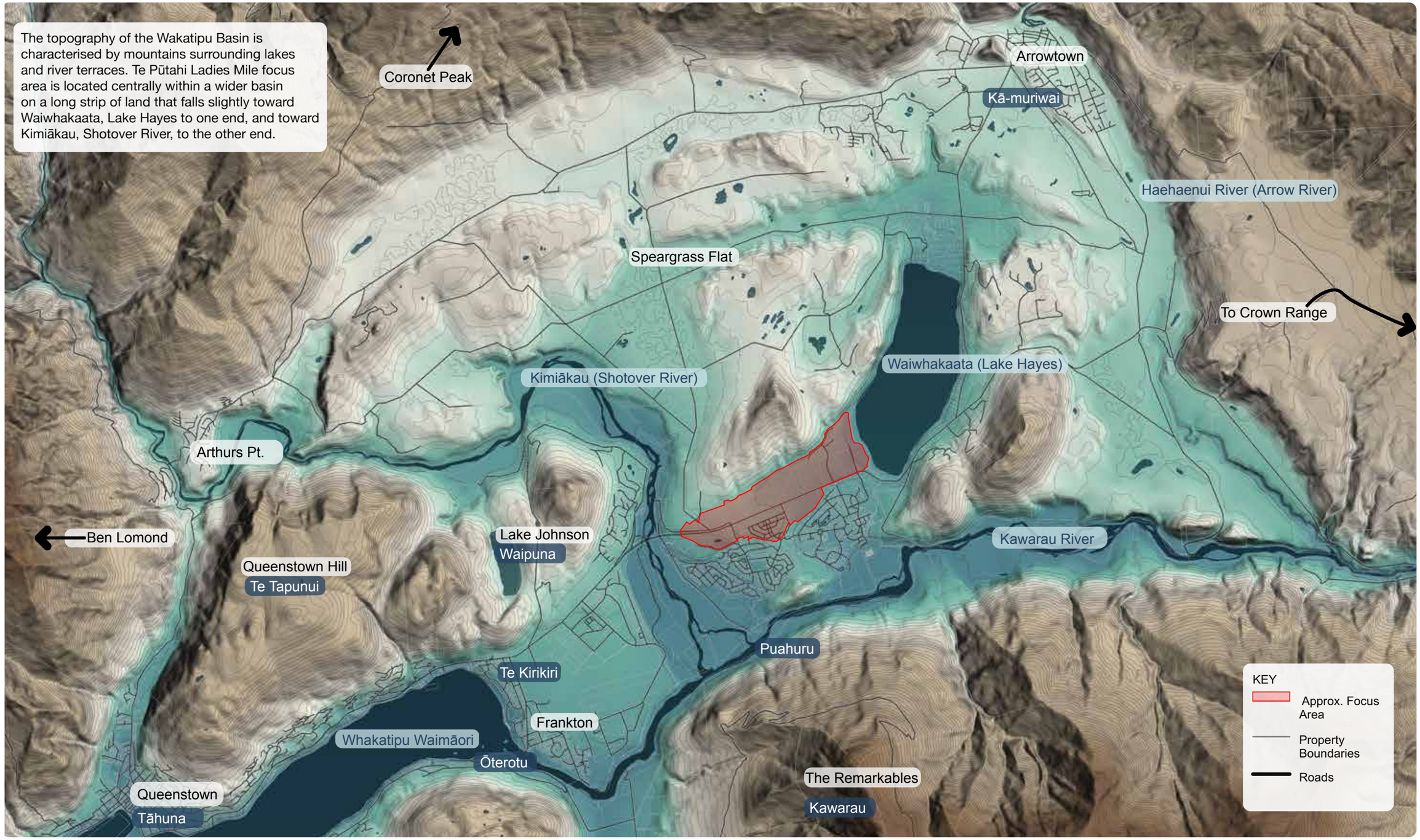
Context Analysis

Whakatipu Basin Landform



Geological History

A Tectonic and Glacial History

Tectonic movements have resulted in the basin and range topography of the Otago area. The Whakatipu region was heavily glaciated over the last 2 million years. As the ice retreated from the Whakatipu basin, Lake Wakatipu began to form, leaving sandy and silty till over the bedrock surfaces. Deposits of the Shotover fan/delta isolated Lake Hayes as levels fell.

