Appendix C7 Frankton Design Report

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Frankton Design Report

Document Prepared by Jasmax for
Waka Kotahi NZTA

14 September 2020

Rev D

F2Q SSBC

JASMAX

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Date	Revision	Description	Drawn	Checked	Approved
28/08/2020	-	Internal issue	[redacted]	[redacted]	[redacted]
02/09/2020	Rev A	Internal issue	[redacted]	[redacted]	[redacted]
07/09/2020	Rev B	Internal issue	[redacted]	[redacted]	[redacted]
08/09/2020	Rev C	BC issue	[redacted]	[redacted]	[redacted]
14/09/2020	Rev D	BC update	[redacted]	[redacted]	[redacted]

Site and Context

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State highway network

Existing highway network

6

6a

Frankton Rd

Frankton-Ladies Mile Hwy

Hansen Rd

Hawthorne Dr

Grant Rd

Joe Oconnell Dr

McBride St

Kawarau Rd

Lucas Pl

Hawthorne Dr

Peninsula Rd

6

Kingston Rd

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Land use and key features

Existing

Lake Johnson

Quail Rise

Shotover Bridge

Lake Hayes Estate

Lower Shotover

Shotover River

Glenda Drive Industrial Estate

Five Mile Shopping Centre

6

6a

Frankton Village

Queenstown Events Centre and Recreation Grounds

Frankton Camp Ground

Frankton Golf Course

Queenstown Airport

Frankton Arm

Remarkables Primary School

Wakatipu High School

Remarkables Park Shopping Centre

Kawarau River

Remarkables Ski Field access road

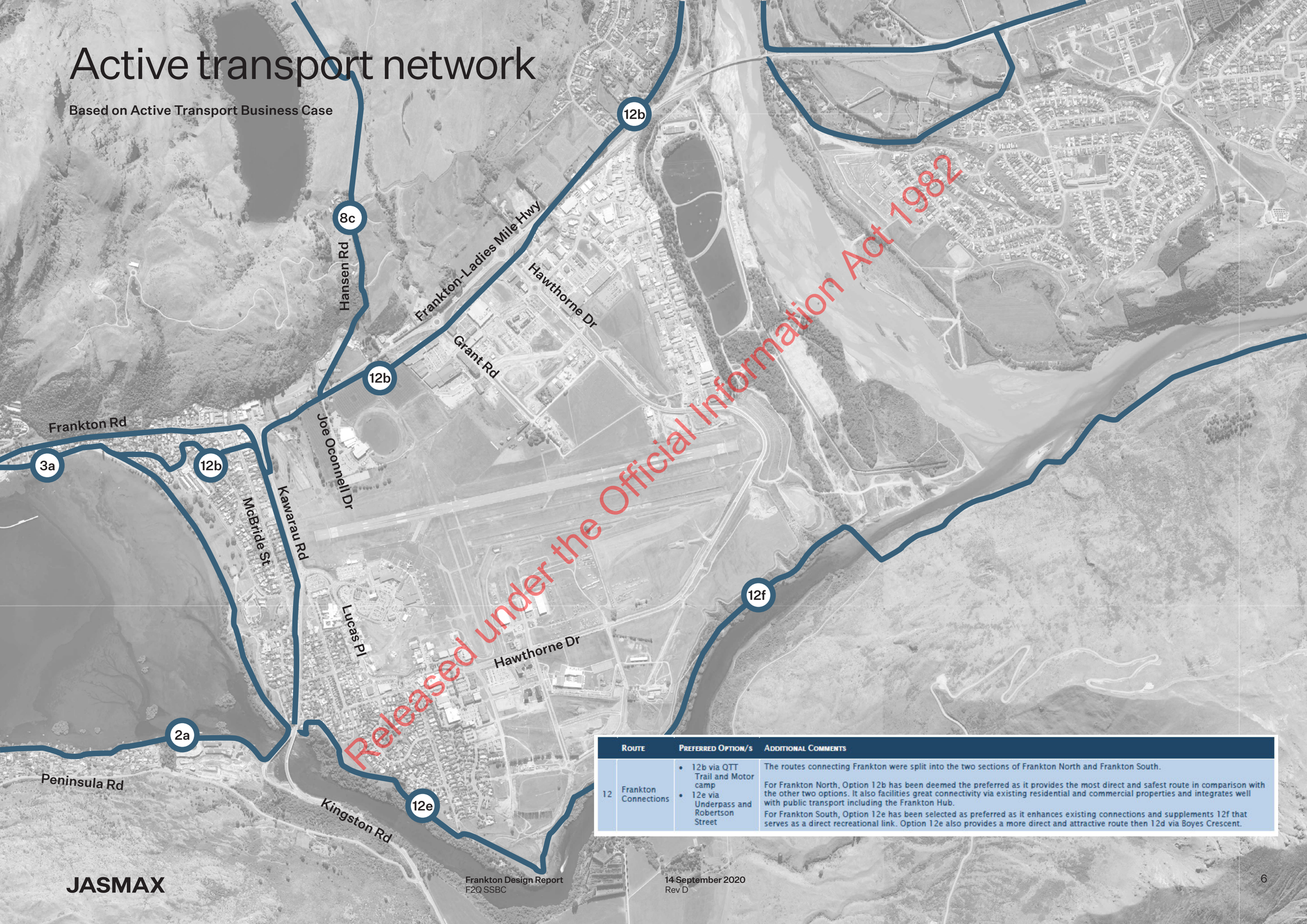
Kawarau Bridge

Kelvin Heights

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Active transport network

Based on Active Transport Business Case



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	Route	Preferred Option/s	Additional Comments
12	Frankton Connections	• 12b via QTT Trail and Motor camp • 12e via Underpass and Robertson Street	The routes connecting Frankton were split into the two sections of Frankton North and Frankton South. For Frankton North, Option 12b has been deemed the preferred as it provides the most direct and safest route in comparison with the other two options. It also facilities great connectivity via existing residential and commercial properties and integrates well with public transport including the Frankton Hub. For Frankton South, Option 12e has been selected as preferred as it enhances existing connections and supplements 12f that serves as a direct recreational link. Option 12e also provides a more direct and attractive route then 12d via Boyes Crescent.

Frankton master plan Information provided

KEY

Masterplan area

MOVEMENT NETWORKS

- Public transport route/stops (separated lanes or priority)
- Orbital bus route/stops
- Gondola lines/base station (private)
- Ferry route/stops
- Street network
- Active travel network (walking and cycling)
- New road corridor
- Freight route
- Bridge crossing (Active travel and/or public transport)
- 400m (5min) walking distance
- PR Park and Ride

Note: Dashed routes subject to further investigation

CONSTRAINTS

- Airport noise contours (existing)
- Transmission lines

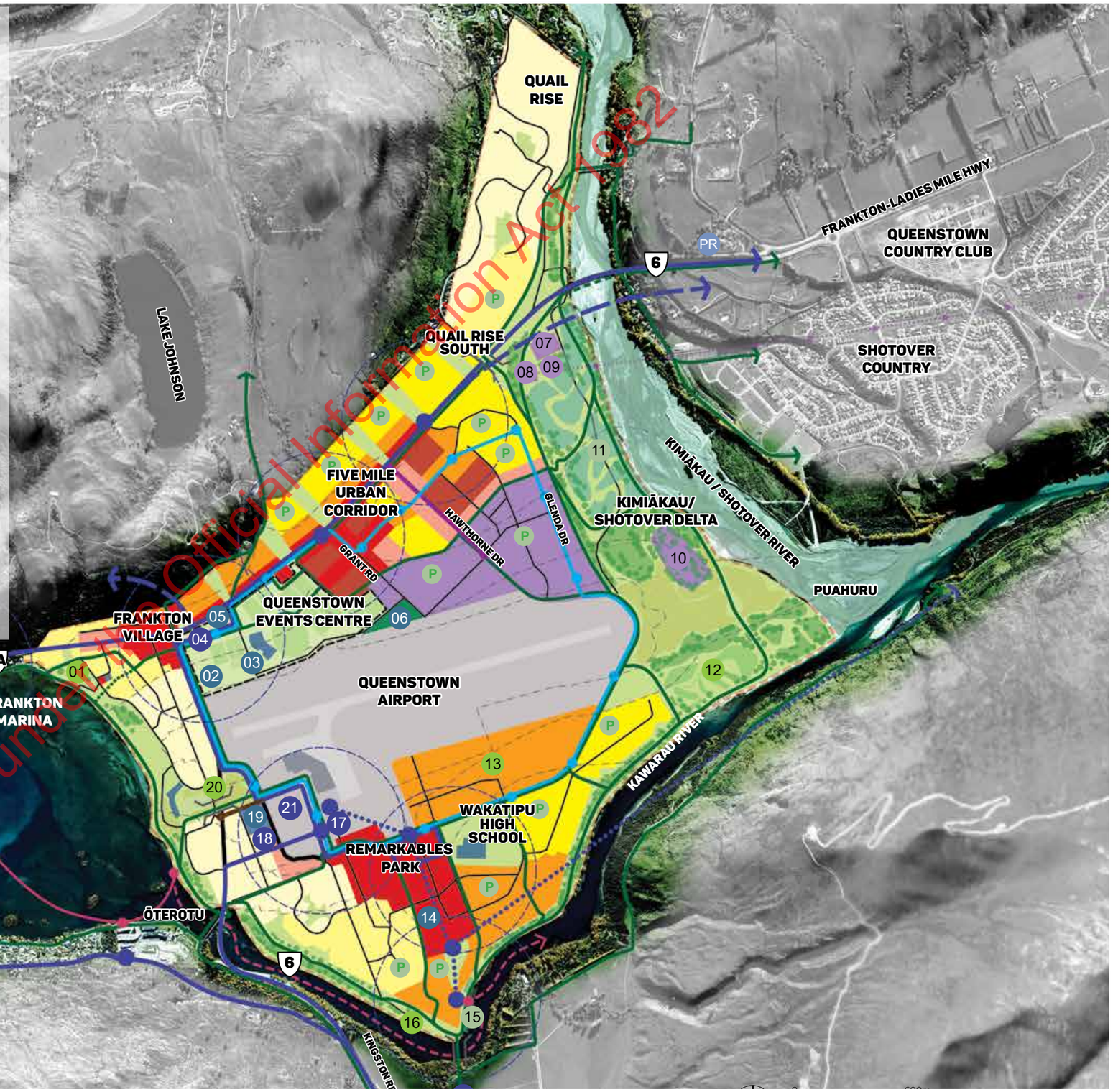
LAND USE

- Higher density residential
- Medium density residential
- Lower density residential
- Mixed use (includes residential)
- Small to medium format retail
- Large format retail
- Commercial (excludes residential)
- Light industrial and utilities
- Community facilities (buildings)
- Queenstown Airport Corporation (subject to separate process)
- Active open space
- QEC Recreation Masterplan area (subject to separate process)
- Passive open space
- P Urban park (location and size subject to levels of service)
- Native revegetation
- Tussockland/wetland

