representatives from the Project and local Aboriginal knowledge holders and stakeholder groups will determine the successful artist/s based on a weighted criteria that is aligned with Project objectives and endorsed by local Aboriginal knowledge holders and stakeholder groups.

4.2.3 Facilitation of Co-design between artists/designers and urban design team

Facilitated by Cultural Capital, the successful artist/s will collaboratively work with the Project team and key stakeholders, using the Cultural Themes Report to develop ideas and concepts that will be the foundations of the integrated connection to Country strategy.

The artist/s will be encouraged to consult with appropriate Aboriginal knowledge holders in the creation of their ideas and concepts. Cultural Capital will assist in this co-design process to ensure alignment between urban designers and the artist/s and champion the artistic integrity of their contributions and the translation of cultural themes from consultation.

The ideas and concepts selected will be handled with a culturally appropriate contract that protects their intellectual property, moral rights and Indigenous Cultural Intellectual Property (ICIP).

4.4   Contextual Opportunities

The team has identified a range of potential opportunities on the Project that may be relevant to the integration of the cultural themes. Implementation of interpretative elements needs to consider a range of scales, speeds, and methods of implementation and expression to enhance the users experience. This includes the landscape or built-form and elements.

The user experience can be perceived in two ways:

1. Driver experience – along the road, that is fast paced, direct movement and a regional scale.

2. Pedestrian / cyclist experience - off the alignment, slow paced, broadscale views, local and regional scales

Potential initiatives include:

· Broadscale landscape treatments seek to re-establish natural communities mitigating impact to natural systems re-vegetating with local communities as an act of respect to Country.

· Interchange planting to explore the use of culturally significant plant species, and colours as part of interpretative process and gateway experience to Wollongong and the Illawarra region.

· Project built elements and landscape present the opportunity to interpret key cultural features incorporating artwork and signage.

· Safety screens present the most flexible element to incorporate artwork without impacting on program, subject to outcomes of stakeholder engagement.

The design team has identified built elements which are visually prominent within the alignment for which a connection to Country could be expressed. These are depicted in the following table.

These potential initiatives are subject to stakeholder engagement outcomes, procurement constraints, and construction program. The use of alternate construction techniques involving integral and applied finishes, will be considered to maximise the involvement of the artist/s in developing the Projects detailed design.

Table 3: Potential Interpretive Art Locations - Visual Prominence Assessment

Location	Built element	Visual Prominence	Installation Method	
Retaining walls				
Main alignment / BR01	RW01A/1B	High	Painted / applied	Face fixed
Mount Ousley Rd	RW02A	Moderate	N/A	N/A
Shared Path/ Service Rd	RW02B	Low	N/A	N/A
Heavy Vehicle Bypass	RW03A/3B	Low	N/A	N/A
Main Alignment (North)	RW04	High	Painted / applied	Face fixed
University Access Rd (Below)	RW05	Low	N/A	N/A
Safety Screens				
	All areas (in general) except over BR03 the heavy vehicle bypass	High	Mesh on mesh/ laser cut system or equivalent	Fixed with tie clips or equivalent
Pathways				
	Shared path areas	High (pedestrian)	Ground plane artworks in pavement, Signage elements	Sand blasting, mosaic, paint etc

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5 Design Strategy

The team has established a framework of four factors to develop the design strategy:

- Strategic context
- Functional hierarchy
- Spatial strategy
- Active transport.

5.1 Strategic context

Further to the objectives and principles established as part of the urban design framework and project specific assessment, the design has looked at the key elements of the Project's strategic context:

Southbound from Sydney, the M1 Princes Motorway corridor cuts through the plateau regions of the upper Illawarra escarpment and the lower foot slopes and plains of Wollongong.

The Project is sited uniquely, encompassed within the well vegetated foot slopes of the escarpment on the bend of the M1 Princes Motorway / Mount Ousley Road corridor, around the spur of Mount Keira, located at the northern fringe of the Wollongong CBD. It is surrounded by the residential neighbourhoods of Wollongong to the north and east, and the education precincts of the University of Wollongong and TAFE NSW Wollongong straddling the motorway to the west and east of the Project respectively.

The escarpment is the key visual element with its intermittent mountains of Mount Keira, Mount Kembla, and Bulli Tops tying the ridge line of the cliff face together like a 'ribbon'.

