

NOR 2 - RONGOMAI PARK TO PUHINUI STATION

Outcomes Opportunities

- 1 **Ecological connectivity** - Landscape outcomes should reinforce the wider vegetation patterns of the local open spaces and support ecological connectivity and biodiversity in the local environment.
- 2 **Identity drivers** - Key local community, landscape and identity drivers should be identified, developed and integrated with the adjacent land use functions and future design response.
- 3 **CPTED** - Future design should incorporate CPTED principles including clear sightlines, good levels of lighting and passive surveillance.
- 4 **Active mode permeability** - Corridor permeability for active modes that addresses cross corridor connectivity (midblock crossings), modal priority and permeable access to destinations such as centres, transport interchanges, open spaces and community facilities.

- 5 **Active mode legibility and priority** - Legibility, connectivity demands, safety and modal priority for active modes should be addressed at intersections.
- 6 **Bridges** - Consideration of visual integration, interface and sense of place for bridge structure.
- 1 **Residual land** - Opportunity to demonstrate how any residual land portions following the construction of the Project are redefined and integrated with the expected future land use function.
- 2 **Wider connectivity** - Opportunity to reinforce features connections to the wider community and landscape features.
- 3 **Enhancement** - Opportunity for ecological enhancement and tree planting

OUTCOMES AND OPPORTUNITIES PLAN - SHEET 02 OF 04

OUTCOMES

- Stormwater management outcomes should demonstrate integration of the stormwater raingardens and wetlands within the corridor and ensure an appropriate interface with adjacent land uses.
- High density residential and mixed-use integration / interface that enables buildings and spaces to positively address and integrate with the corridor.
- Intersection arrangement that addresses multi-modal priority, safety and legibility.
- Cross corridor active mode connection.
- Landscape outcomes should provide replace and augment canopy shading to the corridor. Outcomes to reflect and enhance the local character inherent in the built, natural and cultural qualities of the location within the corridor.
- Interface and visual / landscape buffer considerations for retained industrial, business and mixed use zones
- Integrated lane for stormwater treatments and walking and cycling facilities

LEGEND

- Designation Boundary
- Residential - THAB
- Business - Light Industry Zone
- Business - Future Centre Zone
- Business - Metropolitan Centre Zone
- Business - General Business Zone
- Mixed Use
- Public Open Space
- Proposed Bus Rapid Transit Stop
- Train Station
- School
- Proposed Stormwater Pond