Note: Land use mix assumes removal of crosswind runway

22 KEY FEATURES

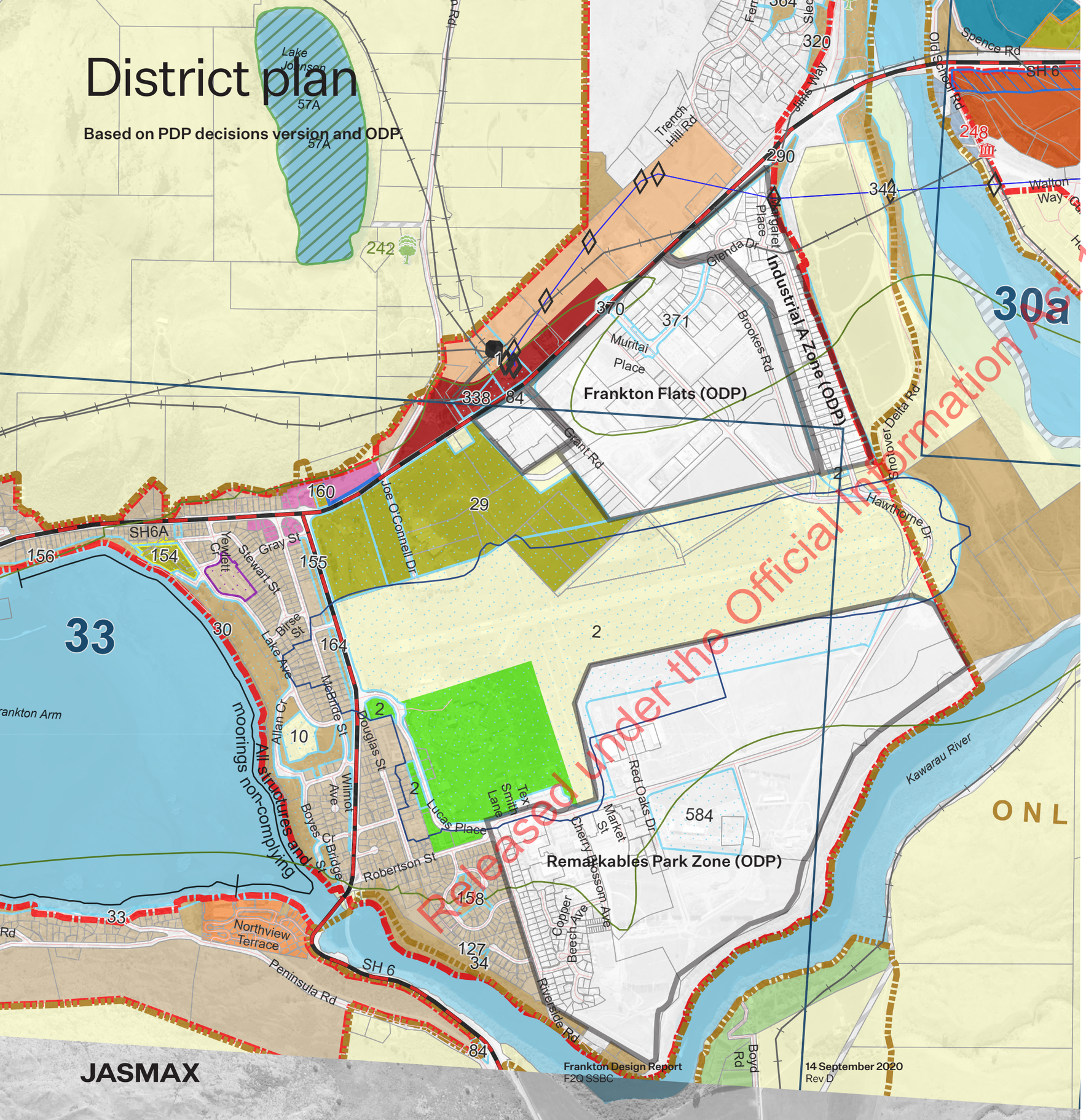
01 Frankton Campground redevelopment
02 Emergency precinct
03 Events centre extension
04 Public transport interchange (estimated location)
05 Community hub
06 Arranmore/McBride Farm heritage precinct
07 Wastewater treatment plant expansion
08 Transmission line substation
09 Resource recovery centre
10 Wastewater ground filtration
11 Mahika Kai wetland areas
12 Proposed golf course
13 Mixed use (excludes noise sensitive activities)
14 Conference and arts centre
15 Quayside waterfront and jetty
16 Frankton Gardens
17 Regional coach hub
18 Humphrey St extension
19 Lakes District Hospital (long-term relocation)
20 Airport-lake link bridge
21 PT and QAC traffic only
22 Potential future PT route



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District plan

Based on PDP decisions version and ODP

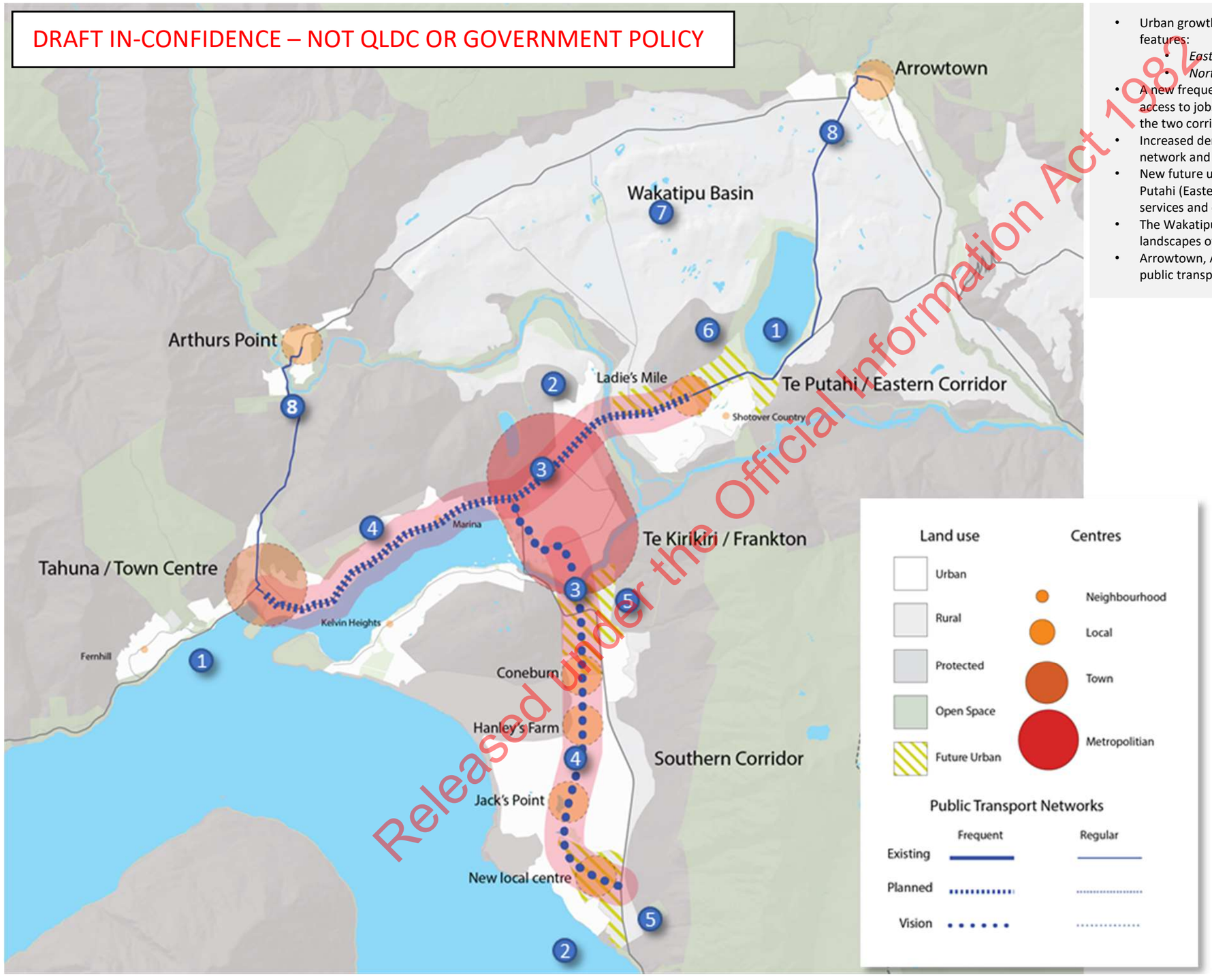


Legend

- Transpower Pylons
- Transpower AC Substation
- Historic Heritage Features
- Protected Tree
- Protected Avenue of Trees/Other Vegetation
- Aurora Distribution Lines – For Information Only
- Transmission Corridor
- Queenstown Airport Air Noise Boundary (Ldn65)
- Queenstown Airport Outer Control Boundary (Ldn55)
- Roads
- State Highway
- Ridge/Escarpment Line
- Parcel/Road Boundary
- Specific Rules Apply
- Landscape Classification (ONF,ONL,RCL)
- Urban Growth Boundary
- Significant Natural Area
- Unformed Roads
- Designated Areas
- Building Restrictions
- Visitor Accommodation Sub-Zone
- Community Purpose - Campground
- Community Purpose - Cemetery
- Business Mixed Use
- Airport Zone
- Community Purposes
- Informal Recreation
- Nature Conservation
- Wakatipu Basin Lifestyle Precinct
- Wakatipu Basin Rural Amenity Zone
- Local Shopping Centre
- Large Lot Residential A
- High Density Residential
- Medium Density Residential
- Lower Density Suburban Residential
- Rural
- Rural Lifestyle
- Rural Residential
- Water (zone Rural unless otherwise shown)