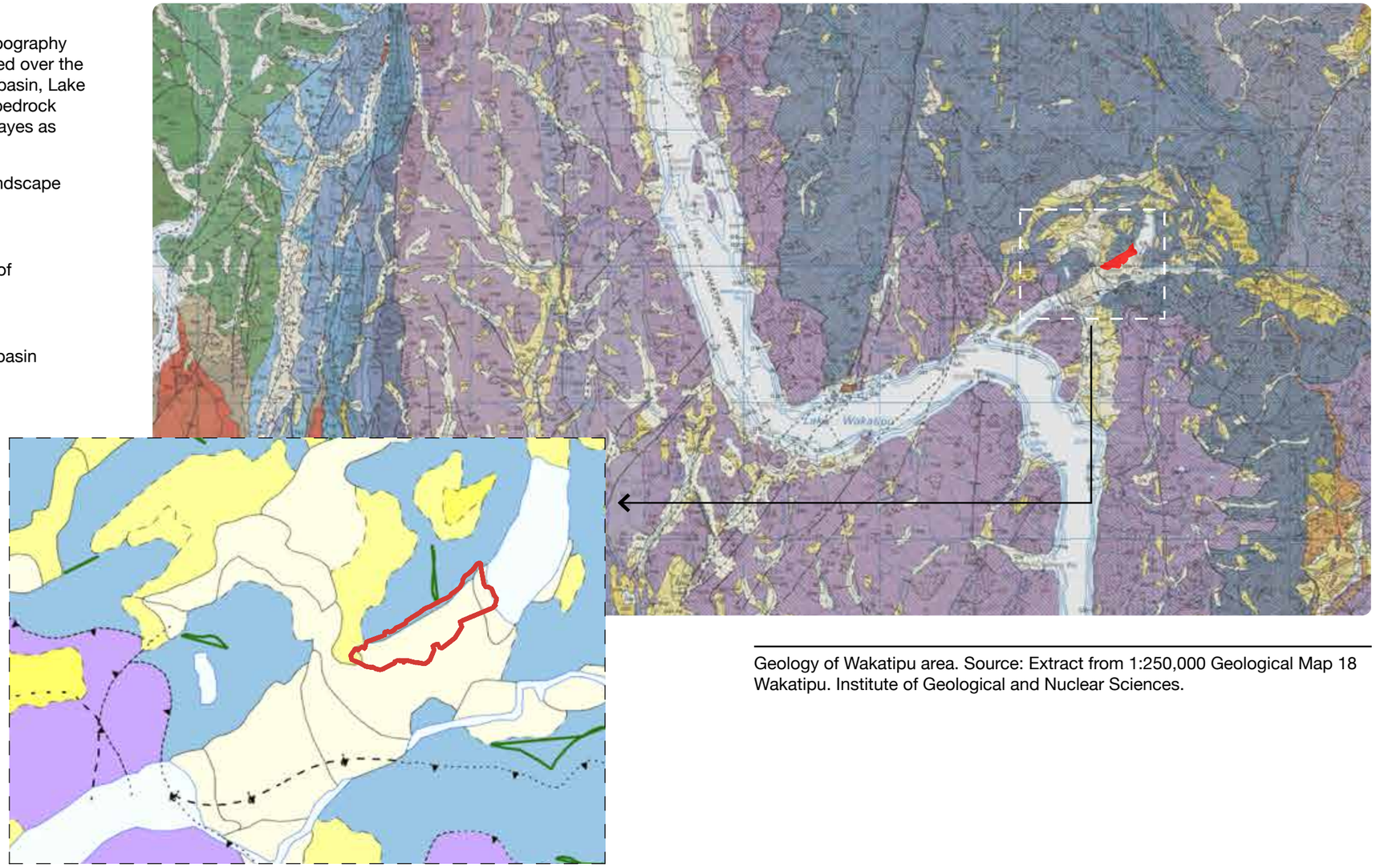
These distinct landforms are strong features of the current landscape character of the area.

Schist

The basement rock type in the basin is Otago Schist formed of sedimentary rocks.

Till & Alluvium

Outwash plains & lake silt form fans and terraces across the basin particularly in the Frankton/Kawarau River area.



Map showing geology of Ladies Mile and surrounding area.
Source: Geology NZ Webmap: data.gns.cri.nz/geology/

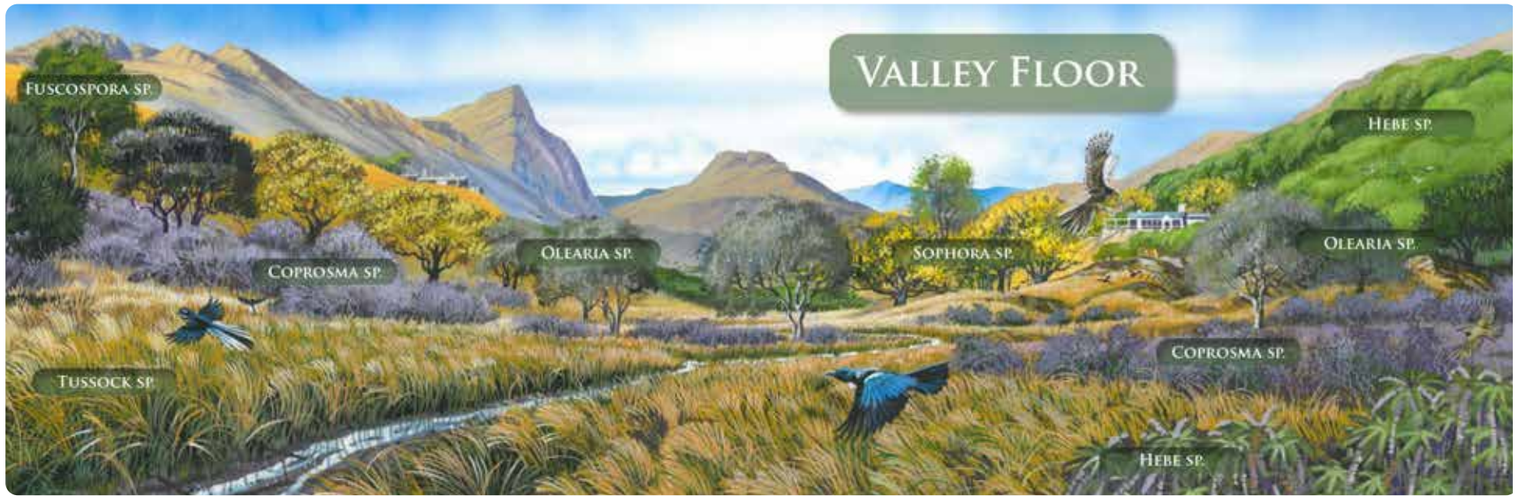
Geology of Wakatipu area. Source: Extract from 1:250,000 Geological Map 18 Wakatipu. Institute of Geological and Nuclear Sciences.

