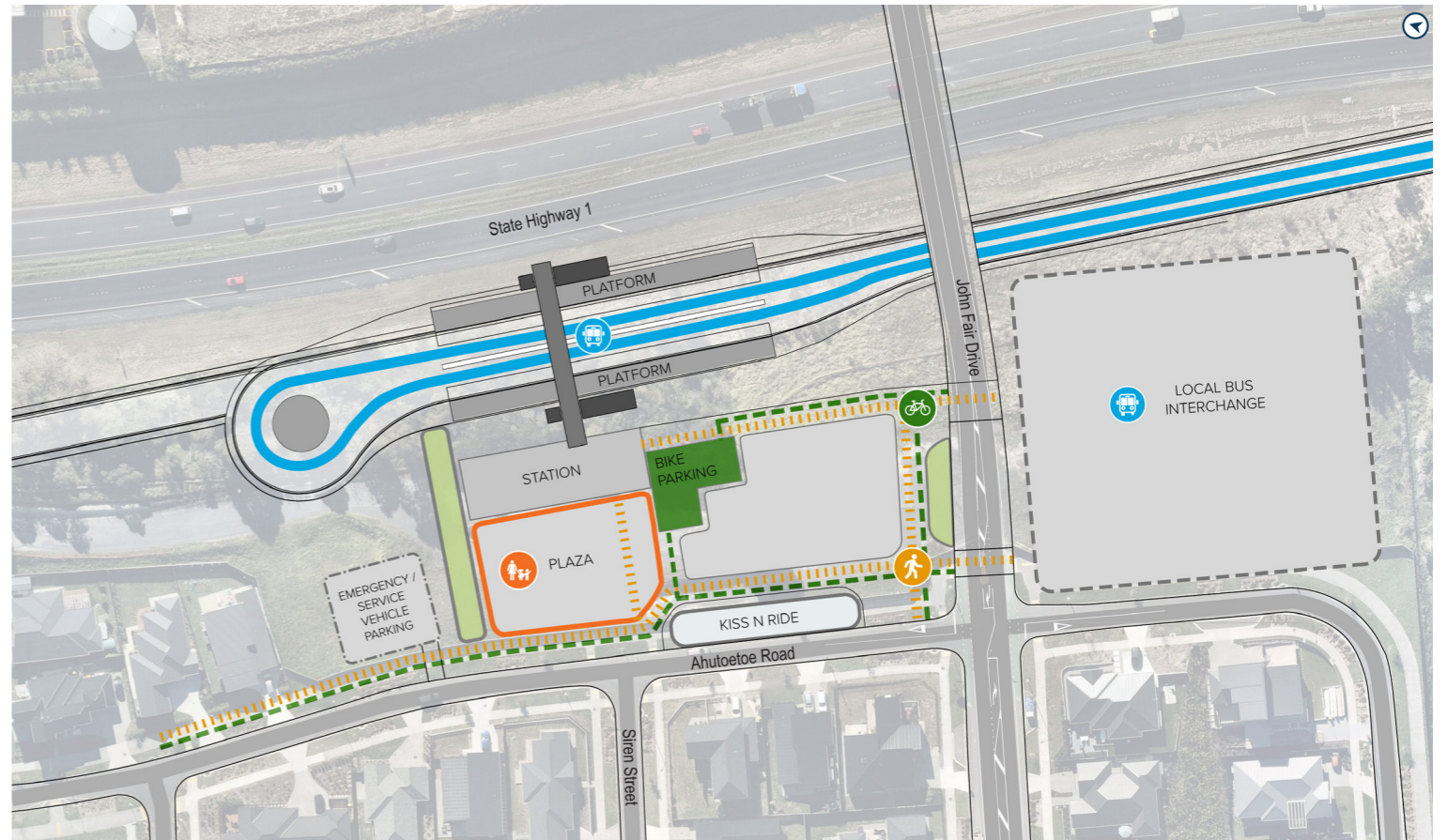
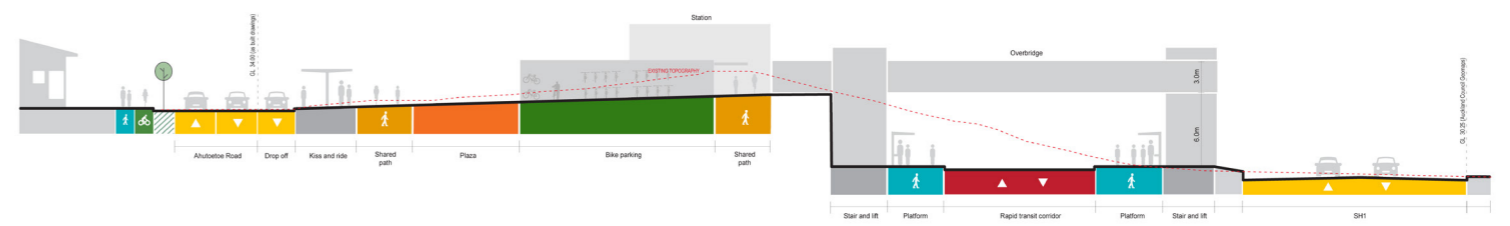