Spatial plan

Information provided

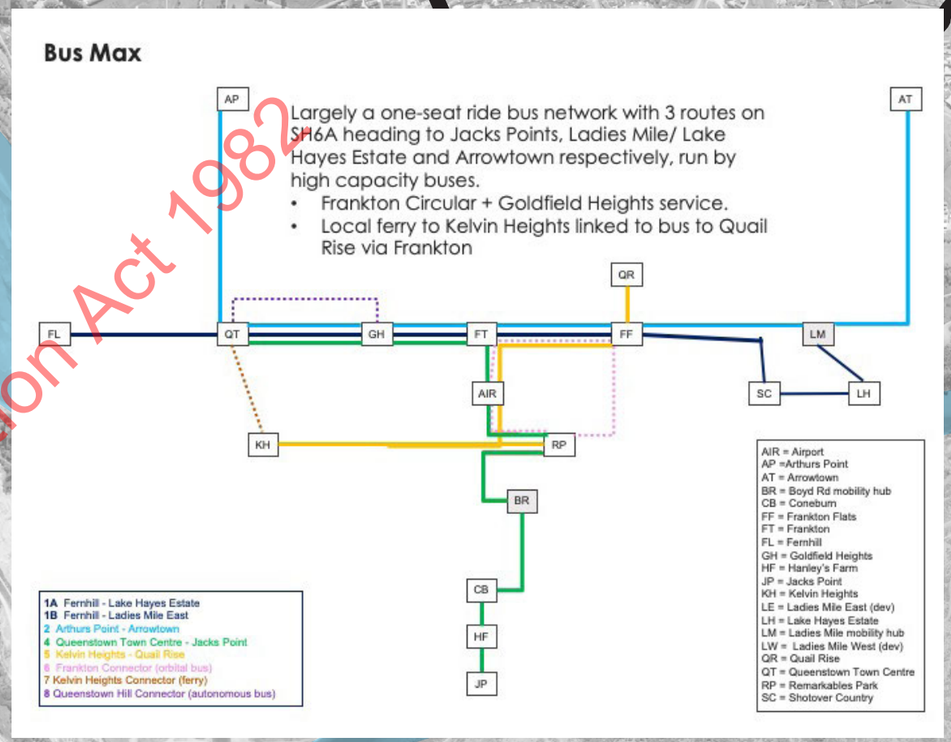


- Urban growth of Queenstown is consolidated within two corridors, framed by natural features:
  - *East – West*: from the Town Centre to Lake Hayes / Waiwhakaata (1)
  - *North - South:* from Frankton to Homestead Bay (2)
- A new frequent public transport network (3) connects mixed use centres, providing access to jobs, schools and major community facilities (events centre, hospital) across the two corridors
- Increased density is enabled within a walkable catchment of the frequent transport network and in new and established centres (4)
- New future urban areas build on existing developments within the Southern (5) and Te Putahi (Eastern) Corridors (6) – creating a critical mass to support public transport, local services and community facilities
- The Wakatipu Basin is protected from urban development – retaining the character and landscapes of significant value to the area (7)
- Arrowtown, Arthurs Point and Kingston / Takerehaka are connected by regular public transport (8)

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Public transport network

New PT network- indicative route map based on Bus Max network



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Events centre master plan

Information provided



Events centre master plan

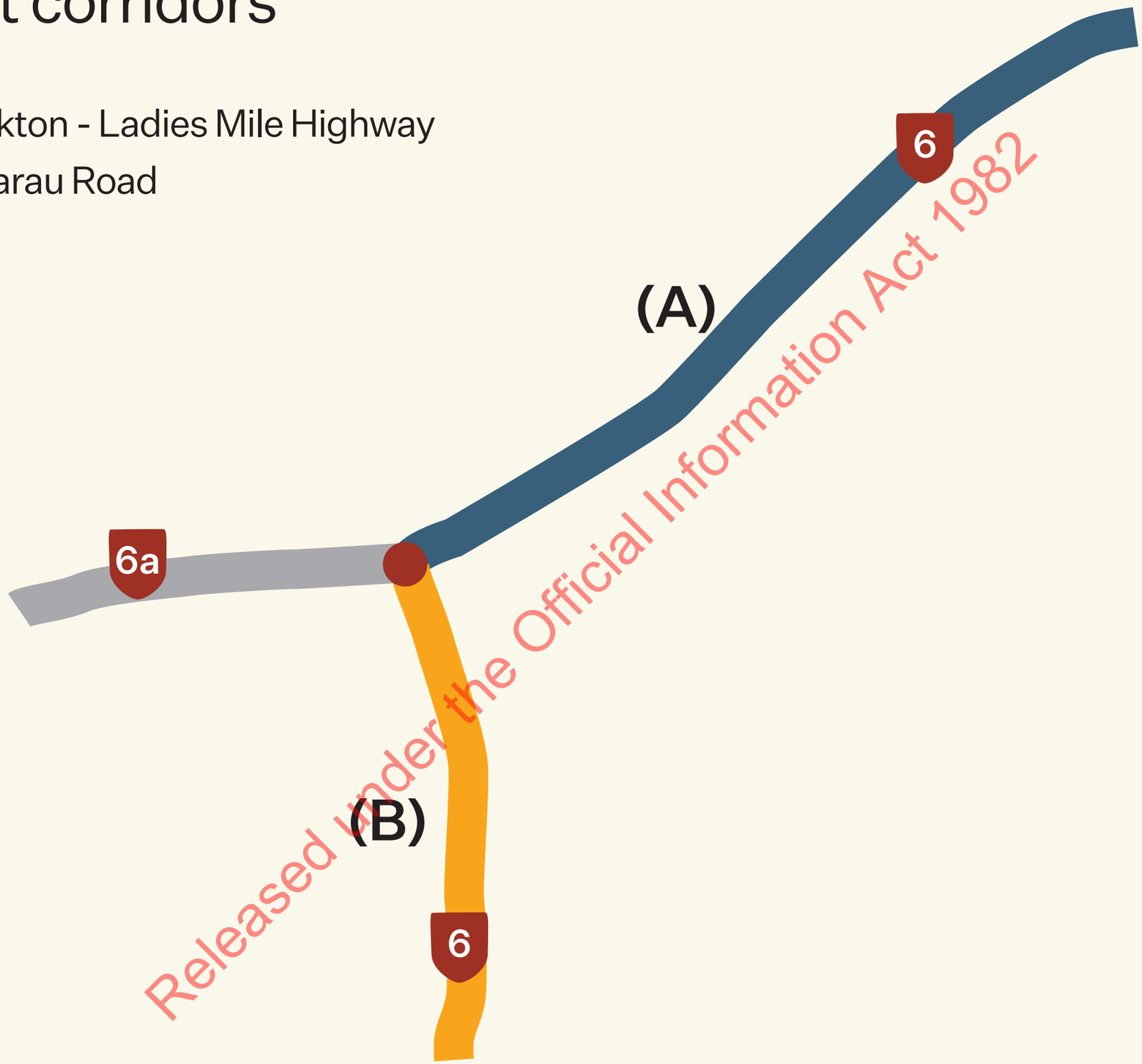
Information provided



Transport corridors

(A) SH6 Frankton - Ladies Mile Highway

(B) SH6 Kawarau Road



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General movement

(A) SH6 Frankton - Ladies Mile Highway

Legend

- State Highway
- Signalised intersection
- Potential future built form edge
- Grade seperated pedestrain crossing

6

6a

Frankton Rd

Hansen Rd

Grant Rd

Hawthorne Dr

McBride St

JASMAX

50m Setback

Existing fields and cricket pitch

2 x Football fields and cricket pitch

2 x Rugby fields and cricket pitch

3 x Training fields / potential overflow carparking

Plaza

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PT Network

(A) SH6 Frankton - Ladies Mile Highway

Legend

- Bus stop location
- PT interchange location
- Signalised intersection
- Potential future built form edge

Potential future bus routes:

- Bus route Fern Hill - Lake Hayes
- Bus route Arthurs Point to - Arrowtown
- Bus route Kelvin Heights - Quail Rise
- Bus route - Frankton Connector
- Bus route Queenstown - Jacks Point

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Pedestrian network

(A) SH6 Frankton - Ladies Mile Highway

Legend

- State Highway
- Signalised intersection
- Potential future built form edge
- Primary pedestrian movement
- Secondary pedestrian movement
- Bus stop location
- Grade seperated pedestrain crossing