Ecological History

Original Ecologies

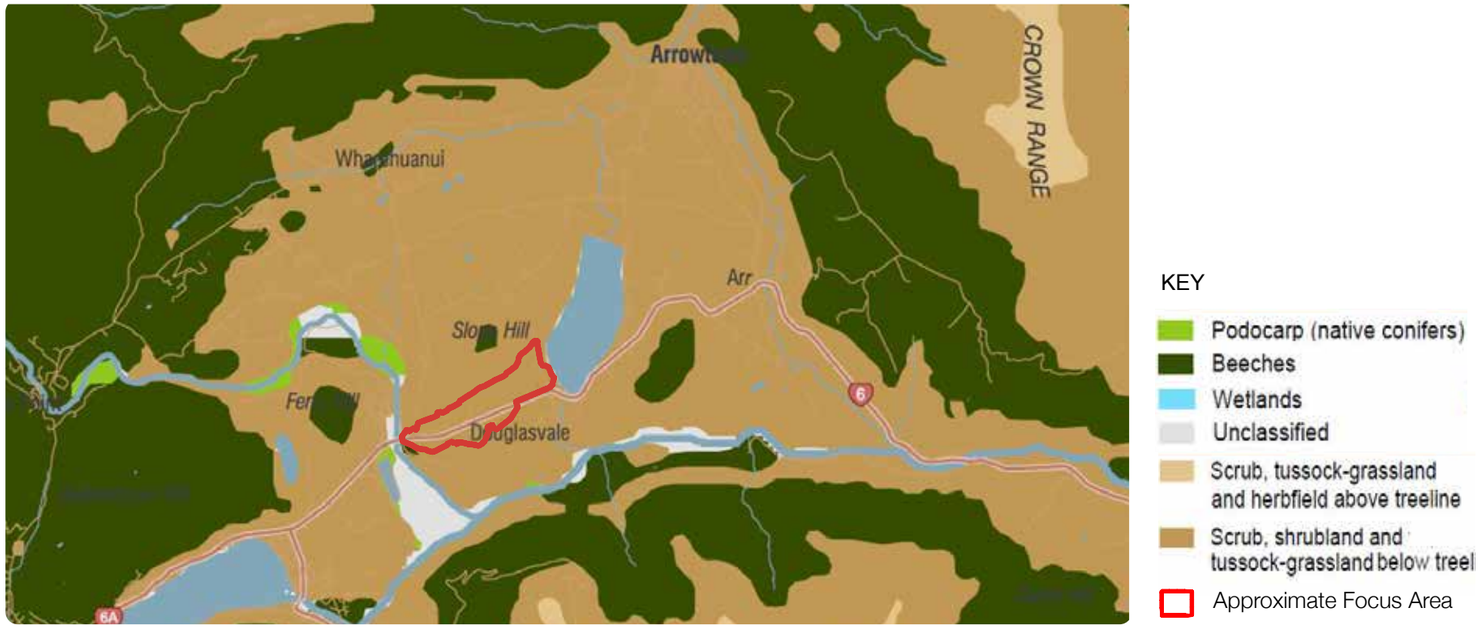
The original vegetation of Te Pūtahi Ladies Mile would have likely been scrub, shrubland and tussock-grassland. Native forests in the area were predominantly Beech and broadleaf-podocamp forests. Kowhai would have also been a dominant species.

The Lakeshore of Lake Hayes would have been a wetland comprised of native sedges, flax and toi toi amongst others. This diverse array of plant species would have provided numerous sources of food and habitat for native birds, lizards, bats and insects.