Figure 6: NoR 2 urban design outcomes and opportunities Sheet 02 of 04

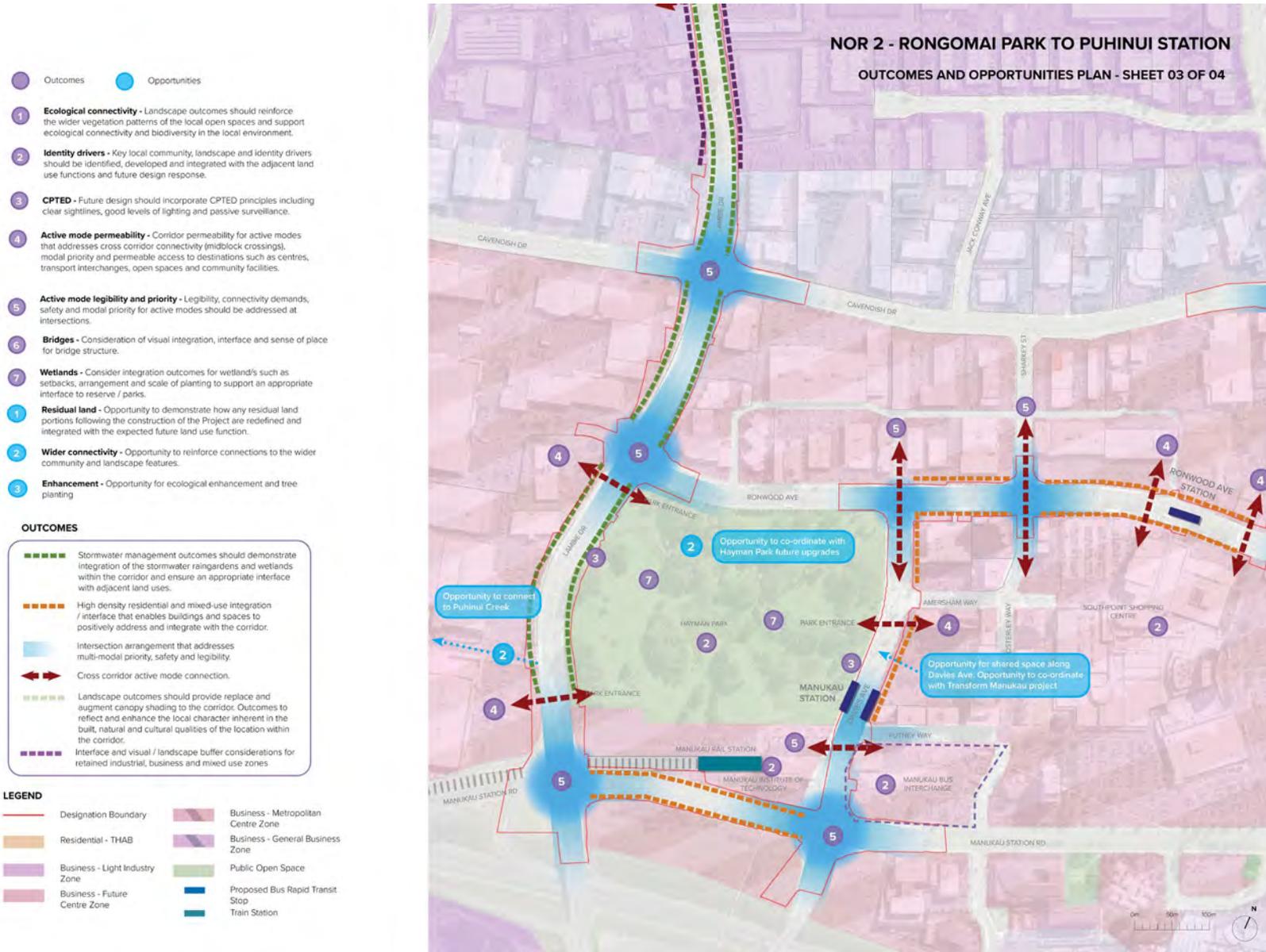
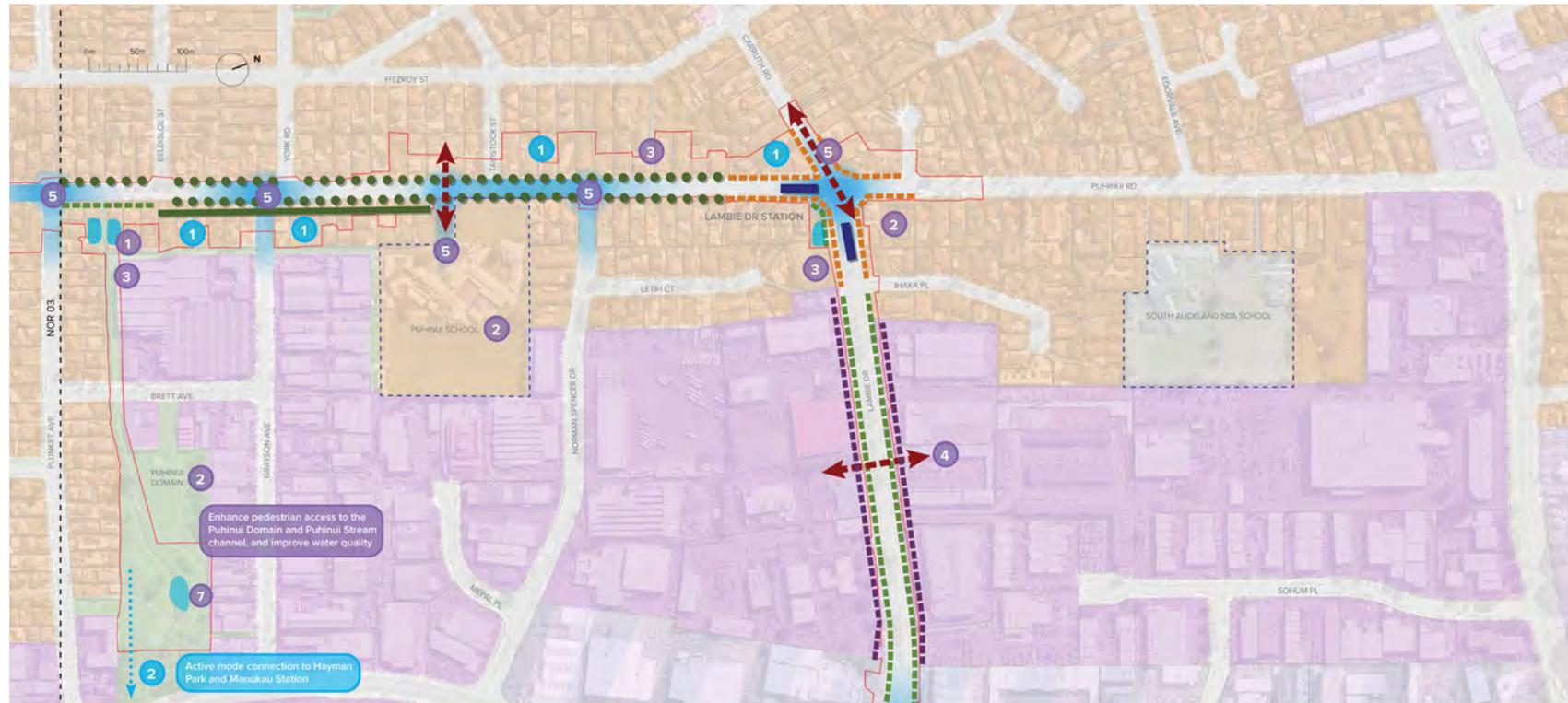