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Cycle network

(A) SH6 Frankton - Ladies Mile Highway

Legend

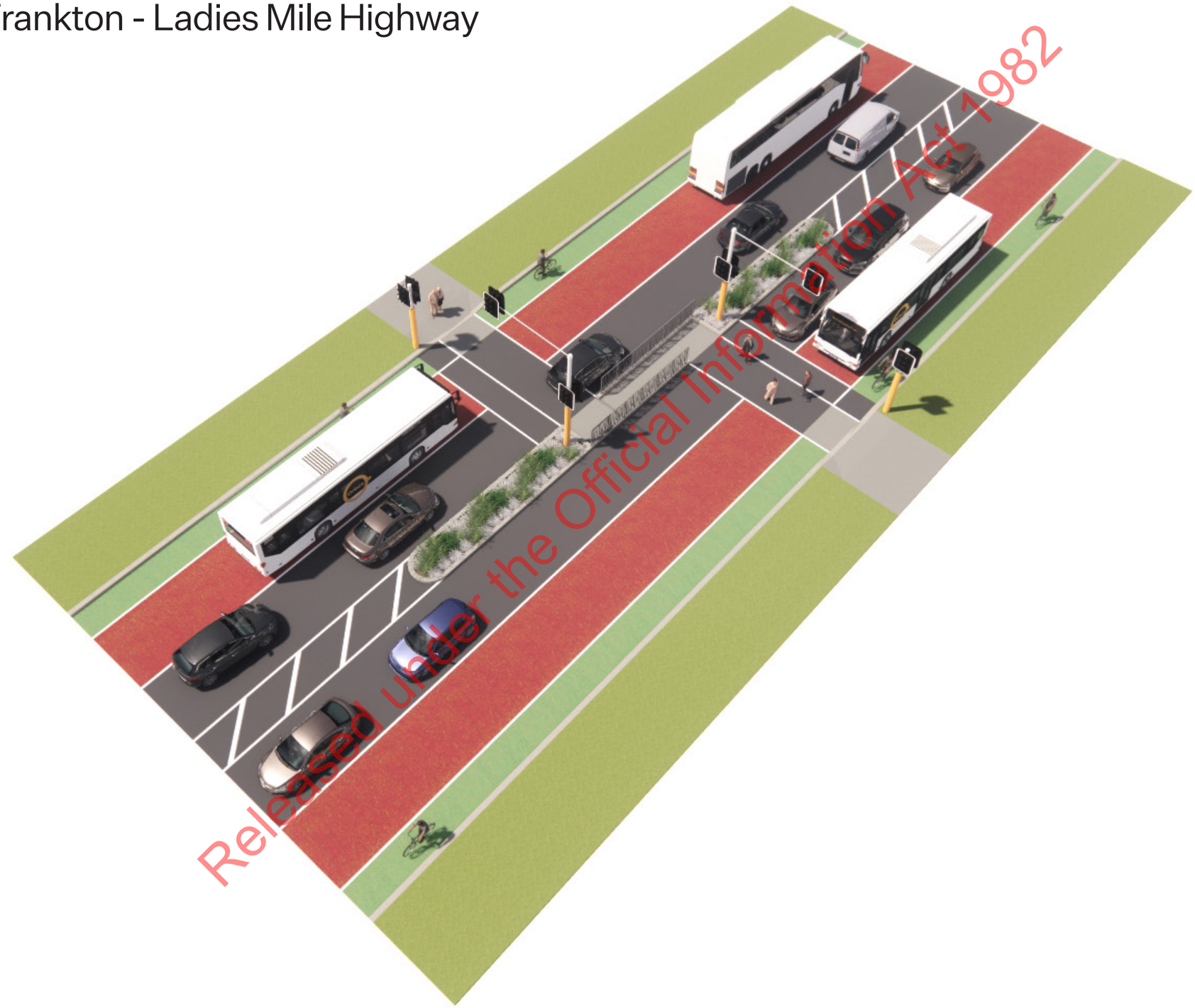
- State Highway
- Signalised intersection
- Potential future built form edge
- Primary cycle movement
- Bus stop location
- Grade seperated pedestrain crossing

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Axonometric diagrams

Short term _ mid-block crossing

(A) SH6 Frankton - Ladies Mile Highway



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Axonometric diagrams

Long term _ mid-block crossing

(A) SH6 Frankton - Ladies Mile Highway



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Axonometric diagrams

Long term MRT _ mid-block crossing

(A) SH6 Frankton - Ladies Mile Highway



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General movement

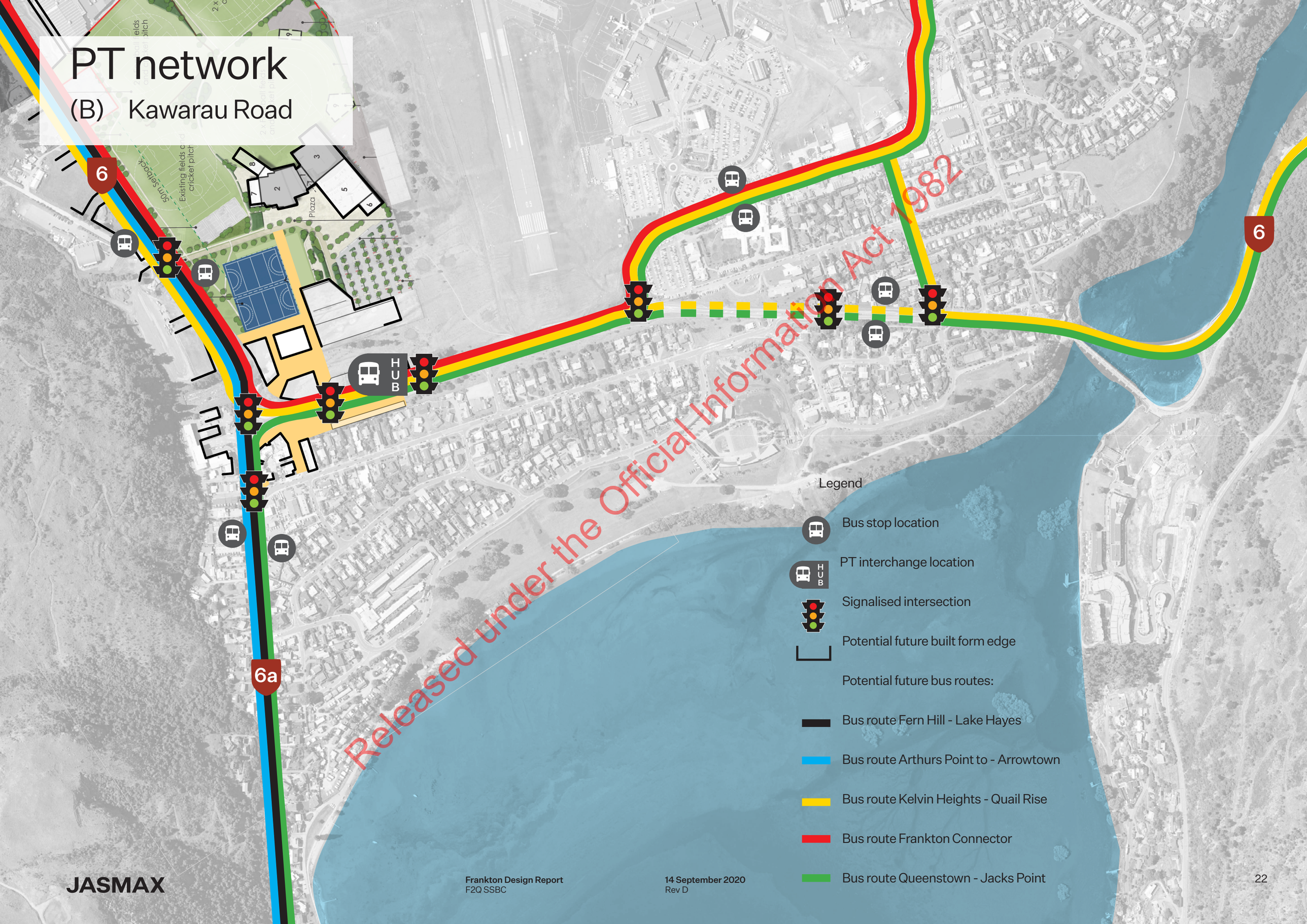
(B) Kawarau Road



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PT network

(B) Kawarau Road



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Pedestrian network

(B) Kawarau Road

HUB

6

6

Existing fields and cricket pitch

50m setback

Plaza

Legend

- State Highway
- Signalised intersection
- Potential future built form edge
- Primary pedestrian movement
- Secondary pedestrian movement
- Bus stop location
- Grade seperated pedestrain crossing

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Cycle network

(B) Kawarau Road

HUB

6

6a

Plaza

Existing fields and cricket pitch

50m setback

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Legend

- State Highway
- Signalised intersection
- Potential future built form edge
- Primary cycle movement
- Bus stop location
- Grade seperated pedestrain crossing

SH6 and SH6a Intersection

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SH6 and SH6a Intersection

Existing aerial

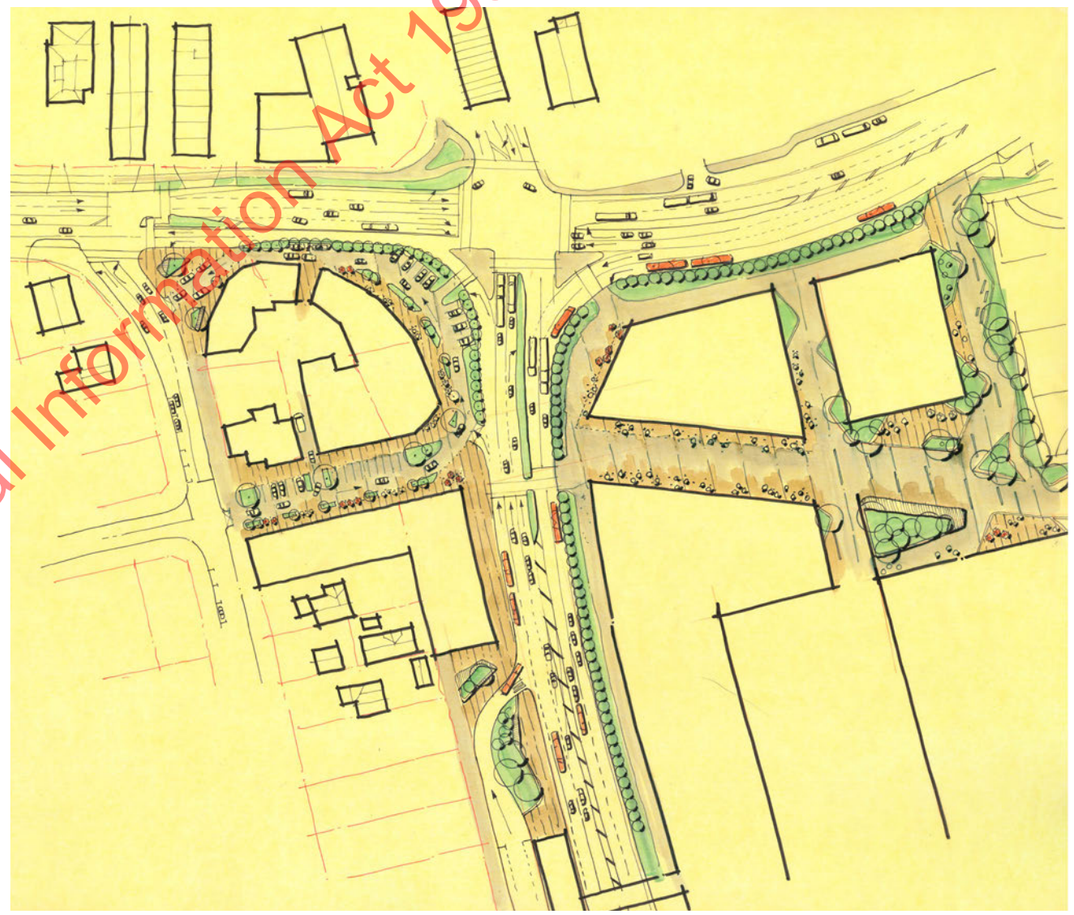
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SH6 and SH6a Intersection