Framed views of the ocean are experienced along Mount Ousley Road through the vegetated area.
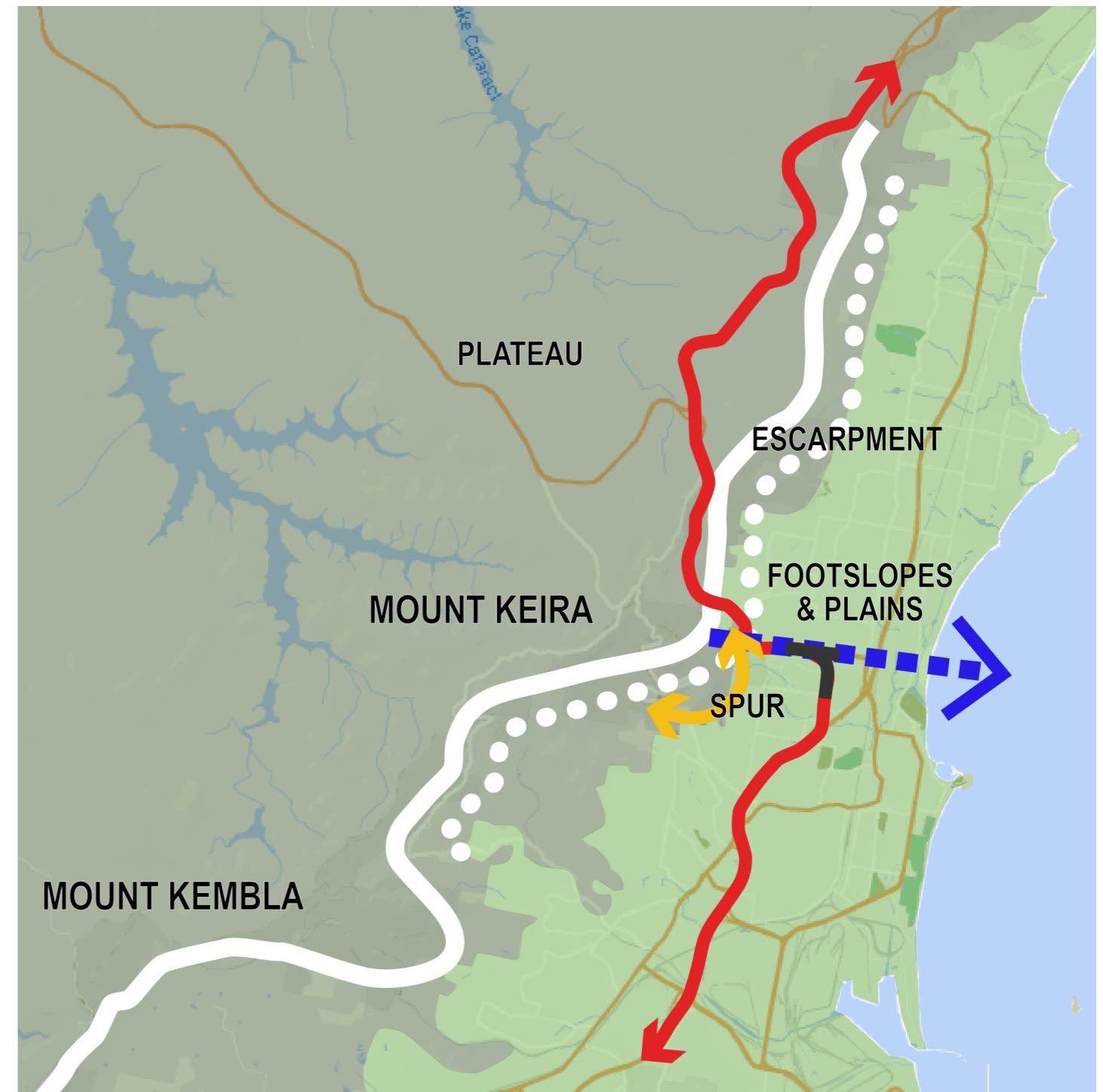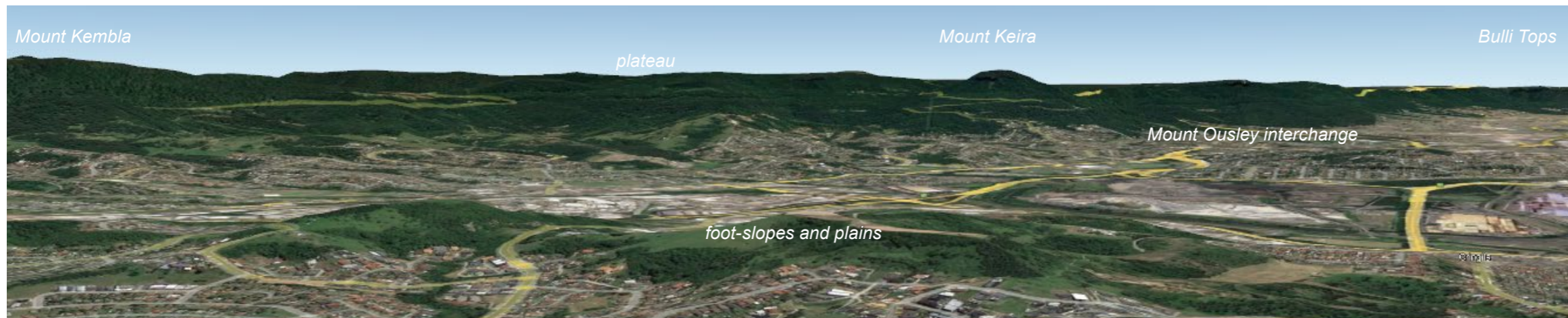

Figure 34: Strategic context

CM⁺

Illawarra escarpment and coastline from Mount Keira lookout
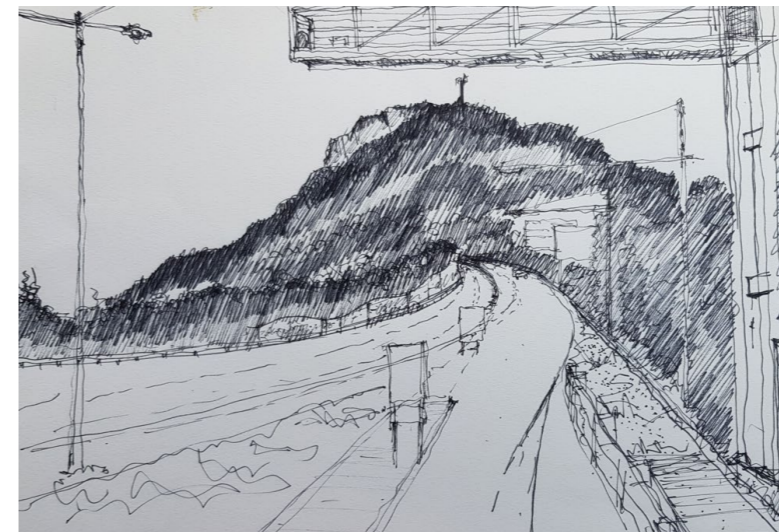

Mount Kembla

Mount Keira

Bulli Tops

plateau

Mount Ousley interchange

foot-slopes and plains

*... a roadway that is juxtaposed
between the escarpment and the water*

5.2   Functional hierarchy

The Project experiences a range of user types of movement patterns. This reflects the location and functions associated with the surrounding land uses. The functional hierarchy is characterised by the traffic user movements of four types:

- Motorway traffic – Light and commercial vehicles servicing the broader region and beyond. This includes an element of commuter traffic.