Figure 7: NoR 2 urban design outcomes and opportunities Sheet 03 of 04



NOR 2 - RONGOMAI PARK TO PUHINUI STATION

- Outcomes
- Opportunities

- 1 Ecological connectivity** - Landscape outcomes should reinforce the wider vegetation patterns of the local open spaces and support ecological connectivity and biodiversity in the local environment.
- 2 Identity drivers** - Key local community, landscape and identity drivers should be identified, developed and integrated with the adjacent land use functions and future design response.
- 3 CPTED** - Future design should incorporate CPTED principles including clear sightlines, good levels of lighting and passive surveillance.
- 4 Active mode permeability** - Corridor permeability for active modes that addresses cross corridor connectivity (midblock crossings), modal priority and permeable access to destinations such as centres, transport interchanges, open spaces and community facilities.
- 5 Active mode legibility and priority** - Legibility, connectivity demands, safety and modal priority for active modes should be addressed at intersections.
- 6 Bridges** - Consideration of visual integration, interface and sense of place for bridge structure.
- 7 Wetlands** - Consider integration outcomes for wetland/s such as setbacks, arrangement and scale of planting to support an appropriate interface to reserve / parks.
- 1 Residual land** - Opportunity to demonstrate how any residual land portions following the construction of the Project are redefined and integrated with the expected future land use function.
- 2 Wider connectivity** - Opportunity to reinforce connections to the wider community and landscape features.
- 3 Enhancement** - Opportunity for ecological enhancement and tree planting

OUTCOMES AND OPPORTUNITIES PLAN - SHEET 04 OF 04

OUTCOMES

- - - - - Stormwater management outcomes should demonstrate integration of the stormwater raingardens and wetlands within the corridor and ensure an appropriate interface with adjacent land uses.
- - - - - High density residential and mixed-use integration / interface that enables buildings and spaces to positively address and integrate with the corridor.
- Intersection arrangement that addresses multi-modal priority, safety and legibility.
- ↔ Cross corridor active mode connection.
- ● ● ● ● Landscape outcomes should provide replace and augment canopy shading to the corridor. Outcomes to reflect and enhance the local character inherent in the built, natural and cultural qualities of the location within the corridor.
- - - - - Interface and visual / landscape buffer considerations for retained industrial, business and mixed use zones
- - - - - Additional landscape screening