Initial sketch options considered in MCA



Roundabout option

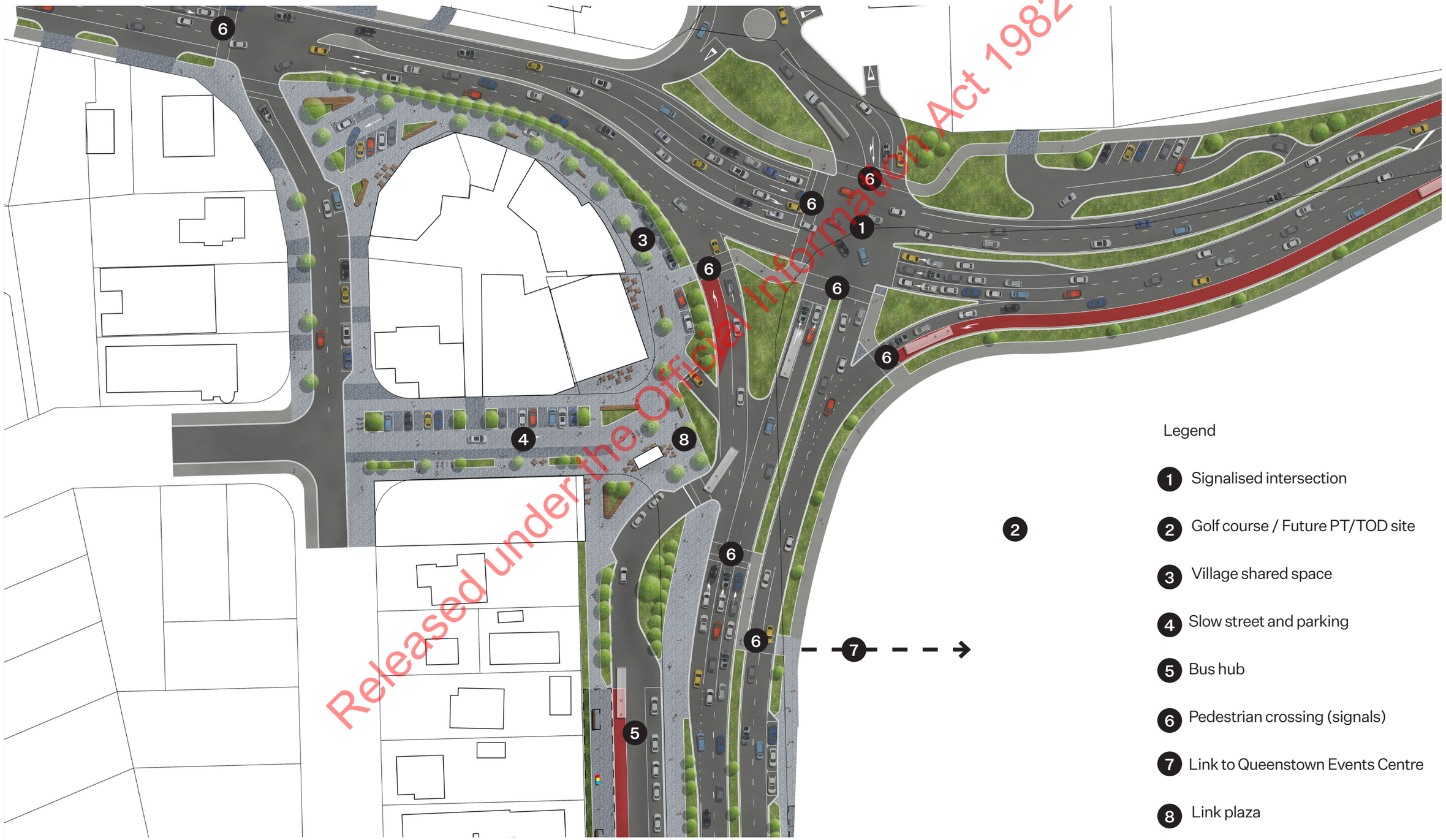


Intersection option

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SH6 and SH6a Intersection

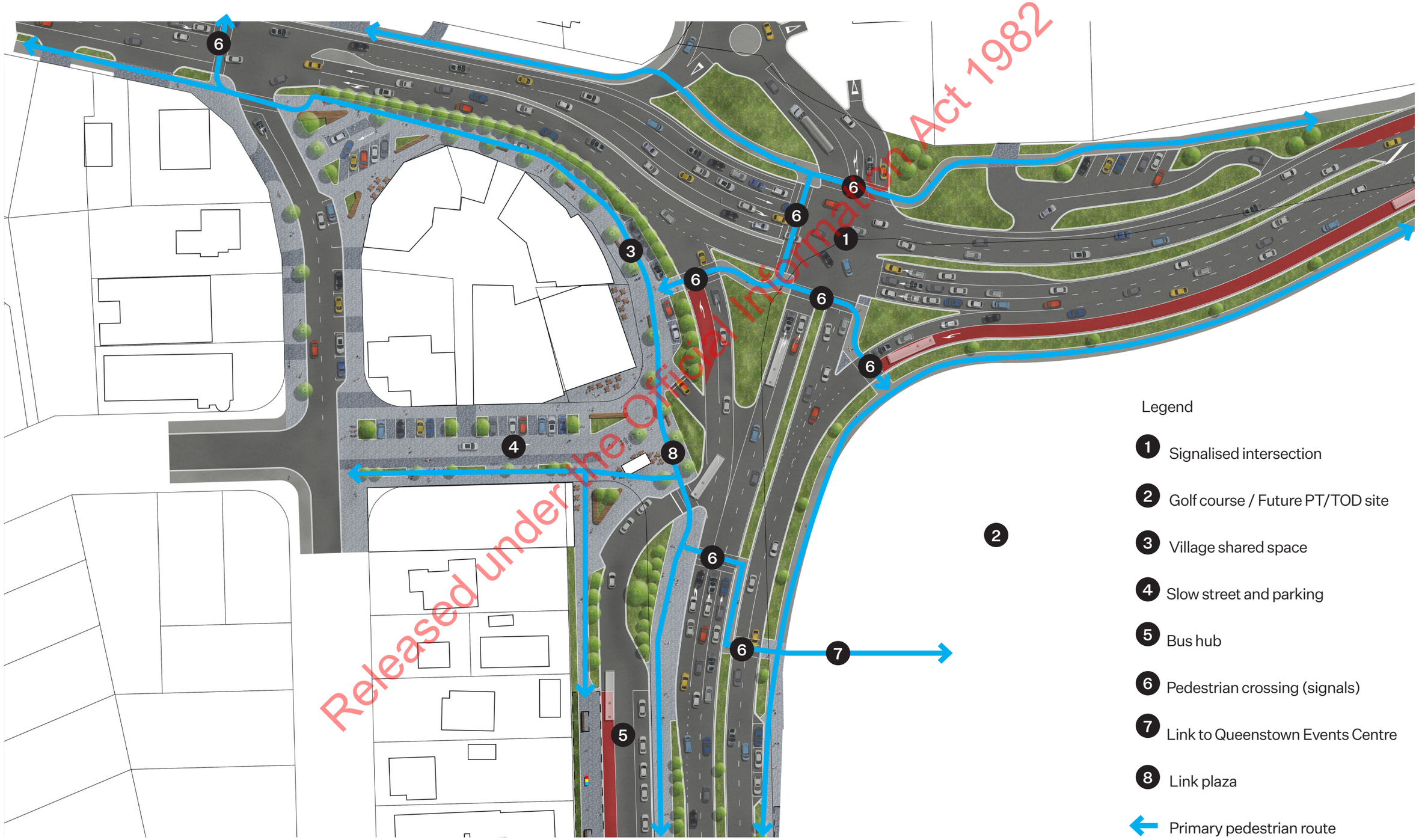
Intersection layout _



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SH6 and SH6a Intersection

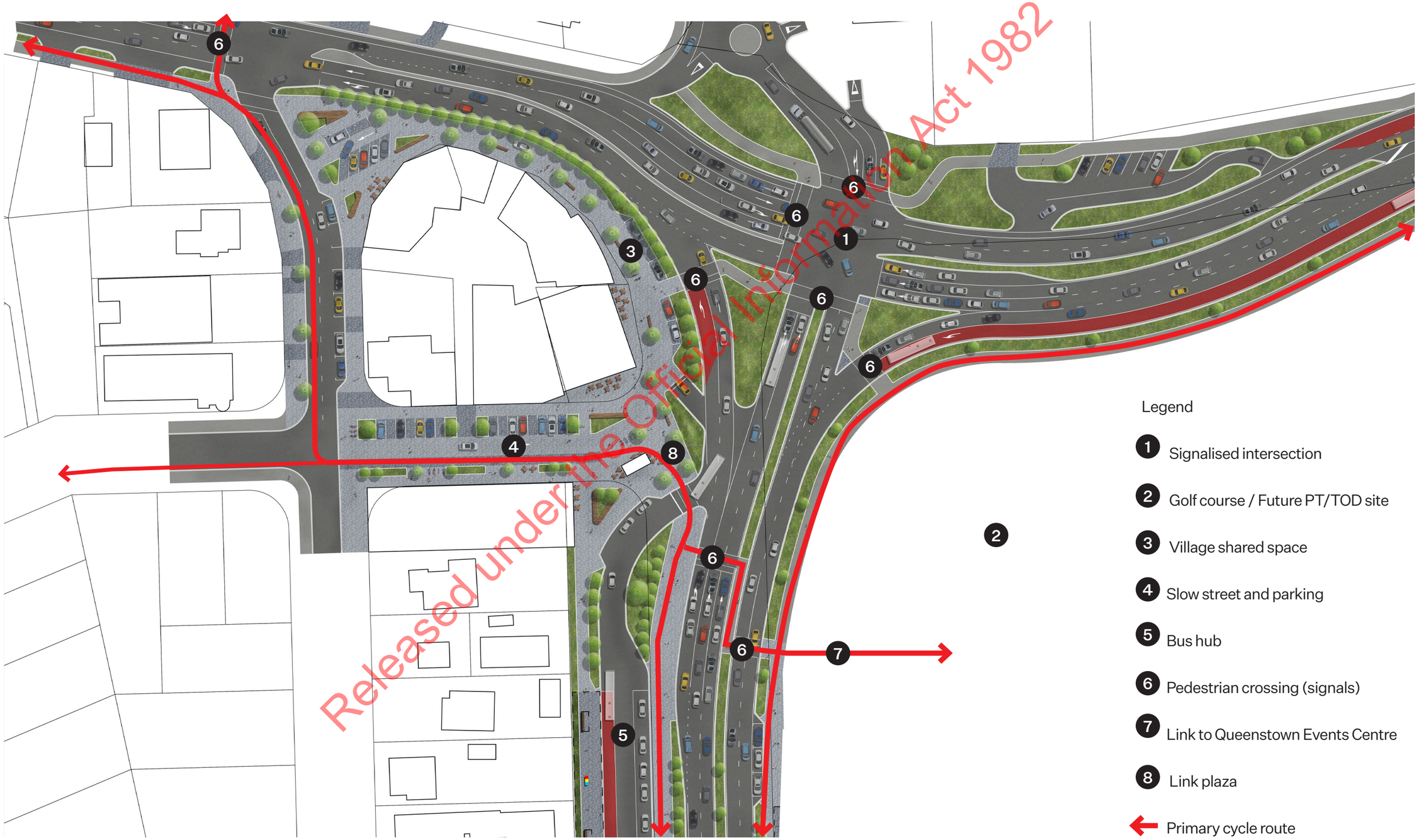
Intersection layout_pedestrian movement



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SH6 and SH6a Intersection

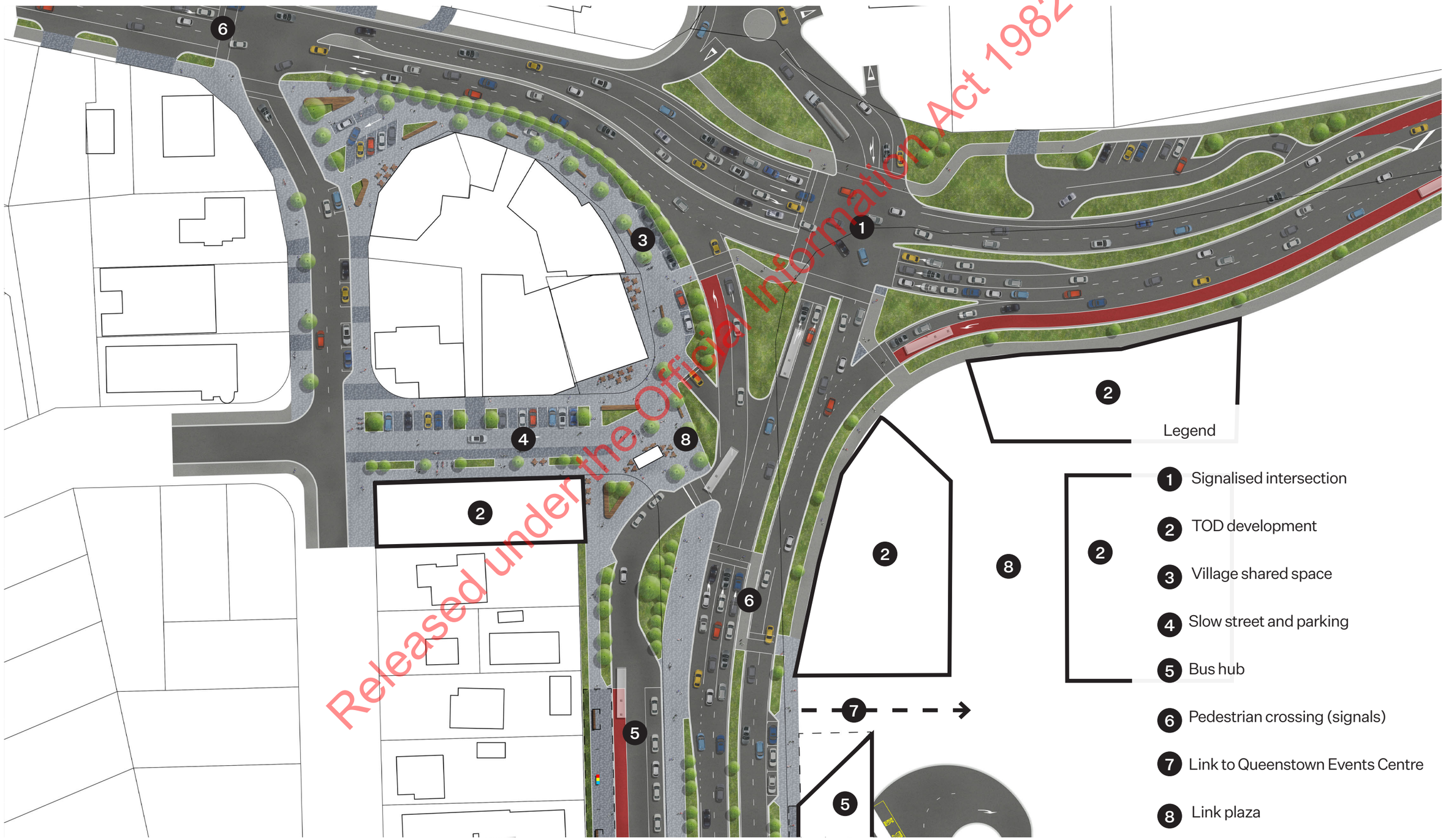
Intersection layout _cycle movement



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SH6 and SH6a Intersection

Intersection layout _ future potential



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Frankton Hub

Existing layout



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Frankton Hub

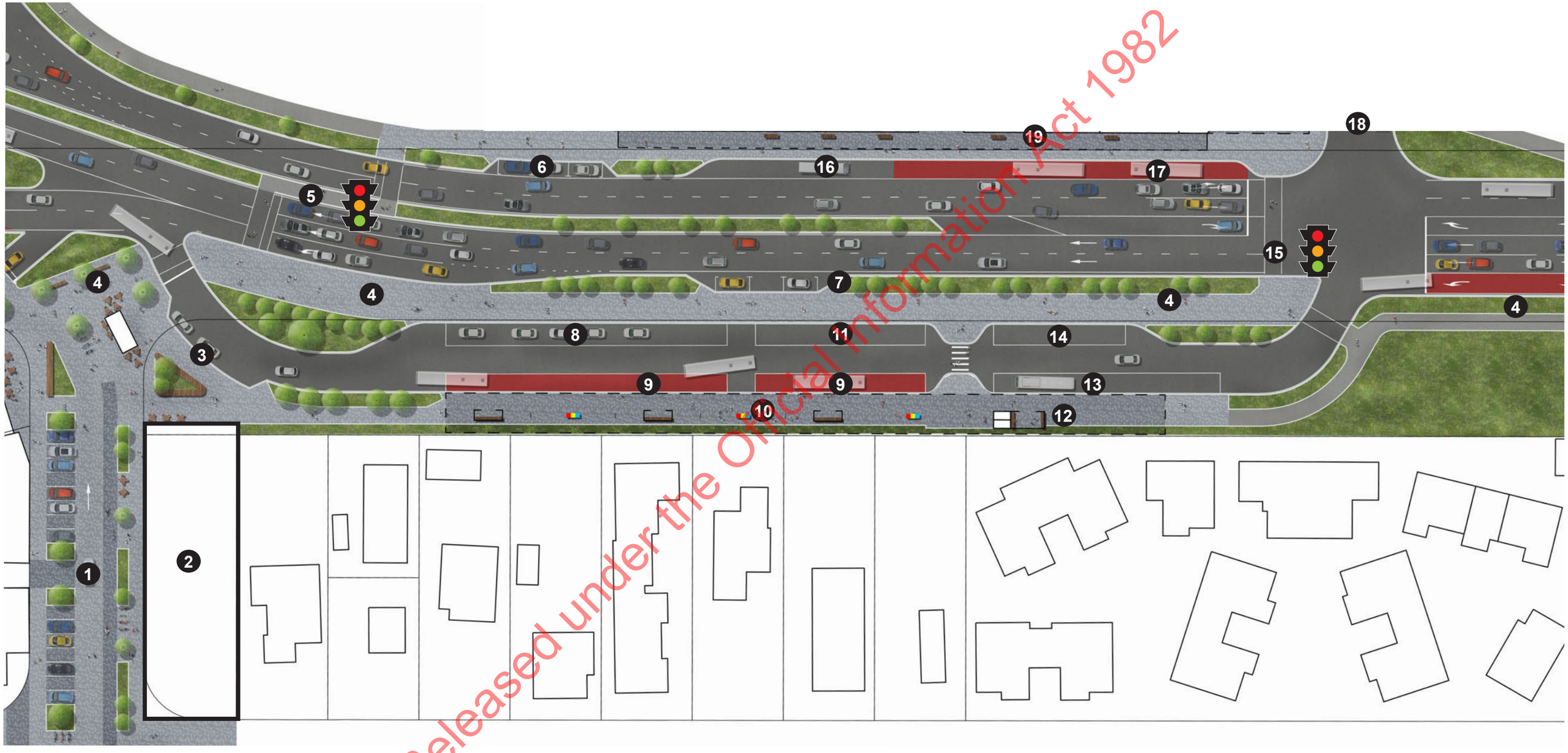
Approach

- A staged approach to infrastructure meeting the required demand and patronage over time.
- Balancing the demand with appropriate amenity, value and functionality.
- Ensuring clarity in wayfinding and bus operations, between PT and Private operations.
- Prioritising pedestrian and cycling movement, into, out of and through the Bus Hub.
- Ensuring safe and functional movement of PT vehicles.
- Sufficient Pick up, drop off and Taxi/Uber provision.
- Clear separation of PT vs Private Coach waiting, boarding.
- Provision of shelter, amenity including WC's for customers.
- Spatial provision for boarding and alighting, furniture zones, through movement and required PT information, real time, ticketing, lighting, CCTV and furniture provision.
- Minimise abortive work for future stage works. Interim as stepped provision to future Hub.
- Enabling connections and opportunities identified in the Frankton and Queenstown Events Centre Master plans.