- Heavy vehicles traffic – Heavy vehicles related to industry and port of Wollongong. Safety ramps form part of this movement pattern.

- Local traffic through Mount Ousley Road – Light vehicle local traffic movements associated with access to the educational precincts to either side of the corridor and the surrounding residential precinct.

- Active Transport Traffic – Pedestrian and cyclist traffic mostly along Mount Ousley Road into the neighbourhoods north and south of the interchange, connecting the University of Wollongong, TAFE NSW Wollongong and the residential neighbourhoods.

The diagram illustrates the functional hierarchy and the objectives that are addressed.

This design response emphasis a focused response to addressing legibility and connectivity to address safety and the issues associated with the steep topography of the site.

Objective 1

To provide a unique experience through an understanding and response to Country at the entry into north Wollongong and the CBD from the motorway, as well as the greater Illawarra Region and South Coast.

Objective 3

To ensure that connectivity is enhanced for pedestrians and cyclists between Mount Ousley, North Wollongong and Keiraville residential areas, and the key land uses of the University of Wollongong and TAFE NSW Wollongong.
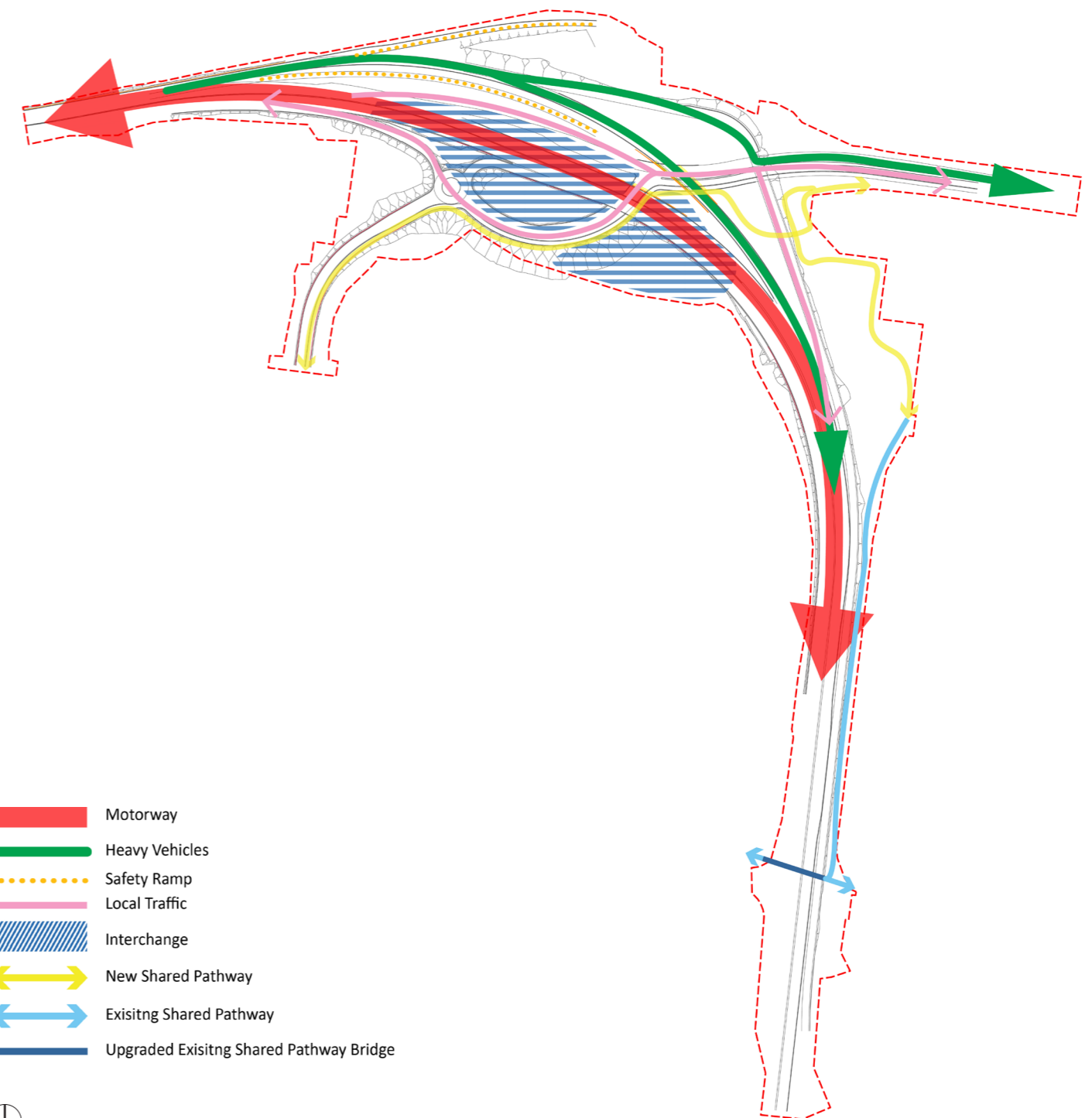
Legend:
- Motorway
- Heavy Vehicles
- Safety Ramp
- Local Traffic
- Interchange
- New Shared Pathway
- Exisitng Shared Pathway
- Upgraded Exisitng Shared Pathway Bridge

Figure 35: Functional hierarchy

5.3   Spatial strategy

The spatial strategy will provide a strong influence on the intersections efficiency with the ability to enhance the overall legibility of the intersection and its integration with context. The strategy is characterised by the following three zones:

- Zone 1 – A zone of enclosed landscape environment on the outer thresholds, which can be perceived to be related to tying in with the neighbourhood environment.