LEGEND

- - - - - Designation Boundary
- Residential - THAB
- Business - Light Industry Zone
- Business - Future Centre Zone
- Business - Metropolitan Centre Zone
- Business - General Business Zone
- Mixed Use
- Public Open Space
- Proposed Bus Rapid Transit Stop
- Train Station
- - - - - School
- - - - - Proposed Stormwater Pond

Figure 8: NoR 2 urban design outcomes and opportunities Sheet 04 of 04

7 NoR 3 – Puhinui Station to SH20/20B Interchange

This evaluation considers the proposed NoR 3 – Puhinui Station to SH20/20B Interchange section against the relevant Design Framework Principles. It provides urban design focused commentary on the current design detail and recommends the framework for how and where any urban design outcomes should be considered in future design stages.

Table 6 in **Appendix A** only outlines urban design commentary specific to NoR 1. For commentary common to all NoRs, refer to Table 3.

7.1 Summary of urban design evaluation and recommendations for NoR 3

Overall, the proposed NoR 3 corridor design and configuration is generally supportive of the Design Framework principles. A summary of the recommended urban design outcomes and opportunities for NoR 3 are outlined below and illustrated in Figure 9 and **Appendix B**. These are recommended to form a part of the ULDMP in future delivery stages. This is to ensure the detailed design of the corridor responds appropriately to the principles and the project specific urban design outcomes sought.

The ULDMP should address the following Project specific outcomes for NoR 3:

ENVIRONMENT

- A landscape plan that considers recommendations from the landscape and visual, arboriculture, flooding and ecological assessments including street tree and stormwater raingarden and wetland planting, construction compound and private property reinstatement and treatment of batter slopes. The landscape outcomes should support the principles of Auckland’s Urban Ngahere Strategy and reinforce the wider vegetation patterns of the local landscape and create connections to proposed greenways and the wider walking and cycling network.
- Integration of the stormwater raingardens and wetlands to ensure an appropriate interface with adjacent land uses, specifically where wetlands are proposed in areas zoned high density.
- Measures to demonstrate that the project has adapted to the changing climate such as reducing urban heat island effects in future urbanised areas, supporting modal shift and accounting for flood hazard risks.

SOCIAL

- In future design stages, Manawhenua shall be invited as Partners to provide input on the cultural, landscape and design matters including how Project outcomes reflect their identity and values.
- The identification, development and integration of key local community and identity drivers within NoR 3 should be demonstrated. Key NoR 3 local identity landscape, open space and community functions to be addressed include:
 - The Business – Neighbourhood Centre Zone at Wyllie Road and Noel Burnside Road;
 - The Puhinui Station precinct that includes Te Kohanga Reo ki Puhinui; and
 - The Business – Neighbourhood Centre Zone at Ranfurly Road.
- The identification, development and integration of historically significant identity drivers within NoR 3 should be demonstrated, these include:

- The Category B Scheduled historic heritage place (250 Puhinui Road - Cambria House and Gardeners Cottage); and
- The memorial plaque identified at the intersection of Kenderdine Road and Puhinui Road.
- The proposed corridor alignment and function can deliver a positive contribution to the sense of belonging and participation, as well as community resilience by supporting direct access to existing local, neighbourhood and town centres, schools, community functions and open spaces. Key school, community and business functions within NoR 2 to be addressed include:
 - Puhinui School;
 - Greyson Avenue Reserve;
 - Puhinui Station area;
 - Te Kohanga Reo ki Puhinui;
 - Papatoetoe South School; and
 - Murdoch Park.
- A CPTED review of the NoR 3 project should address, at a minimum, the current identified CPTED risks including:
 - The Business – Neighbourhood Centre Zone at Wyllie Road and Noel Burnside Road;
 - The Puhinui Station area that includes Te Kohanga Reo ki Puhinui; and
 - The Business – Neighbourhood Centre Zone at Ranfurly Road.