Illustrated visualisation of suggested native planting for the Wakatipu Basin valley floor. Source: The Wakatipu Reforestation Trust: Growing-Native-Plants-In-The-Wakatipu.pdf

Photograph from Pigeon Island, Lake Wakatipu (date not specified). Source: Hocken Collection, University of Otago, c/n E3104/32



Expected original vegetation of the Wakatipu Basin. Source: Statement of Evidence of Glenn Alister Davis on behalf of QLDC: Ecology - Wakatipu Basin Variation Area 28 May 2018. P10. Image retrieved from: Landcare Reseach Limited 2016

Local Ecology

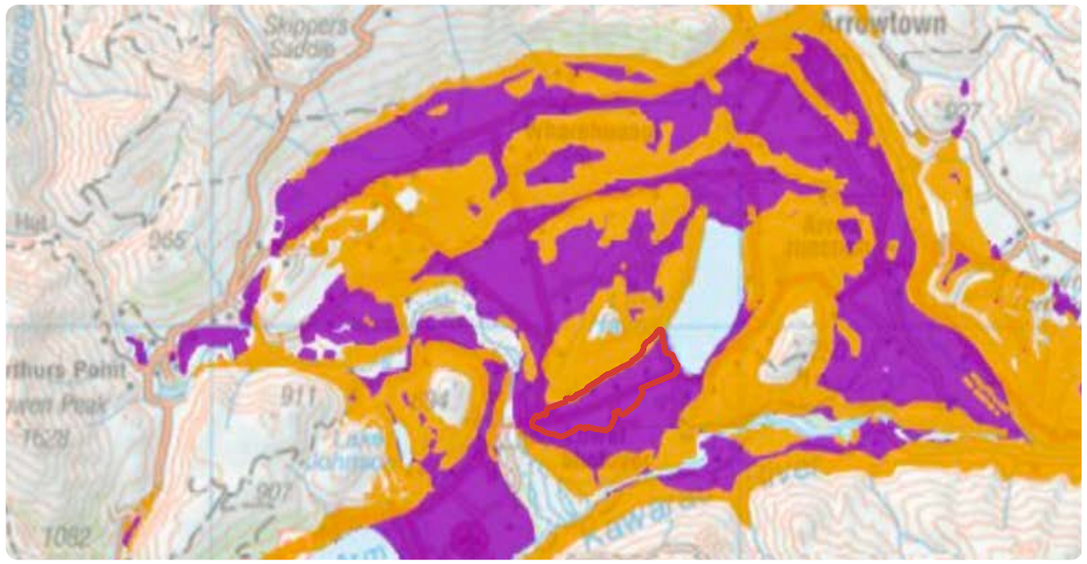
Existing ecosystems and planting

The District contains a high proportion of exotic planting and grasslands that do not support indigenous plants or animals. However, Indigenous biodiversity is an important component of ecosystem services and the District's landscapes. There is a diverse range of habitats that support indigenous plants and animals across the basin. These include forests, shrubland, herbfields, tussock grasslands, wetlands, lake and river margins.

Te Pūtahi Ladies Mile Focus Area has very limited Indigenous planting and habitat. Historical and present-day activities in the area has resulted in a biological environment now dominated by exotic pasture and introduced trees. The remnants of indigenous ecosystems that persist within the Basin are typically small, isolated, and degraded.

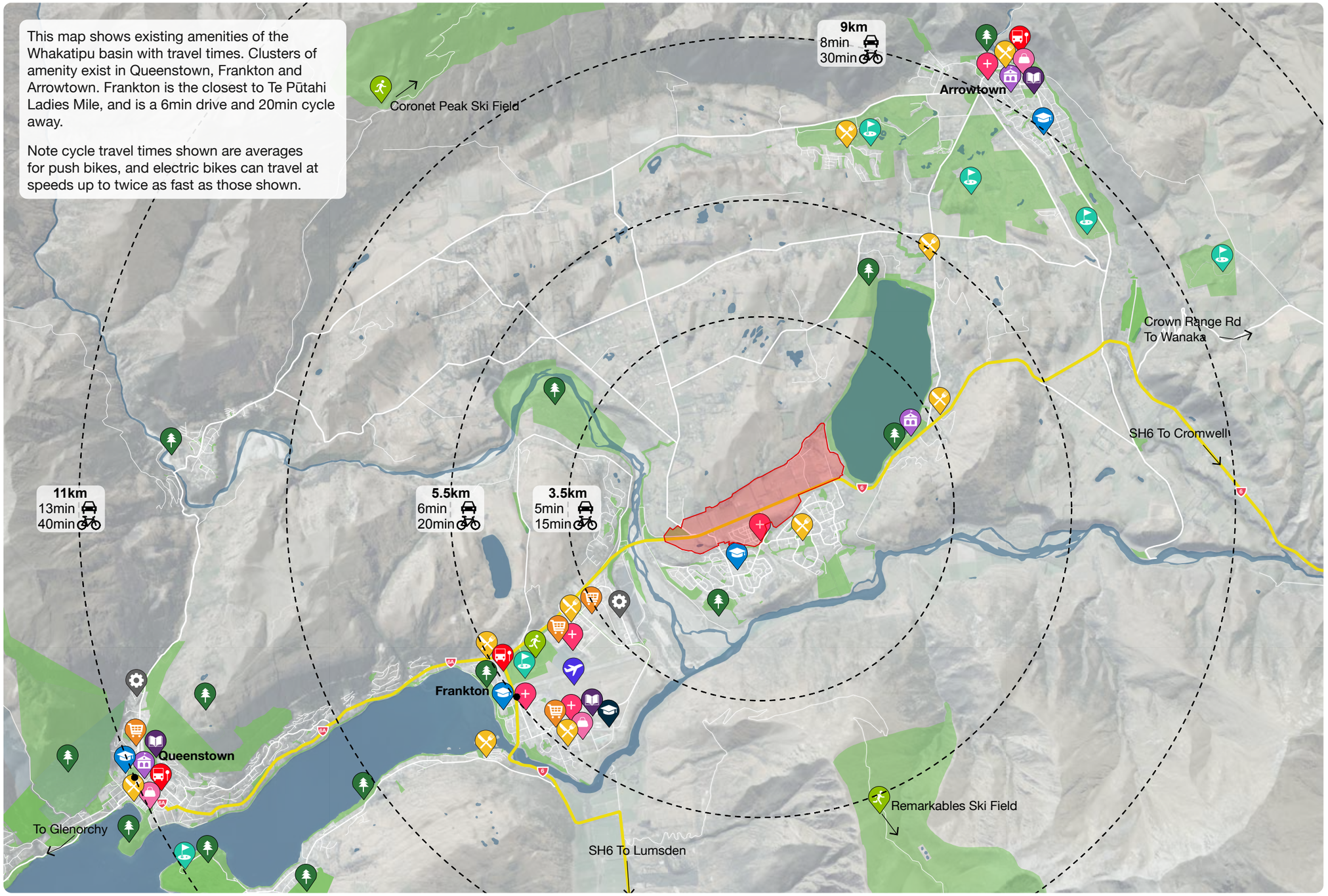
This presents an opportunity to improve the presence of indigenous ecosystems at Te Pūtahi Ladies Mile.