- Zone 2 – A zone of an interchange marker environment on the inner thresholds, which can be perceived to be related to the core area of the interchange itself and include 'gateway' features.

- Zone 3 – A zone of a transitional environment between the 'enclosed' outer threshold zone and the 'interchange marker' inner threshold zone, which can be related to the areas marked for the commuter car park and the maintenance facility.

The diagram illustrates the spatial strategy and the objectives that are addressed in our response.

The design response seeks to encapsulate the road corridor whilst providing visual gateway features within the vegetated setting achieving the following objectives.

Objective 5

To ensure that visual impacts on surrounding residents, as well as motorists, are considered and mitigated, as far as possible, in the design of structures and planting.

Objective 6

To ensure that the character of the interchange sits well within the dramatic slopes and natural remnant forests of the local area.
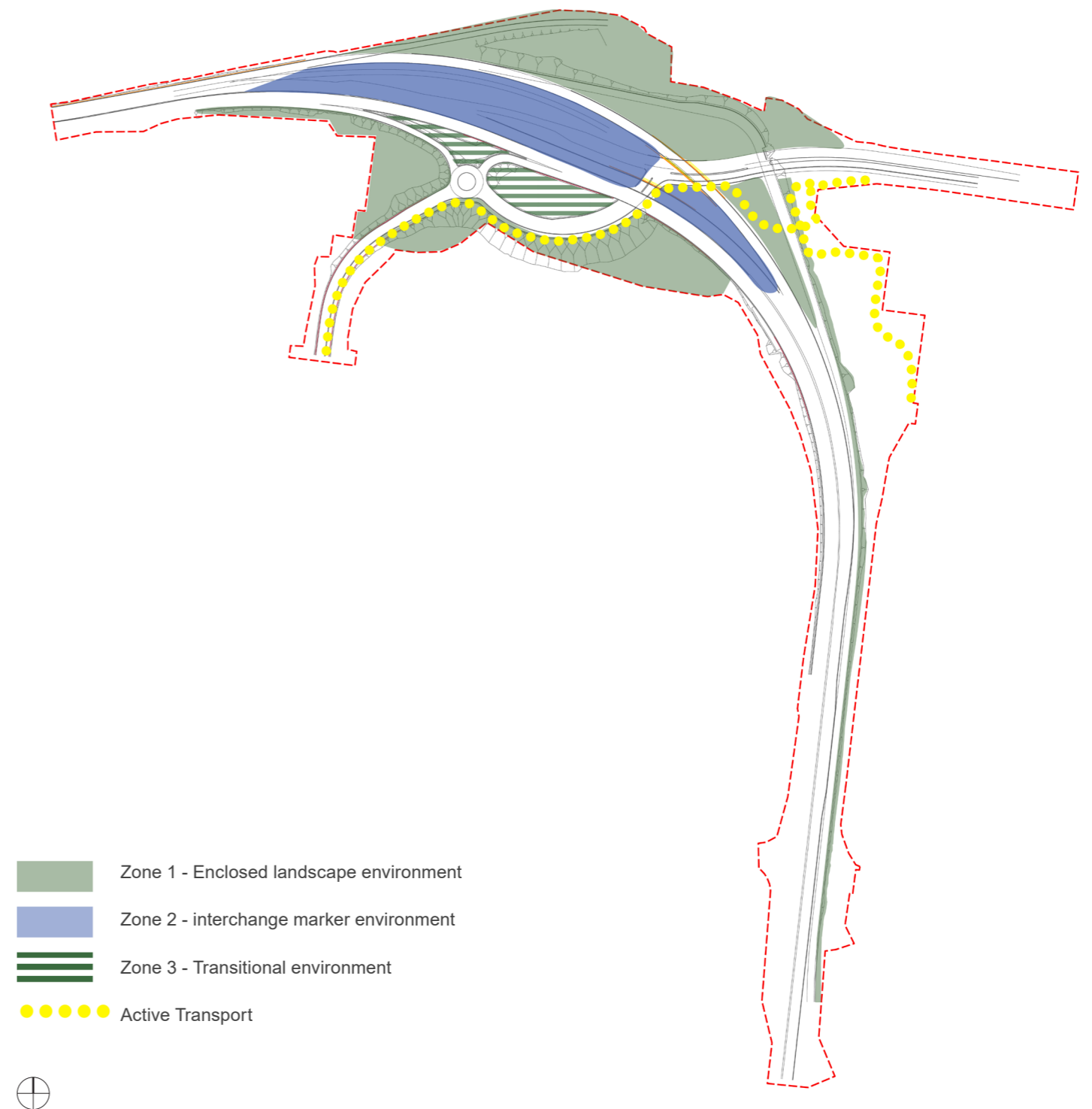
Zone 1 - Enclosed landscape environment

Zone 2 - interchange marker environment

Zone 3 - Transitional environment

Active Transport

Figure 36: Spatial strategy

5.4   Active transport

The active transport network comprises of existing and new pathways, which connect the educational precincts to the residential precincts:

• An existing pathway at the southern end of the Project provided as an over-bridge over the M1 Princes Motorway, from Northfields Avenue adjacent to the University of Wollongong to the west, TAFE NSW Wollongong to the east, the city to the south and the northern residential neighbourhoods at Helen Street (BR04).