7.2.1 NoR 2: New Milldale Station Outcomes and Opportunities Map



Milldale Station Conceptual Layout



Milldale Station Conceptual Cross-Section

NOR 2 - MILLDALE STATION

OUTCOMES AND OPPORTUNITIES PLAN SHEET 1 OF 1

● 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 adjacent Kathy's Thicket.
- 2 Identity drivers** - Key local community, landscape character and identity drivers should be identified, developed and integrated with the adjacent land use functions and future design response, including future land use and centres, existing development in Milldale, Kathy's Thicket and nearby Wēiti Stream.
- 3 Active mode permeability** - Corridor permeability for active modes that addresses cross corridor connectivity (midblock crossings), modal priority and permeable access to the station.
- 4 Active mode legibility and priority** - Legibility, connectivity demands, safety and modal priority for active modes should be addressed at intersections.
- 5 Earthworks** - Minimise Earthworks & Level changes at corridor boundaries & Interfaces with future development areas to enable integration with adjoining future landuse. Use retaining structures in areas where space is insufficient to deploy earthworks batters or where earthworks negatively impacts the efficiency of adjacent landuses. Where mass planting is proposed on batters, use native ecologically appropriate species.

- 6 Design the station and interchange to respond to the adjacent landuse** Future detailed design of the station should respond and integrate with the local area, and adjacent residential development, positively contributing to the public realm of Milldale.
- 7 CPTED** - Future design should incorporate CPTED principles including clear sightlines, good levels of lighting and passive surveillance, particularly at intersections and future cross-corridor connections. This should be a consideration of the active mode facilities which may have limited passive surveillance along the corridor from adjacent land use.
- 8 Create a positive user experience** - Future detailed design of the station should be easy and safe to access, and be designed to create a positive user experience.
- 1 Enhance active mode connection to future centres** - With the nearby Milldale centre approximately, 800m away there is the opportunity to enhance connections and wayfinding from the centre to the Milldale Station.
- 2 Enable more intensive development adjacent to the Milldale Station** The provision of a station on a rapid transit corridor provides the opportunity to intensify within the walkable catchment of the station, increasing access to the service.

Outcomes

- Establish an interface that includes appropriate planting/ screening to respond to adjacent residential development.
- Establish landscape outcomes that provides an appropriate interface to the blue and green network using native and ecologically appropriate planting.
- ↔ Provide cross corridor active mode connection that connects to the station.
- Intersection arrangement that addresses multi-modal priority, safety and legibility.