Current vegetation of the Wakatipu Basin. Source: Statement of Evidence of Glenn Alister Davis on behalf of QLDC: Ecology - Wakatipu Basin Variation Area 28 May 2018. P13. Image retrieved from: Landcare Reseach Limited 2016.



Threatened Indigenous vegetation and biodiversity. Source: Queenstown Lakes District Council - Proposed District Plan Decisions Version (April 2020). P33-23.

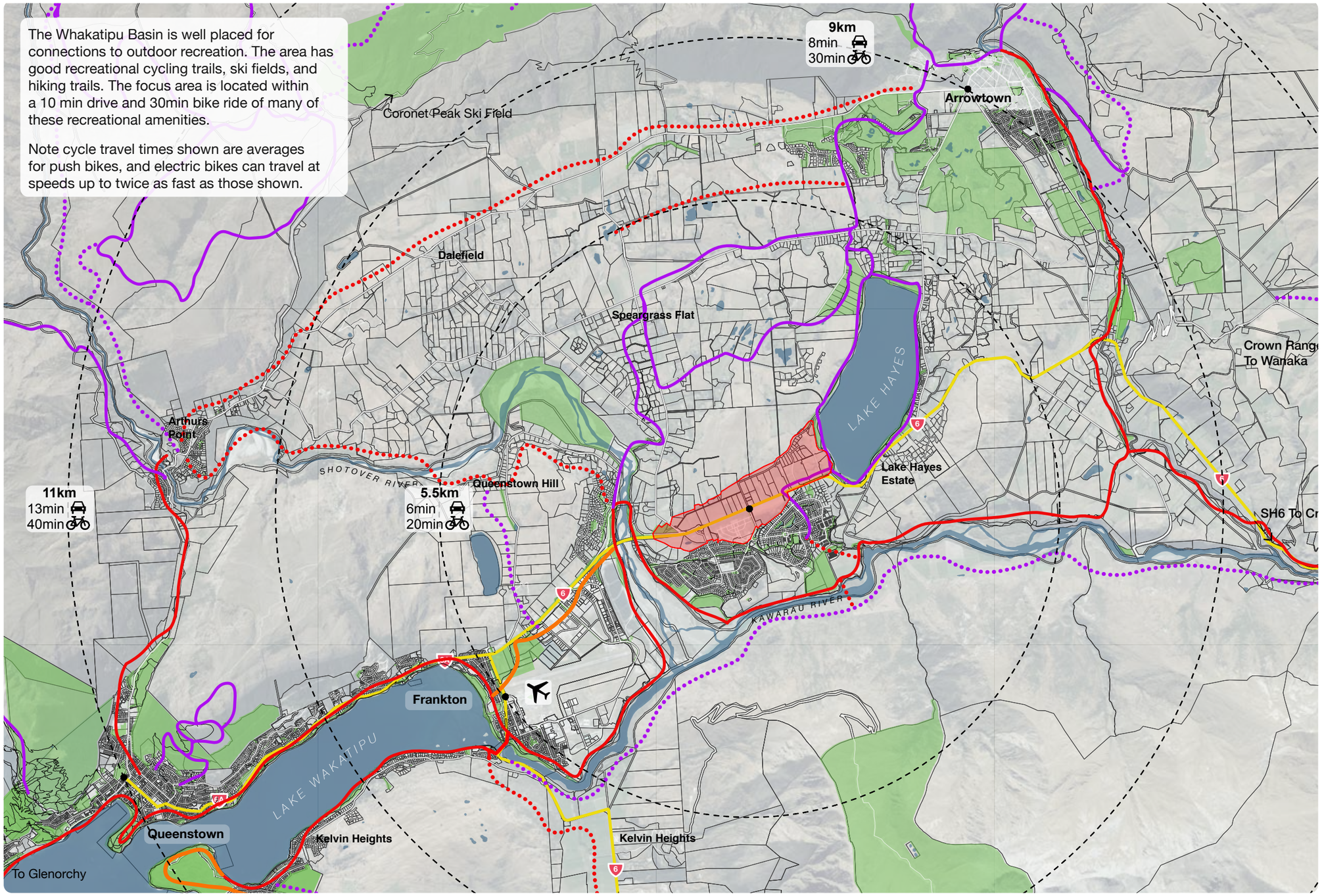
Existing Amenities



Trails and Recreation

The Whakatipu Basin is well placed for connections to outdoor recreation. The area has good recreational cycling trails, ski fields, and hiking trails. The