BUILT FORM

- Known or planned changes of land use and residential density have the potential to alter the perceived scale and impact of the proposed corridor functions should be identified and addressed.
- Resolution of any potential conflict between placemaking aspirations within local communities and the scale and operating speed of the proposed movement functions of the corridor should be addressed.
- An urban interface approach within the corridor that:
 - Provides an appropriate interface to the existing local, neighbourhood and town centres and enables buildings and spaces to positively address and integrate with the NoR 3 corridor;
 - Responds to the spatial character of proposed centre environments and supports quality public realm infrastructure, ample pedestrian footpath width, frequent pedestrian crossing points and street trees for shade and amenity;
 - Demonstrates the proposed modal connections, modal hierarchy, built form interfaces and arrangements at the proposed NoR 3 BRT station at Puhinui Rail Station and interchange that supports the requirements of Policies 1 and 3 of the NPS:UD for enabling increased development capacity adjacent to rapid transit networks;
 - Recognises the transition of densities from Residential Terrace Housing and Apartment Building Zone to Residential Mixed Housing Suburban Zone and provides a corridor interface that supports permeable pedestrian access and responds to the changing built form interface and spatial character of adjacent future development;
 - Responds to any built form interface, visual or landscape buffers and development controls proposed for retained Business – Light Industry Zone and Business – Mixed Use Zone land to the south of Puhinui Road; and

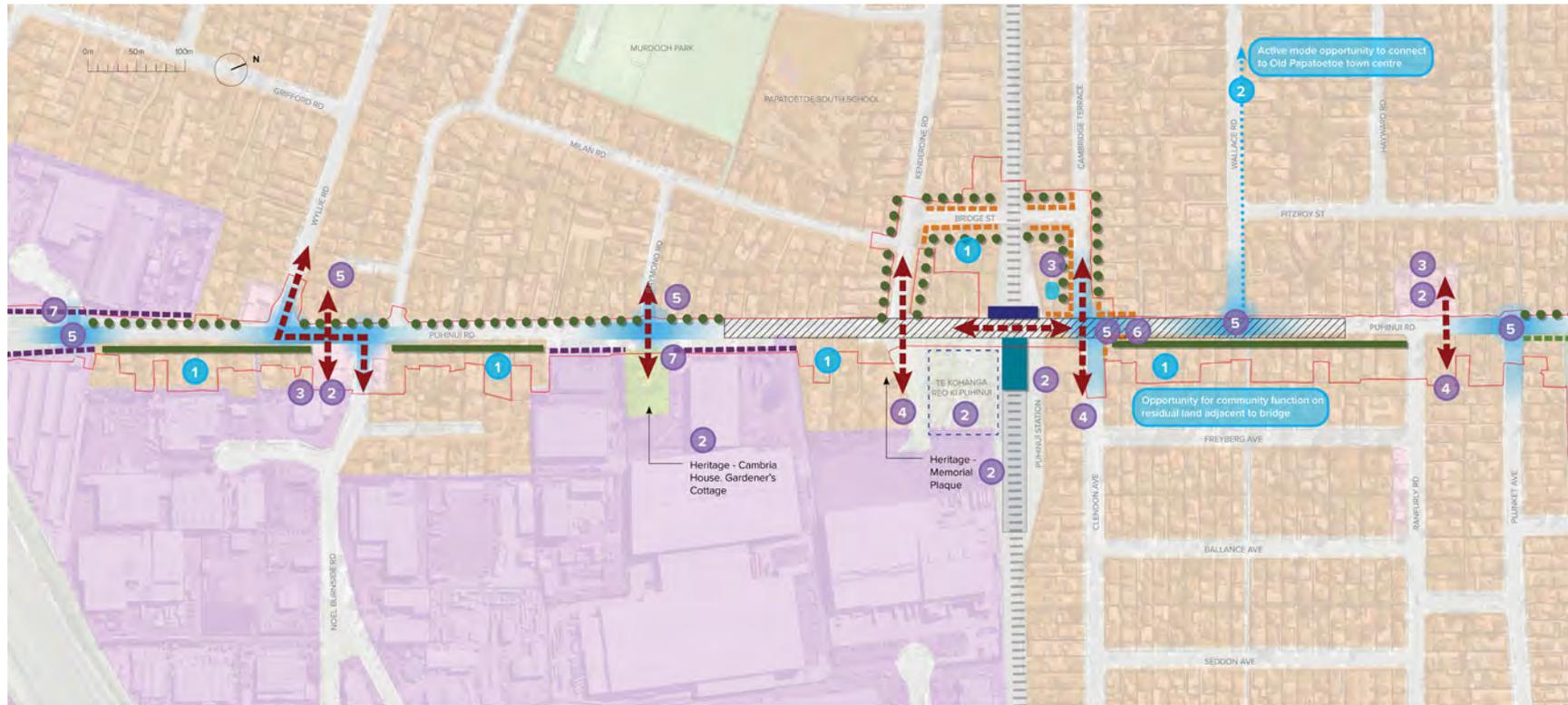
- Considers the scale, visual integration, interface and sense of place qualities of the BRT bridge structure at Puhinui station to the rail station building and other adjacent developments.
- Demonstration of how the Project supports the purpose and objectives of the Puhinui Precinct (and relevant sub precincts) in terms of the response to the place function including the built form interface, any visual or landscape buffers and development controls proposed for adjoining lands.