LEGEND

- Designation Boundary
- Auckland Transport Designation Boundary
- Residential - Single House
- Residential - Mixed Housing Suburban
- Open Space - Informal Recreation
- Open Space - Conservation
- Business - Light Industry
- Indicative Permanent Footprint
- Significant Ecological Area (SEA) - Terrestrial

7.3 NoR 3: New Pine Valley East Station - Urban Design Matters

Table 6 outlines urban design commentary specific to NoR 3.

Table 6: Urban Design Evaluation for NoR 3 – Pine Valley East Station

Principle	Explanation	Application to NoR 3
ENVIRONMENT		
1.1 Support and enhance ecological corridors and biodiversity	<i>Mitigate the effects on or enhance existing ecological corridors through the placement and design of movement corridors</i>	<ul style="list-style-type: none"> Opportunities within the immediate environment of NoR 3 to support ecological connectivity and biodiversity are identified in the <i>North: Assessment of Ecological Effects</i>.
1.2 Support water conservation and enhance water quality in a watershed	<i>Take into account and work with the existing watershed as part of a whole system.</i>	<ul style="list-style-type: none"> Refer to Table 3: Common urban design matters in relation to this design principle.
1.3 Minimise land disturbance, conserve resources and materials	<i>Respect the existing topography, landforms and urban structure in the placement of strategic corridors. Minimise the quantity of hard engineering materials required. Minimise, mitigate any adverse effects of activities on the environment.</i>	<ul style="list-style-type: none"> The station location provides an efficient use of space, taking advantage of where the RTC crosses over New Pine Valley Road on a viaduct. By widening the viaduct in this location, it allows for reduced land take for station facilities in an area that is likely to include high density residential use in the future, maximising opportunities to deliver density that supports the station (and RTC) in the future. Soil classification in this area is LUC 4 and therefore not considered to be highly productive.
1.4 Adapt to a changing climate and respond to the microclimatic factors of each area	<i>Design for predicted future regional climatic impacts in the corridor location. Consider the positive contribution that the orientation of transport corridors can make to the local climate of future places and streets.</i>	<ul style="list-style-type: none"> The station is likely to include areas of space that provide access between the road corridor and the station buildings. Future design stages should consider climate change and respond to the microclimatic features of the area, including taking into consideration the prevailing wind direction, the provision of shade, through landscaping and planting, and architectural design of the station and stormwater management.
SOCIAL		
2.1 Identity and place	<i>The identity or spirit of place is generally acknowledged as the unique amalgam of the inherent built, natural and cultural qualities of a place. Responding to identity in the location and type of new corridors can provide a sense</i>	<ul style="list-style-type: none"> The further identification, development and integration of key local community and identity drivers within NoR 3 should be addressed in future design stages. Key NoR 3 local identity locations and functions include: <ul style="list-style-type: none"> The surrounding development The Wēiti Stream and its tributaries.