focus area is located within a 10 min drive and 30min bike ride of many of these recreational amenities.

Note cycle travel times shown are averages for push bikes, and electric bikes can travel at speeds up to twice as fast as those shown.



KEY

- Existing Main Connector Trail
- Proposed Main Connector Trail
- Existing Secondary Connector Commuter Trail
- Existing Recreational Trails
- Proposed Recreational Trails
- Existing Open Space
- State Highway

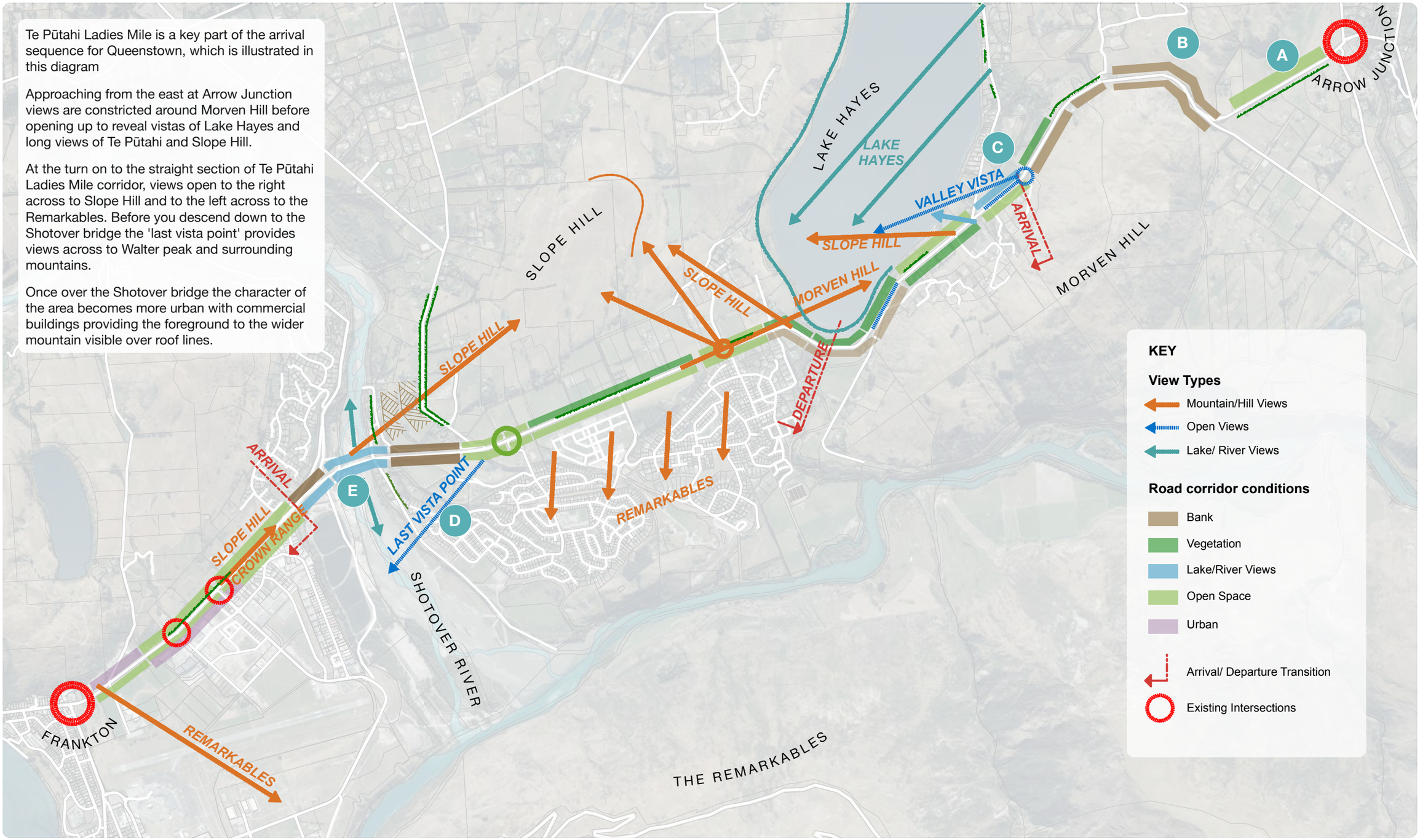
Views and Arrival

Te Pūtahi Ladies Mile is a key part of the arrival sequence for Queenstown, which is illustrated in this diagram