MOVEMENT

- Permeability of the corridor for active modes that addresses cross corridor connectivity (midblock crossings), modal priority and permeable access to destinations such as centres, transport interchanges, open spaces and community facilities. Demonstration of place specific active mode cross corridor solutions should include:
 - The Puhinui Station precinct including intersections at Kenderdine Road, Cambridge Terrace and Clendon Avenue;
 - An integrated crossing at the intersections of Wyllie Road and Noel Burnside Road.
- Legibility, connectivity demands, safety and modal priority for active modes should be addressed for intersections within NoR 3. Demonstration of specific intersection responses to ensure connectivity between the proposed BRT facilities, local centres and other community facilities should include the intersections on Puhinui Road at:
 - Plunket Avenue;
 - Wallace Road;
 - Clendon Avenue;
 - Raymond Road;
 - Noel Burnside Road;
 - Wyllie Road; and
 - Vision Place.
- A modal integration strategy that addresses the potential conflict between the continued freight function of the corridor and placemaking opportunities arising from the introduction of the BRT stations along the NoR 3 corridor.
- A modal integration strategy that addresses the functional layout of the Puhinui station area to provide for legibility and clear wayfinding for active modes through and around the station area and between the rail and BRT station.

LANDUSE

Demonstration of how any residual land portions resulting from the Project are redefined and integrated with the expected future land use function.



NOR 3 - PUHINUI STATION TO SH20 / SH20 INTERCHANGE

- Outcomes ● Opportunities
- 1 **Ecological connectivity** - Landscape outcomes should reinforce the wider vegetation patterns of the local open spaces and support ecological connectivity and biodiversity in the local environment.
- 2 **Identity drivers** - Key local community, landscape and identity drivers should be identified, developed and integrated with the adjacent land use functions and future design response.
- 3 **CPTED** - Future design should incorporate CPTED principles including clear sightlines, good levels of lighting and passive surveillance.
- 4 **Active mode permeability** - Corridor permeability for active modes that addresses cross corridor connectivity (midblock crossings), modal priority and permeable access to destinations such as centres, transport interchanges, open spaces and community facilities.
- 5 **Active mode legibility and priority** - Legibility, connectivity demands, safety and modal priority for active modes should be addressed at intersections.
- 6 **Bridges** - Consideration of visual integration, interface and sense of place for bridge structure.
- 7 **Removal of Notable Trees** - Loss of canopy square metre should be replaced
- 1 **Residual land** - Opportunity to demonstrate how any residual land portions following the construction of the Project are redefined and integrated with the expected future land use function.
- 2 **Wider connectivity** - Opportunity to reinforce connections to the wider community and landscape features.
- 3 **Enhancement** - Opportunity for ecological enhancement and tree planting