• A new connection that extends from west of Helen Street and connects the northern suburbs with improved pedestrian and cycle connectivity to be refined as part of detailed design, enhancing the existing connections.

• A new connection along the southern side of the upgraded Mount Ousley Road via an over bridge over the service road (BR02A), connecting the University of Wollongong.

The diagram illustrates the active transport network and the objectives that are addressed.

Objective 3

To ensure that connectivity is enhanced for pedestrians and cyclists between Mount Ousley, North Wollongong and Keiraville residential areas, and the key land uses of the University of Wollongong and TAFE NSW Wollongong.
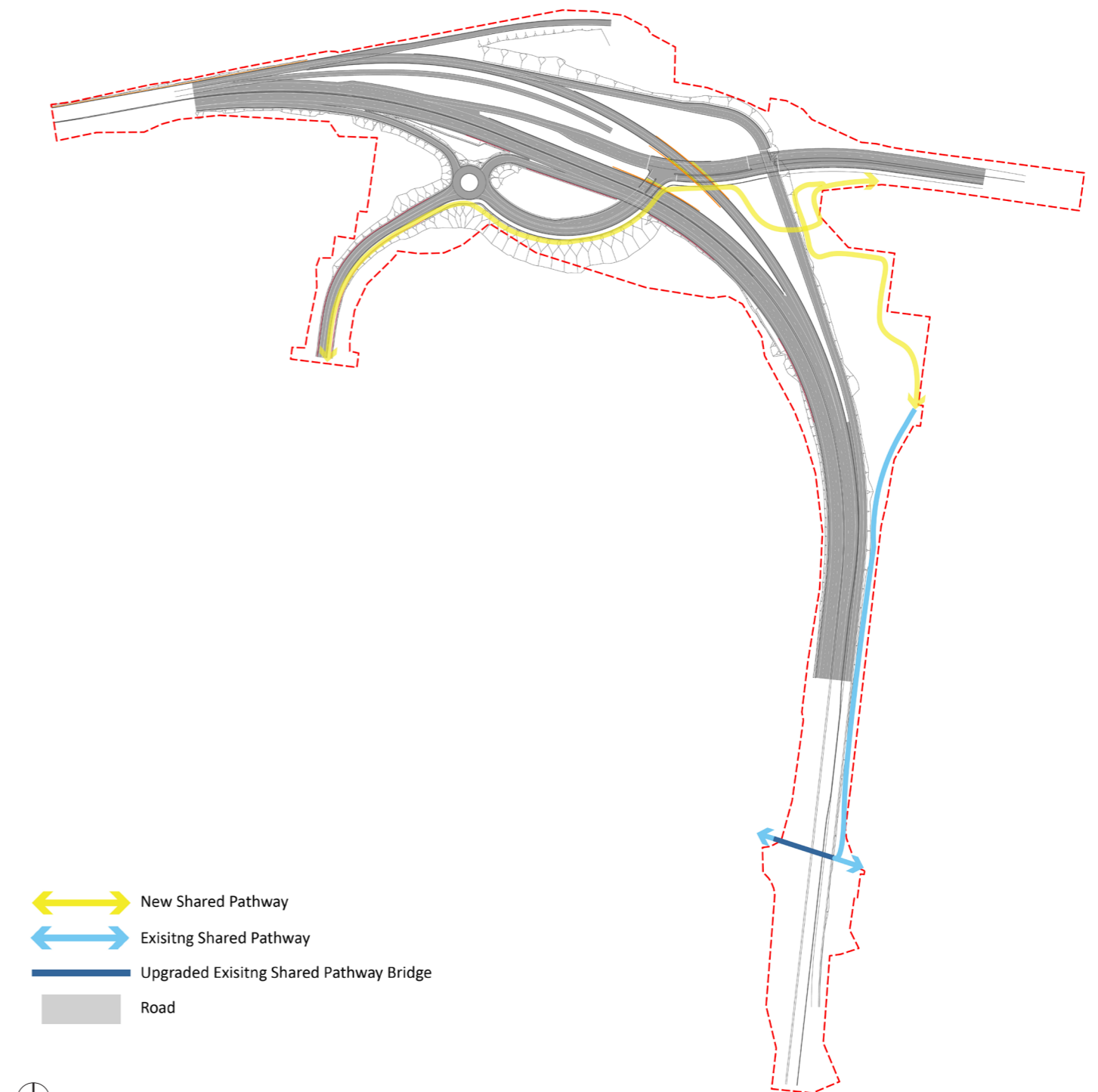

New Shared Pathway

Exisitng Shared Pathway

Upgraded Exisitng Shared Pathway Bridge

Road

Figure 37: Active transport

5.5   Design strategy

The design strategy has been developed by consolidating the four factors established as part of the framework and seeks to achieve the design vision through the use of a number of key initiatives.