Approaching from the east at Arrow Junction views are constricted around Morven Hill before opening up to reveal vistas of Lake Hayes and long views of Te Pūtahi and Slope Hill.

At the turn on to the straight section of Te Pūtahi Ladies Mile corridor, views open to the right across to Slope Hill and to the left across to the Remarkables. Before you descend down to the Shotover bridge the 'last vista point' provides views across to Walter peak and surrounding mountains.

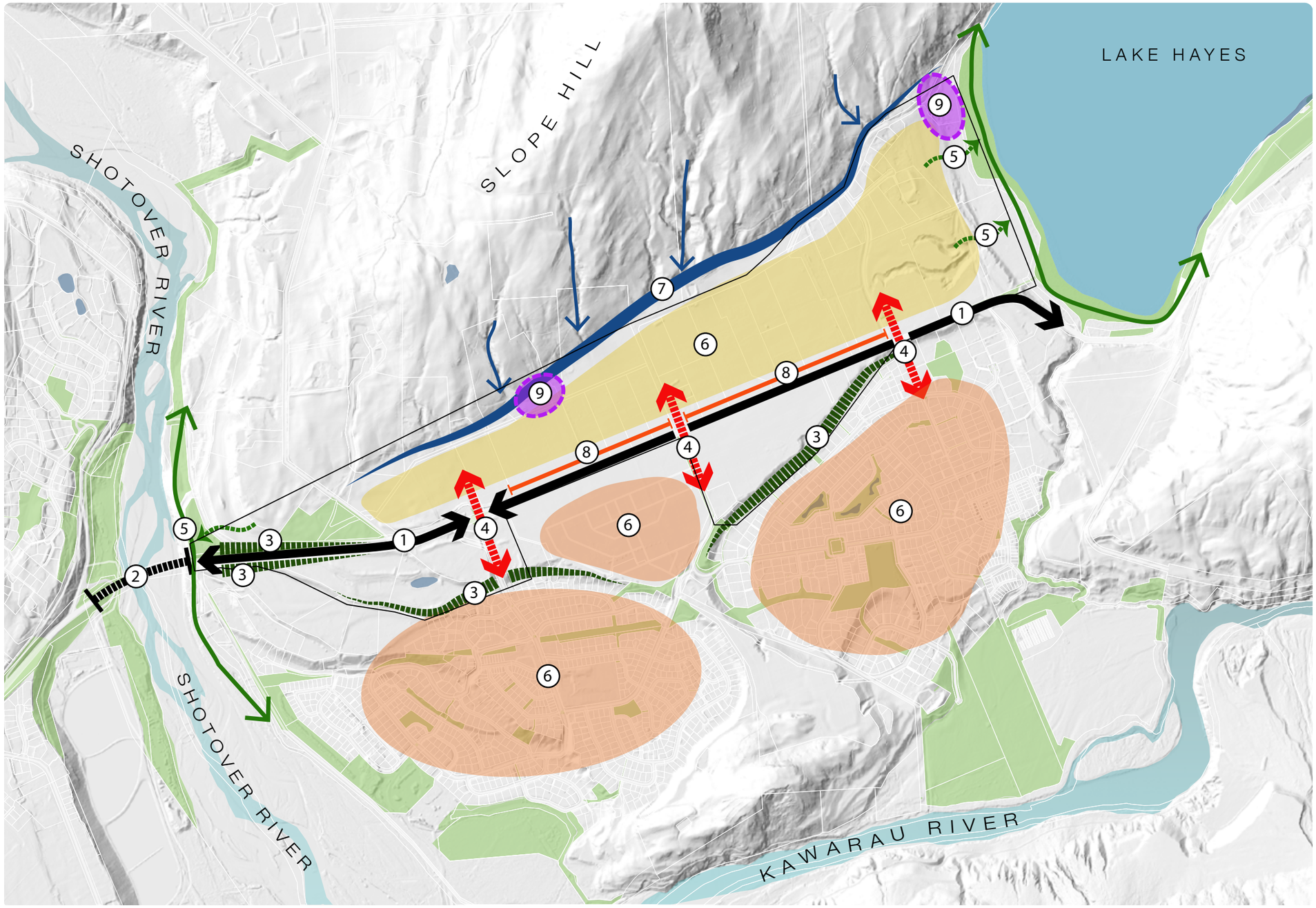
Once over the Shotover bridge the character of the area becomes more urban with commercial buildings providing the foreground to the wider mountain visible over roof lines.