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Frankton Hub

Interim layout - Plan

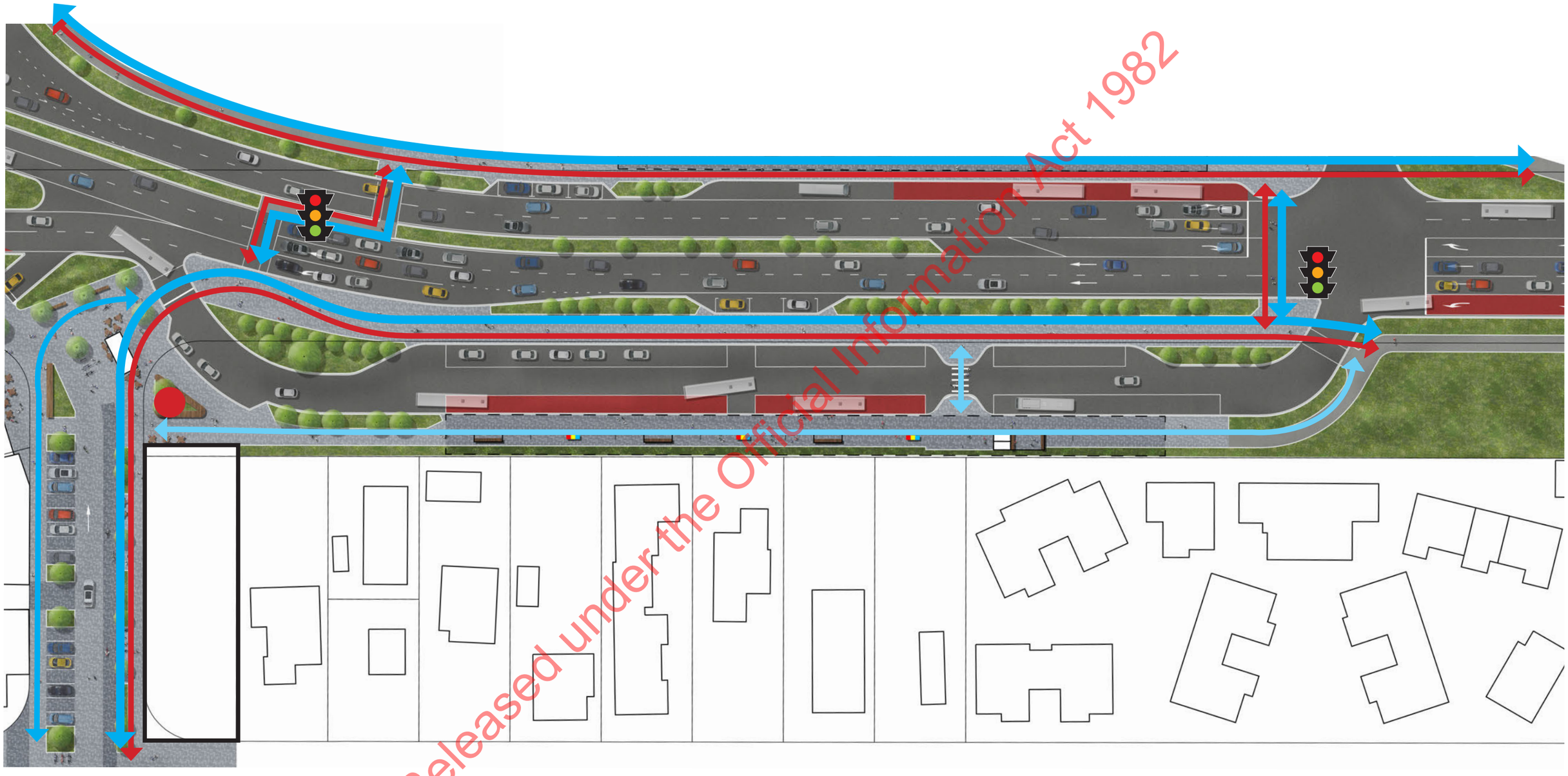


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1 Parking and access
2 Possible Future Development
3 Taxi/Uber Pick up/Shelter
4 Pedestrian and cycle pathway
5 Controlled Pedestrian crossing
6 Pick up/Drop off
7 Pick up/Drop off
8 Taxi storage
9 Local PT Bus Stops
10 Hub Facilities/Info/Shelter
11 Coach Layover
12 Coach Hub/WC/Shelter
13 Private coaches
14 Authorised Vehicle/Service
15 Controlled crossing
16 Private Coach Stop
17 Local PT Bus Stops
18 Future PT Hub access
19 Coach/PT Hub facilities/shelter/info

Frankton Hub

Interim layout - Pedestrian and Cycle Movement



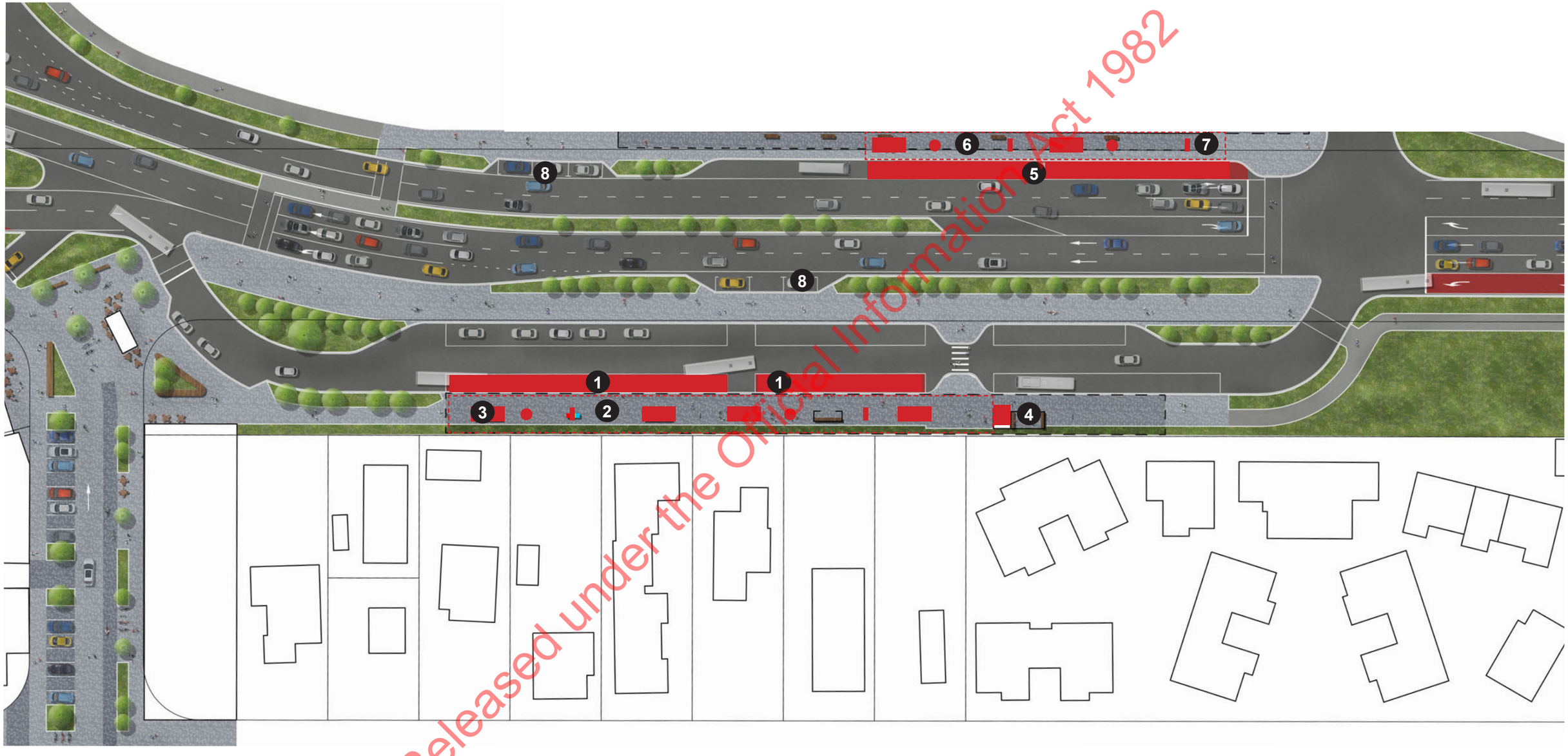
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Key

- Cycling route
- Pedestrian Pathways
- Possible Bike Racks
- PT Hub Pedestrian access

Frankton Hub

Interim layout - PT Bus Hub



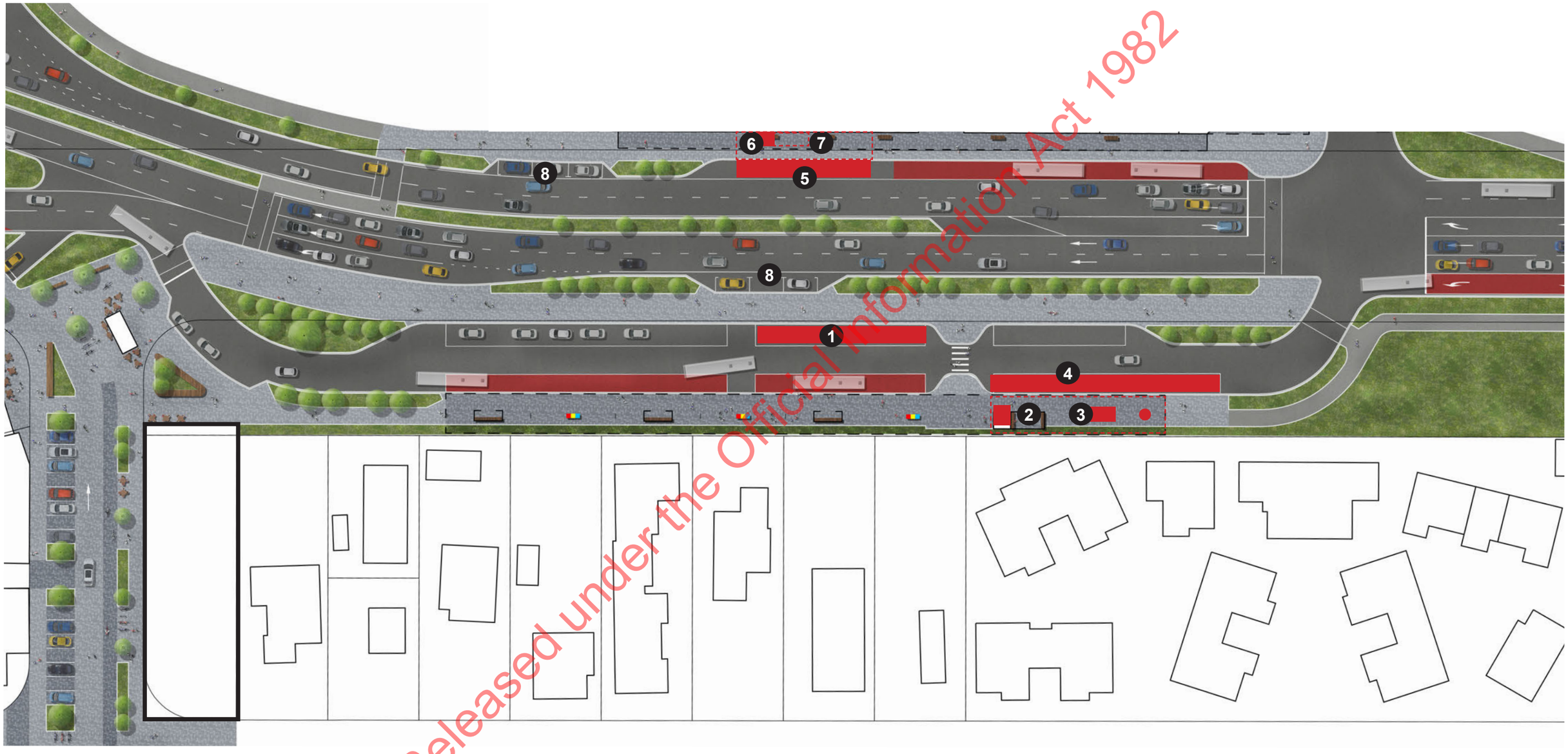
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Key