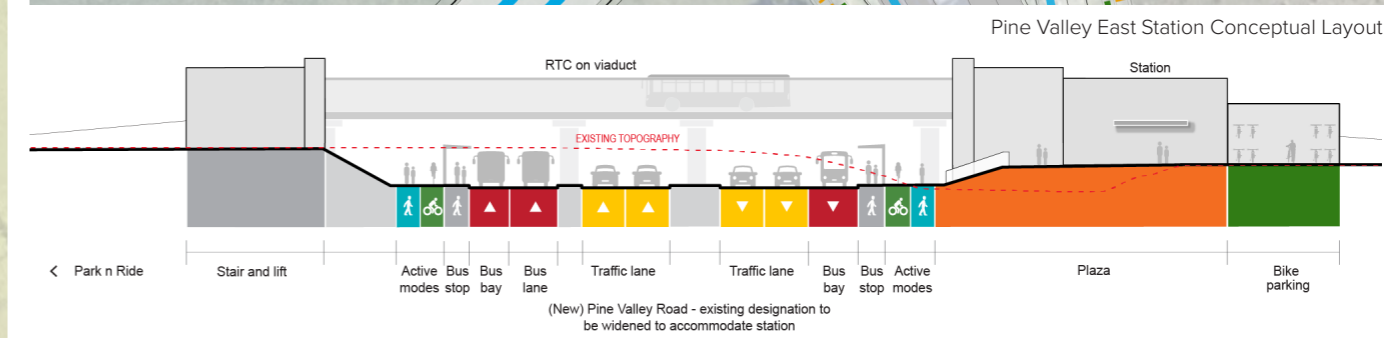
Principle	Explanation	Application to NoR 3
	<p><i>of continuity and contribute to our collective memory.</i></p> <p>Local Identity</p> <p><i>Locate the station facilities to maximise the placemaking potential and enhance local identity.</i></p>	<ul style="list-style-type: none"> ○ Any future local centre that may be co-located with the station. ● Future design stages should demonstrate the project response to both the locational drivers outlined above and placemaking drivers including: <ul style="list-style-type: none"> ○ Improved pedestrian and cyclist connectivity to the local catchment; ○ Interface, modal priority and access arrangements with (New) Pine Valley Road ○ How the park and ride facilities can be integrated into the surrounding land use, including consideration of the carpark form and whether there are opportunities to provide for active frontages as part of the development.
<p>2.2</p> <p>Respect culturally significant sites and landscapes</p>	<p><i>Acknowledge significant sites and features in the layout of movement corridors including ridgelines or horizons.</i></p>	<ul style="list-style-type: none"> ● Refer to Table 3 in relation to this design principle.
<p>2.3</p> <p>Adaptive corridors</p>	<p><i>Corridors should demonstrate flexibility to respond to changes in their function and physical interfaces. Consider an adaptive approach in the way strategic corridors are designed to be able to respond to changes in land use, the way we move around or utilise technology over time.</i></p> <p>Future Growth</p> <p><i>Consider the existing and future movement and place context in the location of bus stations and transport interchange and the ability of the design to accommodate change over time.</i></p>	<ul style="list-style-type: none"> ● The proposed station is located near the northern end of the RTC (NoR 1) and the footprint provides for a station that includes provision for park and ride facilities and a layover space for buses. The footprint of the station provides the opportunity for additional passenger facilities to be provided in the future if required. ● The station has been designed and assessed for bus rapid transit but the station footprint is futureproofed for light rail, thereby future proofing the route to be adaptive for a range of transport options ● The station footprint provides for future flexibility in that the park and ride facilities could change over time and provide for alternative, or more intensive land uses. ● If practicable, future land integration post construction should be considered in the following areas to support any proposed development / redevelopment adjacent to the station, particularly: <ul style="list-style-type: none"> ○ A potential local centre in this location
<p>2.4</p> <p>Social cohesion</p>	<p><i>Provide clear, effective and legible connectivity between community and social functions.</i></p>	<ul style="list-style-type: none"> ● The proposed station can deliver a positive contribution to the sense of belonging and participation, as well as community resilience by supporting access to centres, employment and the wider area via the RTC corridor. ● To enable equitable local connectivity and cross corridor access to the station, active modes crossings should be provided across (New) Pine Valley Road and future local corridors as the design of the designation is refined in the future allowing ease of access to the station for users.