Arrival View Sequence

Source: Google Maps Street View 2020

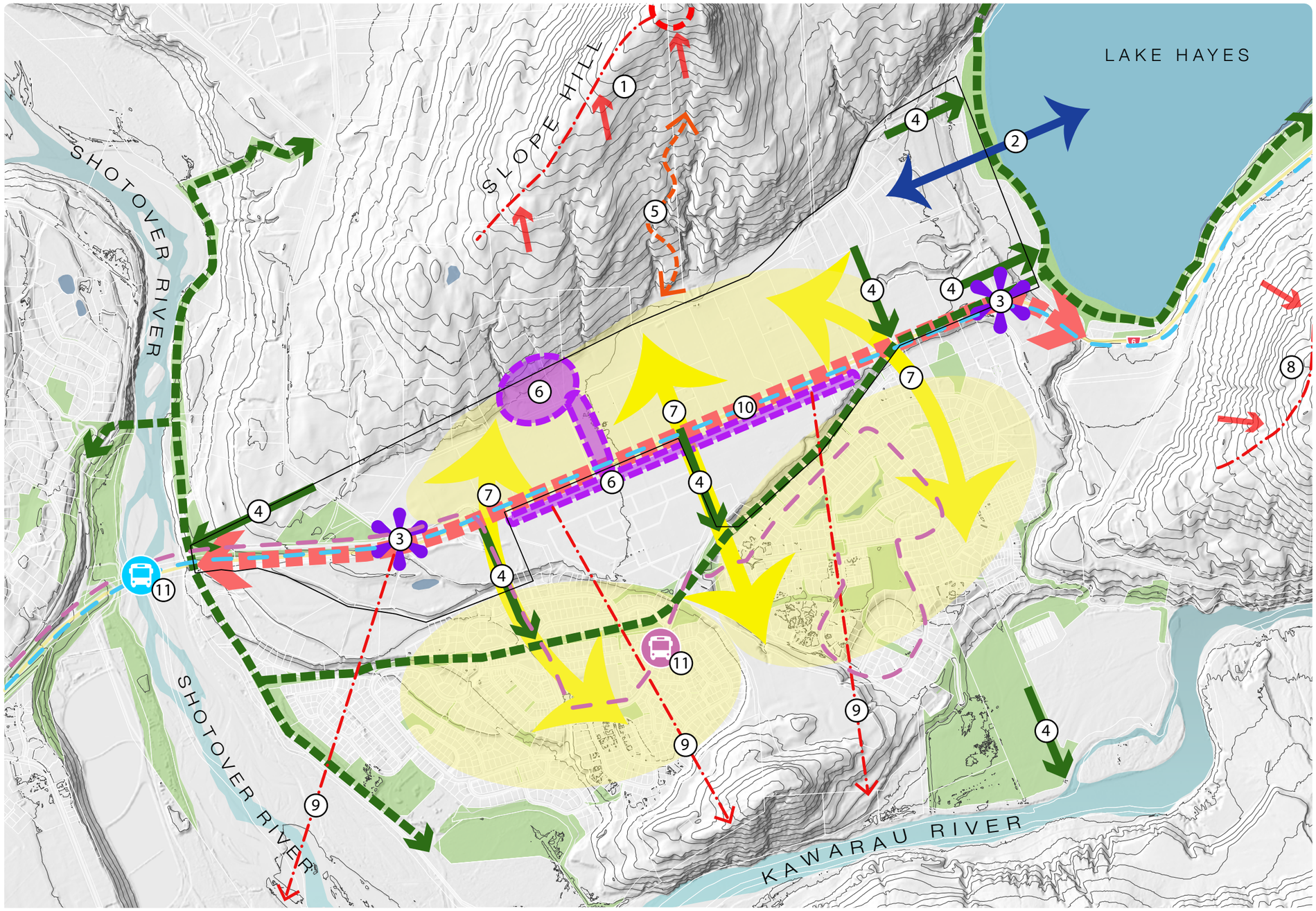
Existing Physical Constraints



KEY

1. High speeds along SH6 (80-100km/h)
2. Choke point for traffic at bridge
3. Steep embankment
4. Poor connectivity across SH6
5. Poor connectivity to existing trail network
6. Existing communities with limited social infrastructure
7. Stormwater-related constraints along base of hill
8. Shelterbelt trees are a visual barrier
9. Existing protected features and trees

Existing Opportunities



KEY

1. Maintain views to Slope Hill (Outstanding Natural Feature)
2. Enhance connection to Lake Hayes
3. Potential Gateway to Ladies Mile
4. Create links to existing trails network
5. Potential new access up Slope Hill
6. Retain existing homestead and notable trees
7. Connect existing residential neighbourhoods to new development and amentities
8. Views to ridgelines
9. Views to The Remarkables and surrounding mountains
10. Reduce speed along SH6 and create cycleway and walkway
11. Connect into existing Bus networks