OUTCOMES AND OPPORTUNITIES PLAN - SHEET 01 OF 01

OUTCOMES

- Stormwater management outcomes should demonstrate integration of the stormwater raingardens and wetlands within the corridor and ensure an appropriate interface with adjacent land uses.
- High density residential and mixed-use integration / interface that enables buildings and spaces to positively address and integrate with the corridor.
- Intersection arrangement that addresses multi-modal priority, safety and legibility.
- Cross corridor active mode connection.
- Landscape outcomes should provide replace and augment canopy shading to the corridor. Outcomes to reflect and enhance the local character inherent in the built, natural and cultural qualities of the location within the corridor.
- Interface and visual / landscape buffer considerations for retained industrial, business and mixed use zones
- Additional landscape screening

LEGEND

- Designation Boundary
- Residential - THAB
- Business - Light Industry Zone
- Business - Future Centre Zone
- Business - Metropolitan Centre Zone
- Business - General Business Zone
- Mixed Use
- Public Open Space
- Proposed Bus Rapid Transit Stop
- Train Station
- School
- Proposed Puhinui Bridge Extent
- Proposed Stormwater Pond

Figure 9: NoR 3 urban design outcomes and opportunities Sheet 01 of 01

8 NoRs 4a and 4b – SH20/20B Interchange to Orrs Road

This evaluation considers the proposed NoR 4a and 4b – SH20/SH20B Interchange to Orrs Road section (combined for this evaluation) against the relevant Design Framework Principles. It provides urban design focused commentary on the current design detail and recommends the framework for how and where any urban design outcomes should be considered in future design stages.

Table 7 in **Appendix A** only outlines urban design commentary specific to NoR 1. For commentary common to all NoRs, refer to Table 3.

8.1 Summary of urban design evaluation and recommendations for NoRs 4a and 4b

Overall, the proposed corridor design and configuration for NoRs 4a and 4b is generally supportive of the Design Framework principles. A summary of the recommended urban design outcomes and opportunities for NoR 4a and 4b are outlined below and illustrated in Figure 10, Figure 11 and Appendix B. These are recommended to form a part of the ULDMP in future delivery stages. This is to ensure the detailed design of the corridor responds appropriately to the principles and the Project specific urban design outcomes sought.

The ULDMP should address the following Project specific outcomes for NoR 4a and 4b:

ENVIRONMENT

- A landscape plan that considers recommendations from the landscape and visual, arboriculture, flooding and ecological assessments including street tree and stormwater raingarden and wetland planting, construction compound and private property reinstatement and treatment of batter slopes. The landscape outcomes should support the principles of Auckland's Urban Ngahere Strategy and reinforce the wider vegetation patterns of the local landscape and create connections to proposed greenways and the wider walking and cycling network.
- Integration of stormwater raingardens and wetlands to ensure an appropriate interface with adjacent land uses, specifically where wetlands are proposed in areas zoned high density.
- Measures to demonstrate that the project has adapted to the changing climate such as reducing urban heat island effects in future urbanised areas, supporting modal shift and accounting for flood hazard risks.

SOCIAL

- As set out in the AEE, this section of the Project traverses the Puhinui peninsula, which is of significant cultural value to Manawhenua, in particular Te Ākitai Waiohua. In future design stages, Manawhenua will be invited to provide input on the cultural, landscape and design matters including how Project outcomes reflect their identity and values.
- The identification, development and integration of key local community and identity drivers within NoRs 4a and 4b should be demonstrated. Key local identity landscape, open space and community functions within NoR 4a and 4b to be addressed include the Manukau Memorial Gardens frontage and entry and Waokauri Creek.
- A CPTED review of NoRs 4a and 4b should address, at a minimum, the current identified CPTED risks including:

- The walking and cycling facilities where there are limited passive surveillance opportunities; and
- The underbridge environment at the Waokauri Creek overbridge.