Key initiatives includes:

- Encapsulate the overall Project within the vegetation of the site:
  - Escarpment Blackbutt Forest to the north.
  - Escarpment Moist Blue Gum Forest to the south.
- Planting used to define:
  - Wollongong entry and local road hierarchy (i.e. Mount Ousley Road and exit ramp).
  - Illawarra and South Coast gateway and responsive to motorway environment.
  - Entry to the University of Wollongong.
- Investigate opportunities to incorporate connection to Country through use of culturally important plant species as gateway elements.
- Capitalising on the hardscape elements to enhance the gateway experience.
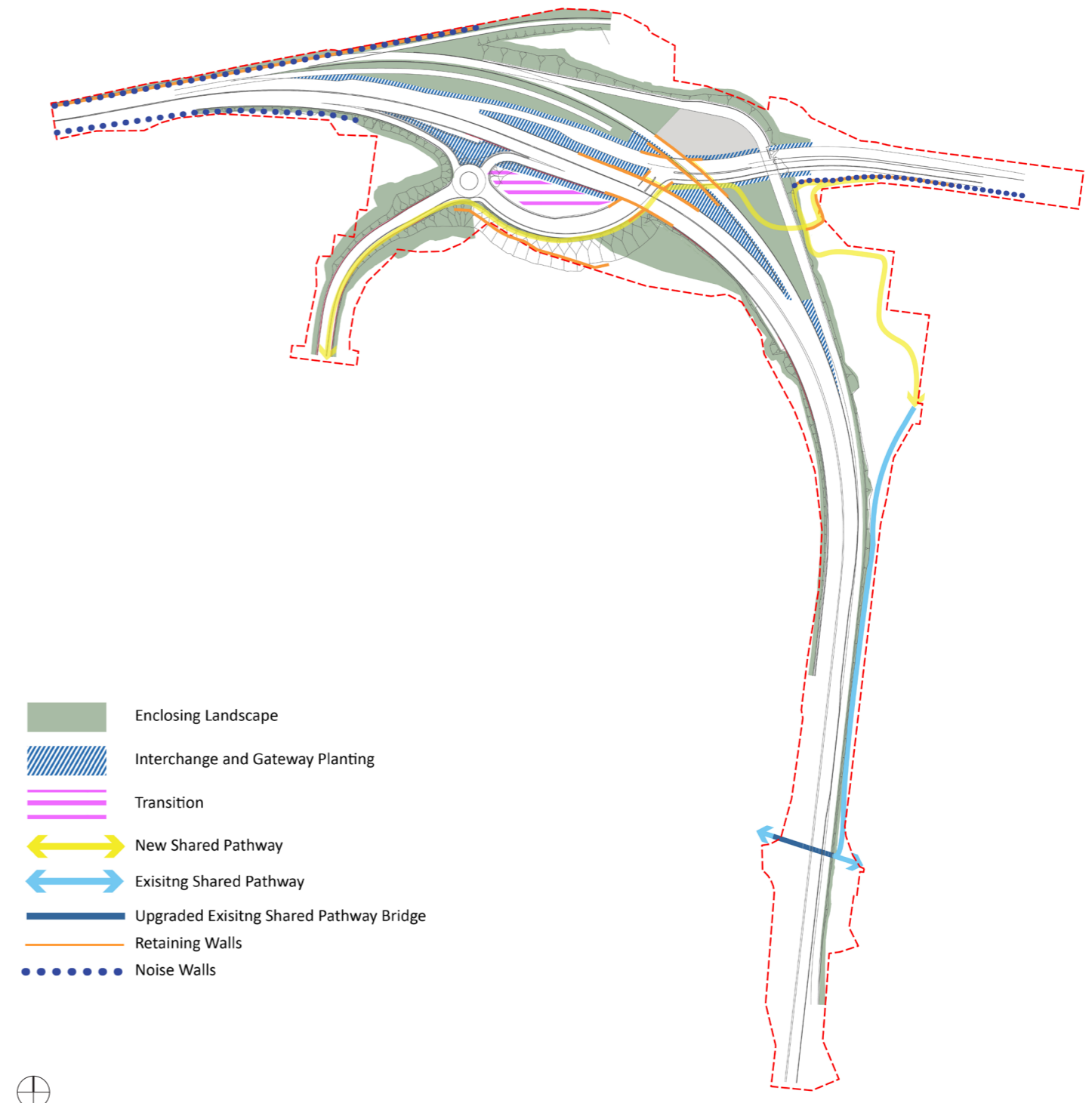- The interchange itself envisaged as a sculptural entity.

Enclosing Landscape

Interchange and Gateway Planting

Transition

New Shared Pathway

Exisitng Shared Pathway

Upgraded Exisitng Shared Pathway Bridge

Retaining Walls

Noise Walls

Figure 38: Design strategy

A hierarchy of three gateway experiences have been developed which provide for wayfinding and legibility to Mount Ousley interchange:

1. Motorway gateway - experienced whilst traversing via the M1 Princes Motorway; which is defined by feature avenue of palm trees with garden bed understorey and feature noise walls and retaining walls which have the opportunity to incorporate art.

2. Mount Ousley Road gateway - experienced while traversing via the M1 Princes Motorway southbound exit ramp to Mount Ousley Road and along Mount Ousley Road itself; which are defined by feature avenue of coloured tree planting with garden bed understorey and feature bridge safety screen elements.