Principle	Explanation	Application to NoR 3
2.5 Safety	<p><i>Provide a safe and convenient network of routes accessible to people of all ages and abilities.</i></p> <p>Universal Access</p> <p><i>Focus on the needs of the customer by placing importance on the spatial requirements that provide for universally inclusive and safe facilities with good physical and visual links.</i></p>	<ul style="list-style-type: none"> Refer to Table 3 in relation to Safety recommendations. In addition to these recommendations, a CPTED audit of the NoR 2 project should address, at a minimum, the current identified CPTED risks including connections between the bus interchange and the station and connections to the proposed Park and Ride and the underbridge environment on (New) Pine Valley Road). The station and surrounding environment, including (New) Pine Valley Road should be designed to provide for universal accessibility, and a universal access audit should be undertaken as the design is refined in the future.
BUILT FORM		
3.1 Align corridors with density	<p><i>Locate stations/stops and corridors within walking distance of higher density development to facilitate modal shift, support commercial and mixed-use centres and contribute to vibrant, active urban environments.</i></p> <p>Active Mode Catchments</p> <p><i>Locate stations and interchange facilities in places that align with areas of greater density and is centred on the active mode catchment.</i></p>	<ul style="list-style-type: none"> The proposed NoR 3 station is located adjacent to future industrial land and FUZ which is anticipated to be developed for residential land use, which is likely to be of higher density. The station may be a future catalyst that drives intensification of dwellings and employment as the area develops. The station in this location presents the opportunity for improved active mode connections within the local road network to facilitate access within the catchment to the station.
3.2 Corridor scaled to the surrounding context and urban structure	<p><i>Align the speed, type and scale of transport corridors and infrastructure with the environment that it moves through (appropriate scale to the context).</i></p> <p>Respond to Land Use</p> <p><i>The size, design and location of the facilities should respond to the adjacent land use and respect natural features. This minimises any 'left over' spaces and disconnected pockets of land that need integration.</i></p>	<ul style="list-style-type: none"> The station is located adjacent to land that is anticipated to be light industrial, and FUZ (anticipated to be future residential). The location and designation boundary of the station provides for flexibility in the design of the station, to allow it to be scaled to adjacent land use as detailed design is refined in the future. The presence of the station is anticipated to enable more intensive, higher density land use within the walkable catchment.
3.3 Facilitate an appropriate interface	<p><i>Facilitate the opportunity for place as well as movement in corridors (people-oriented streets)</i></p>	<ul style="list-style-type: none"> The station designation area has space to provide for place shaping to occur including space for an entrance plaza and connections to the local transport network.

Principle	Explanation	Application to NoR 3
between place and movement		
MOVEMENT		
4.1 Connect nodes	<p><i>Provide tangible connectivity between identified activity nodes.</i></p> <p>Cross Corridor Connectivity</p> <p><i>Balance the functional access requirements across the Project corridor with the optimal location to provide connections into the surrounding area.</i></p>	<ul style="list-style-type: none"> The station is located on the RTC (NoR 1), providing connections to the wider FUZ and beyond. As design of the station continues to be refined in the future, connection to the station across the adjacent road corridors should be resolved to maximise connections into the station.
4.2 Connect modes	<p><i>Provide for choice in travel and the ability to connect at interchanges between modes.</i></p>	<ul style="list-style-type: none"> The station location and layout of land use adjacent to the station should consider legibility and clear wayfinding for all modes to the station from the bus layover, and the adjacent transport network.
4.3 Support access to employment and industry	<p><i>Align the corridor location and typology to provide direct and efficient access to areas of employment and industry.</i></p>	<ul style="list-style-type: none"> The station provides access to the RTC which will provide access to wider nodes of employment and industry.
4.4 Prioritise active modes and public transport	<p><i>Provision of quality active mode corridors and dedicated public transport corridors to enable a modal shift away from private vehicle use.</i></p> <ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Refer to Table 3 in relation to this design principle.
4.5 Support inter-regional connections and strategic infrastructure	<p><i>Consider the location and alignment of significant movement corridors and placement of infrastructure (power, wastewater, water) to the network.</i></p>	<ul style="list-style-type: none"> The station provides access to the RTC (NoR 1) which provides access through to the Albany Metropolitan Centre and beyond via the Northern Busway.
4.6 Support legible corridor function	<p><i>Consider how the corridor can be clearly navigated and understood by users moving from place to place.</i></p>	<ul style="list-style-type: none"> The future design of the station should consider way-finding and universal access as the design progresses. A wider way-finding and route strategy could also be provided within the catchment.
LANDUSE		
5.1 Public transport directed and integrated into centres	<p><i>Locate rapid transit interchanges within centres (local, town and metro) to support a mix of uses and provide modal choice to a larger number of users.</i></p>	<ul style="list-style-type: none"> The Draft Spatial Land Use Strategy for Dairy Flat indicates that there is the potential for a small local centre to be developed in co-location with the Pine Valley East Station.