BUILT FORM

- Known or planned changes of land use and the ultimate delivery of the Future Urban Zone land to the north west of the corridor have the potential to alter the perceived scale and impact of the proposed corridor functions should be identified and addressed.
- Resolution of any potential conflict between placemaking aspirations within local communities and the scale and operating speed of the proposed movement functions of the corridor should be addressed.
- An urban interface approach for the proposed ramp structure from SH20B to SH20 that considers the scale, visual integration and interface response to adjacent land use functions.

MOVEMENT

- Legibility, connectivity demands, safety and modal priority for active modes should be addressed for intersections within NoRs 4a and 4b. Demonstration of specific intersection responses to ensure connectivity between the proposed BRT facilities or other community facilities should include the intersections on Puhinui Road at:
 - The SH20 access ramps / interchange;
 - The vehicular entry to Manukau Memorial Gardens;
 - Princes Road;
 - Campana Road; and
 - Orrs Road.
- A modal integration strategy that addresses the potential conflict between the continued freight function of the corridor and any placemaking opportunities along NoRs 4a and 4b corridor.

LANDUSE

No NoR specific recommendations.



NOR 4A AND 4B - SH20 / SH20B INTERCHANGE TO ORRS ROAD

- Outcomes ● Opportunities
- 1 **Ecological connectivity** - Landscape outcomes should reinforce the wider vegetation patterns of the local open spaces and support ecological connectivity and biodiversity in the local environment.
- 2 **Identity drivers** - Key local community, landscape and identity drivers should be identified, developed and integrated with the adjacent land use functions and future design response.
- 3 **CPTED** - Future design should incorporate CPTED principles including clear sightlines, good levels of lighting and passive surveillance.
- 4 **Active mode permeability** - Corridor permeability for active modes that addresses cross corridor connectivity (midblock crossings), modal priority and permeable access to destinations such as centres, transport interchanges, open spaces and community facilities.
- 5 **Active mode legibility and priority** - Legibility, connectivity demands, safety and modal priority for active modes should be addressed at intersections.
- 6 **Bridges** - Consideration of visual integration, interface and sense of place for bridge structure.
- 7 **Removal of Notable Trees** - Loss of canopy square metre must be replaced
- 8 **Residual land** - Opportunity to demonstrate how any residual land portions following the construction of the Project are redefined and integrated with the expected future land use function.
- 9 **Wider connectivity** - Opportunity to reinforce connections to the wider community and landscape features.
- 10 **Enhancement** - Opportunity for ecological enhancement and tree planting
- 11 **Walking and Cycling** - Opportunity for stopping point with walking and cycling facilities to observe the cultural landscape

OUTCOMES AND OPPORTUNITIES PLAN - SHEET 01 OF 02

OUTCOMES

- Stormwater management outcomes should demonstrate integration of the stormwater raingardens and wetlands within the corridor and ensure an appropriate interface with adjacent land uses.
- High density residential and mixed-use integration / interface that enables buildings and spaces to positively address and integrate with the corridor.
- Intersection arrangement that addresses multi-modal priority, safety and legibility.
- Cross corridor active mode connection.
- Landscape outcomes should provide replace and augment canopy shading to the corridor. Outcomes to reflect and enhance the local character inherent in the built, natural and cultural qualities of the location within the corridor.
- Interface and visual / landscape buffer considerations for retained industrial, business and mixed use zones
- Proposed SH20 ramp

LEGEND

- Designation Boundary
- Residential - THAB
- Business - Light Industry Zone
- Business - Future Centre Zone
- Business - Metropolitan Centre Zone
- Business - General Business Zone
- Mixed Use
- Public Open Space
- Proposed Bus Rapid Transit Stop
- Train Station
- School

Figure 10: NoR 4a and 4b urban design outcomes and opportunities Sheet 01 of 02