3. University Avenue gateway - experienced whilst traversing via the new University access road; defined by feature avenue of coloured tree planting with garden bed understorey.
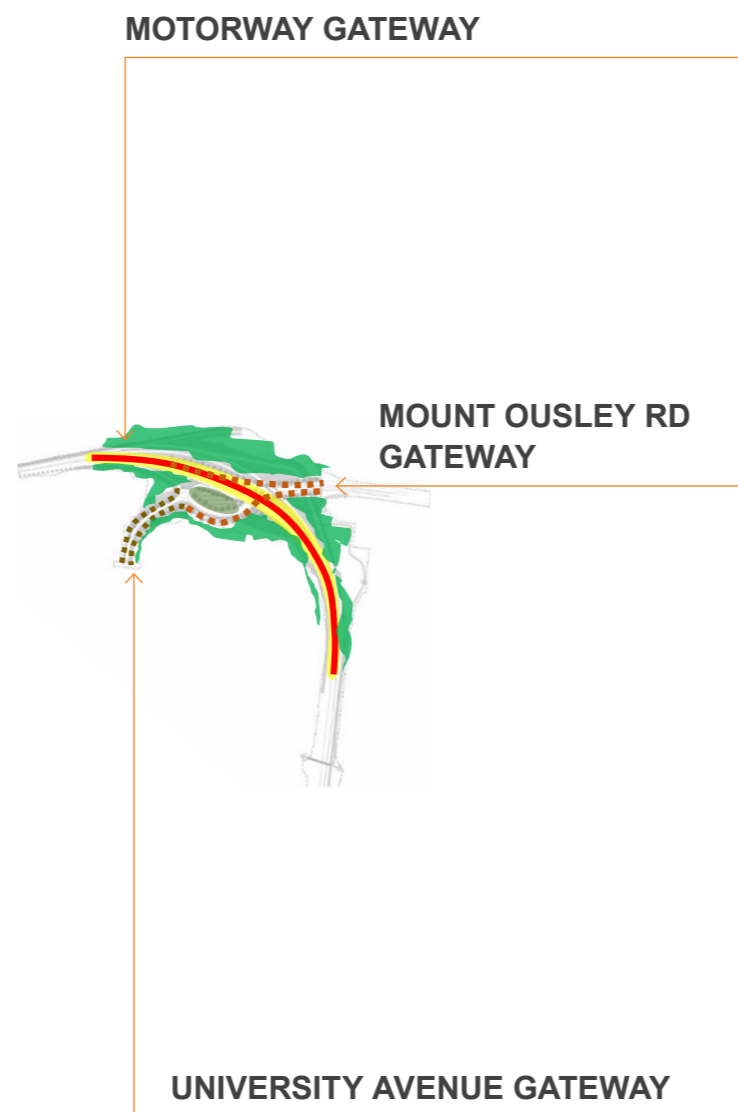
MOTORWAY GATEWAY

MOUNT OUSLEY RD GATEWAY

UNIVERSITY AVENUE GATEWAY

Figure 39: Motorway gateway

Figure 40: Mount Ousley Road gateway

Figure 41: University access road gateway

Figure 42: Strategy plan - scale: 1:20000

5.6   User experience

The user experience is perceived to be a two-fold experience:

- A surface experience associated generally with the motorway - fast paced – internal
- An elevated experience associated generally with the shared path - slow paced – intimate

The design has been developed by using the infrastructure elements such as the safety screens, retaining walls and landscape treatments to enhance the two-fold user experience described above.

The retaining walls and noise walls are more associated with the surface experience, and the safety screens are associated more with the elevated experience, as they are located mainly on bridges. The landscape response works at both the internal and intimate levels.

The interchange is encapsulated by vegetation enabling the works to be experienced at the faster pace. However, the composition and make up the vegetation is something which is experienced at the slower pace including the variation in species, colour, and the potential meaning associated with exploration of Country which is integrated within the design and has informed the species composition.
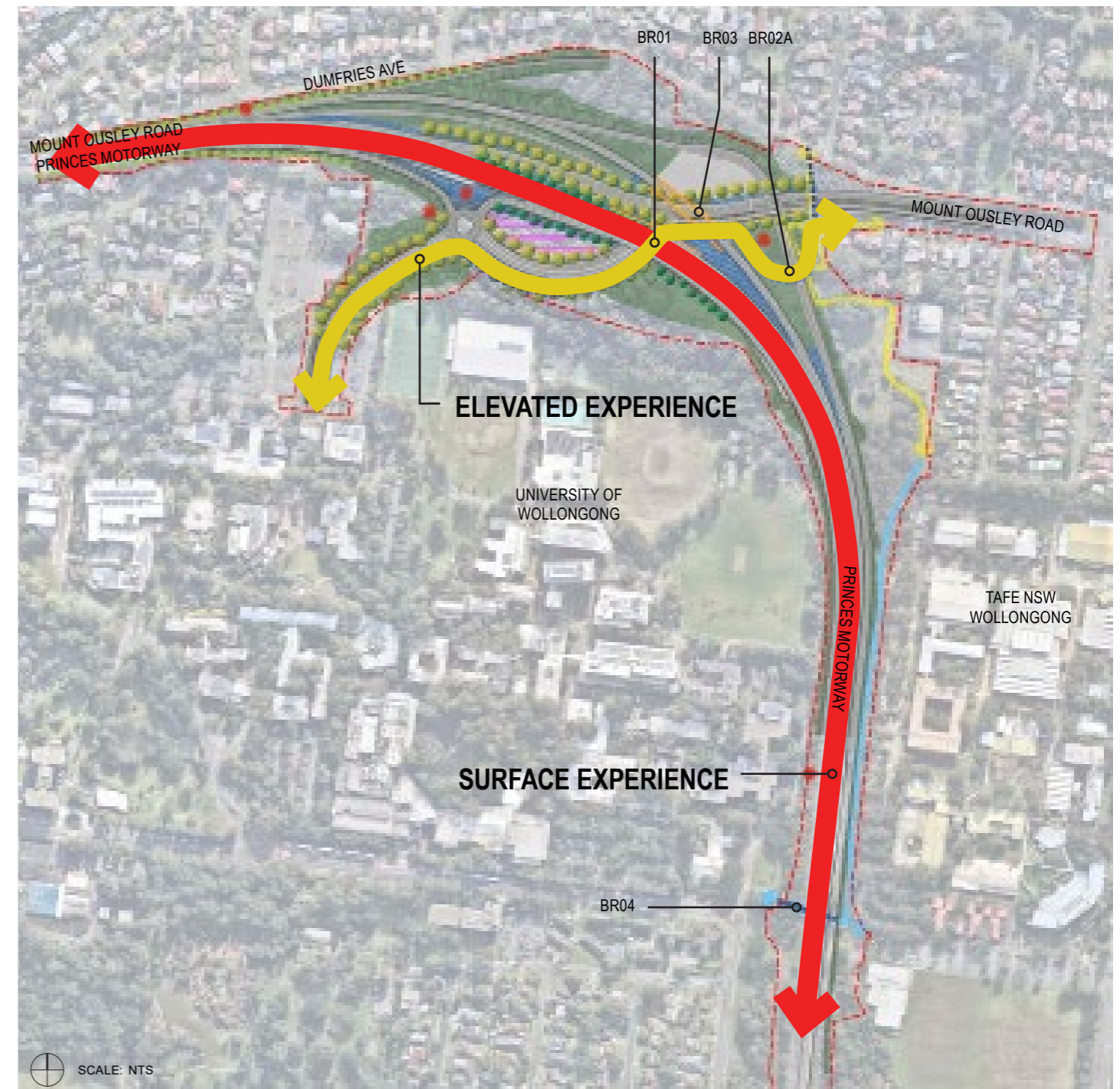