Principle	Explanation	Application to NoR 3
5.2 Strategic corridors as urban edges	<i>Strategic corridors as potential definers of a land use edge.</i>	<ul style="list-style-type: none"> This principle is not directly relevant to the Pine Valley Station project corridor as set out in Table 3.

7.3.1 NoR 3: New Pine Valley East Station – Outcome and Opportunities Map



NOR 3 - PINE VALLEY EAST STATION

OUTCOMES AND OPPORTUNITIES PLAN SHEET 1 OF 1

- Outcomes
- Opportunities

- Ecological connectivity** - Landscape outcomes should reinforce the wider vegetation patterns of the local open spaces and support ecological connectivity and biodiversity where the corridor crosses Weiti Stream and its tributaries.
- Identity drivers** - Key local community, landscape character and identity drivers should be identified, developed and integrated with the adjacent land use functions and future design response, including future land use and local centres and nearby Weiti Stream.
- CPTED** - Future design should incorporate CPTED principles including clear sightlines, good levels of lighting and passive surveillance, particularly at intersections and the connection between the station, park and ride facilities and bus interchange.
- Active mode permeability** - Corridor permeability for active modes that addresses cross corridor connectivity (midblock crossings), modal priority and permeable access to the station.
- Active mode legibility and priority** - Legibility, connectivity demands, safety and modal priority for active modes should be addressed at intersections.
- Earthworks** - Minimise Earthworks & Level changes at corridor boundaries & Interfaces with future development areas to enable integration with adjoining future landuse. Use retaining structures in areas where space is insufficient to deploy earthworks batters or where earthworks negatively impacts the efficiency of adjacent landuses. Where mass planting is proposed on batters, use native ecologically appropriate species.
- Design the station and interchange to respond to the adjacent landuse** - Future detailed design of the station should integrate the station with the local area and contribute positively to the public realm of Pine Valley East.
- Create a positive user experience** - Future detailed design of the station should be easy and safe to access, and be designed to create a positive user experience.
- Co-locate a possible future centre** - There is the opportunity for a local centre to be established in Pine Valley East. This should be co-located with the station to promote density and more intensive land use in close proximity to the station.
- Enable more intensive development adjacent to the Pine Valley East Station** - The provision of a station on a rapid transit corridor provides the opportunity to provide for more intensive land use activities within the walkable catchment of the station, increasing access to the service.
- Connect to the station** - To enable connected and legible communities, the local transport network should provide clear and direct access to future stations that prioritises access via active modes and public transport.
- Activate the interface of the park and ride** - Consideration should be given to how the proposed park and ride interfaces with the adjacent land use and how this interface could be activated to provide a positive interface with the adjacent development and public realm.

OUTCOMES

- Establish land use integration / interface that enables buildings and spaces to positively address and integrate with the corridor.
- Establish an interface that positively addresses adjacent industrial, business and mixed use zones including consideration of amenity and surveillance for active mode users.
- Establish an interface that enables buildings and spaces in the town centre to positively address and integrate with the corridor.
- Establish landscape outcomes that provides an appropriate interface to the blue and green network using native and ecologically appropriate planting.
- Provide cross corridor active mode connection that connects to the station.
- Intersection arrangement that addresses multi-modal priority, safety and legibility.

LEGEND

- Designation Boundary
- Existing Auckland Transport Designation Boundary (1479 & 1480)
- Future Urban Zone - FUZ
- Significant Ecological Area (SEA) - Terrestrial
- Indicative footprint of Pine Valley East Station park and ride and bus layover
- Blue network
- Open Watercourse
- Potential Future Local Centre