Figure 43: Design strategy

The views illustrate the arrival and departure experience whilst entering and departing the interchange. The gateway features are proposed in the inner threshold zones of the Mount Ousley interchange which include the mainline retaining walls at BR01, the approach landscapes and the noise walls on approach.

Enclosed landscape treatments are proposed in the outer threshold zone of the Mount Ousley interchange, to integrate and stitch the urban bushland into the surrounding environment.
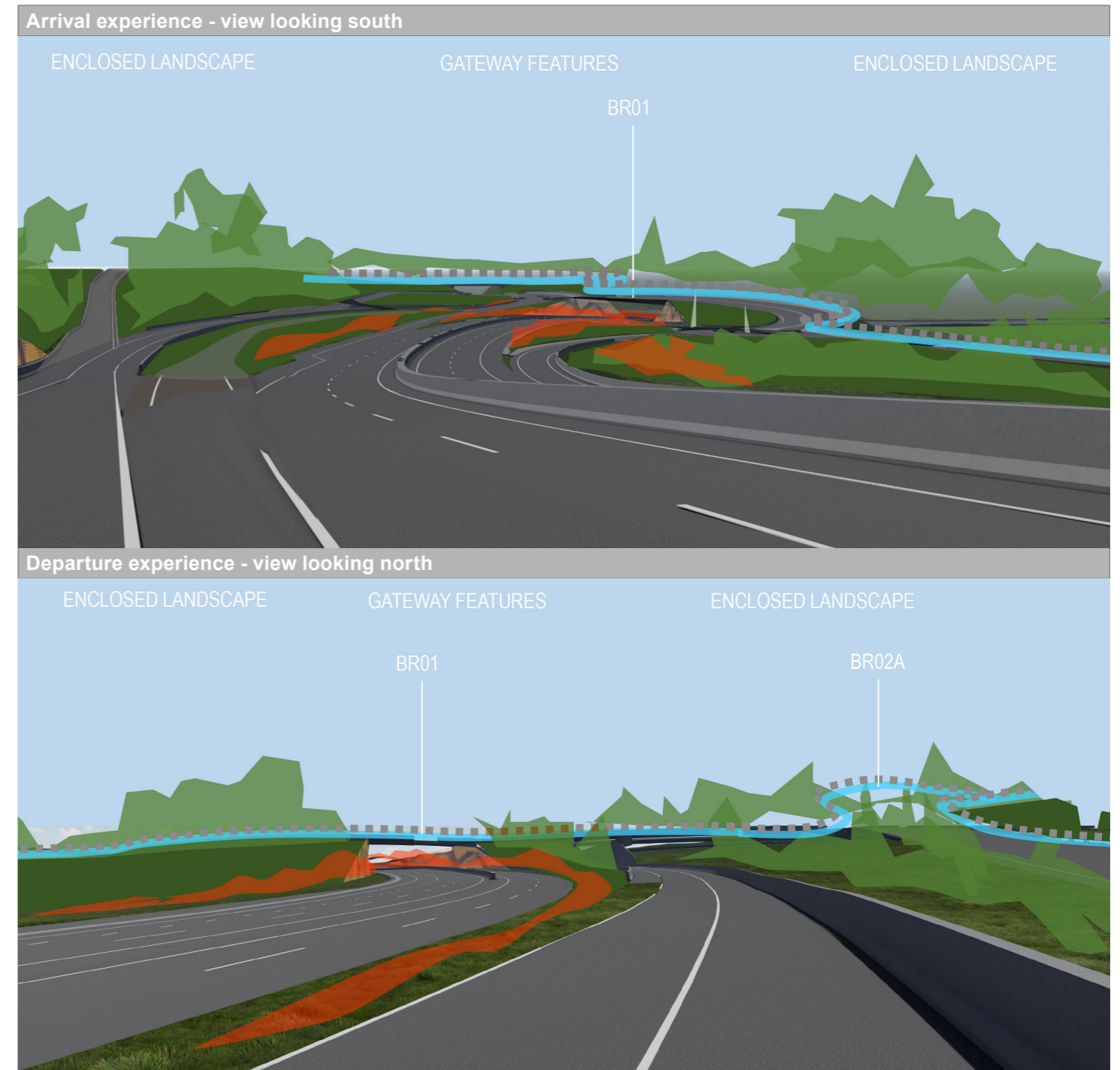

Figure 44: Arrival and departure experience