1. Local East and West PT Bus Stops
2. Bus Hub Shelter Boarding and Alighting
3. Modular furniture zone, seating lighting, CCTV, info, Tickets, PIDs
4. WC
5. Local PT Bus Stops Frankton and Kawarau Bridge
6. Bus Hub Shelter and cover for Boarding and Alighting
7. Modular furniture zone, seating, lighting, CCTV, info, Tickets, PIDs
8. Pick up Drop off

Frankton Hub

Interim layout - Private Coaches



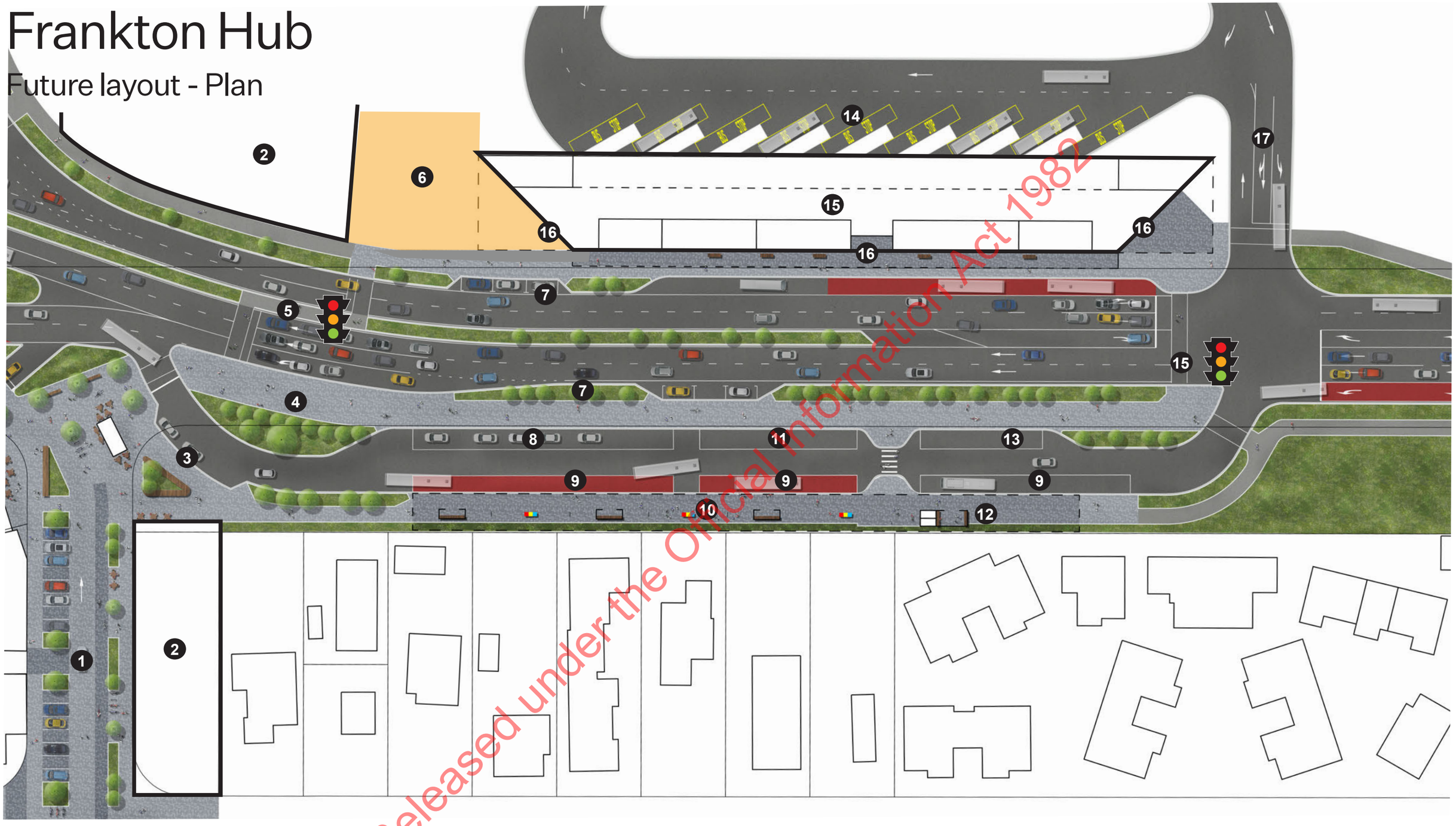
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Key

1. Coach Layover
2. WC, Waiting Shelter, info
3. Covered waiting area, Furniture Zone
4. Private Coach Stop
5. Private Coach Stop
6. WC, Waiting Shelter, info
7. Covered waiting area, Furniture zone
8. Pick up Drop off

Frankton Hub

Future layout - Plan

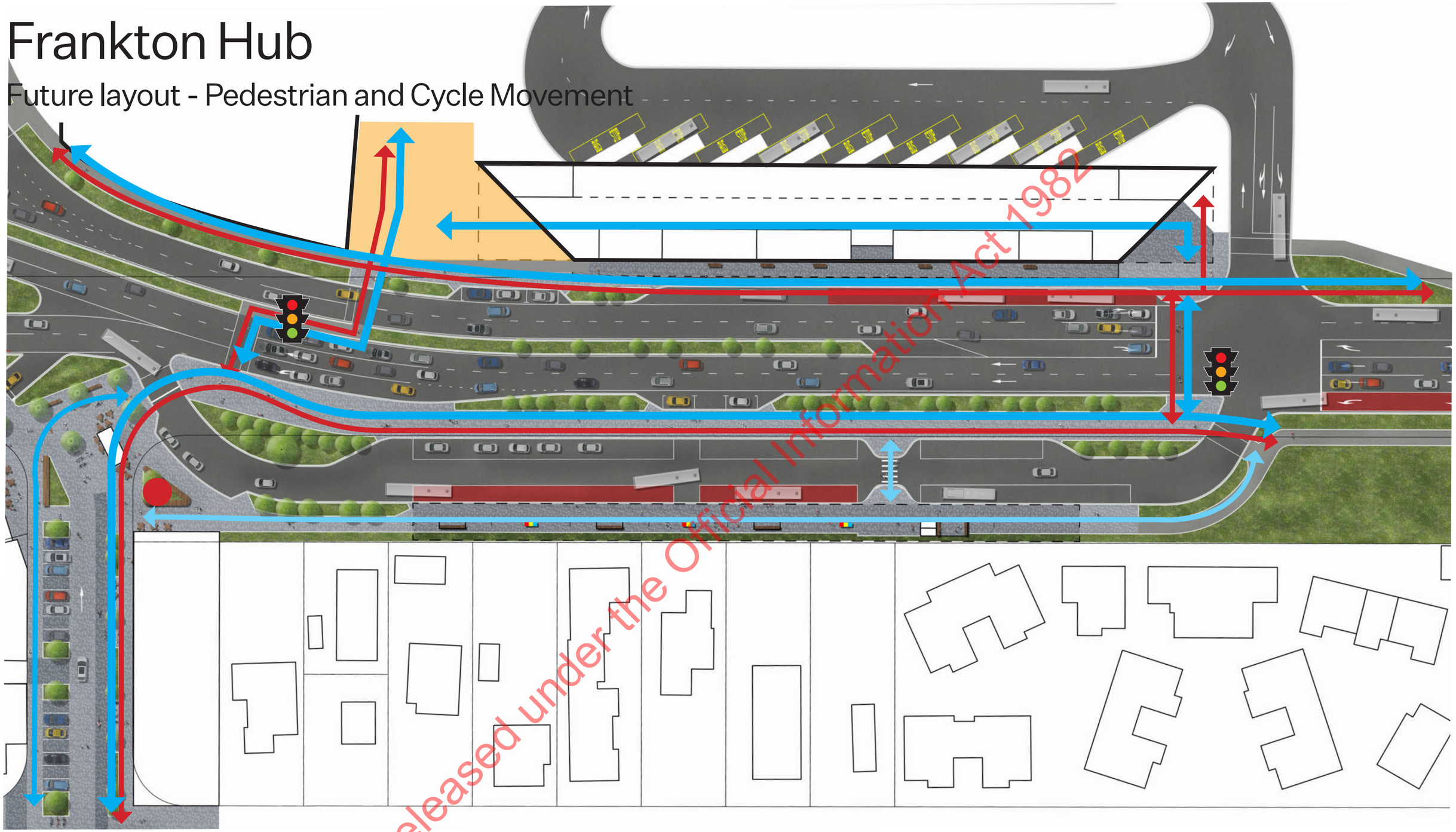


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1. Parking and access
2. Possible Future Development
3. Taxi/Uber Pick up/Shelter
4. Pedestrian and cycle pathway
5. Controlled Pedestrian crossing
6. Future Plaza
7. Pick up/Drop off
8. Taxi storage
9. Private Coach Stop
10. Coach Hub/WC/Shelter
11. Coach Layover
12. Private coaches
13. Authorised Vehicle/Service
14. Local PT Bus Stops
15. PT Hub building
16. PT Hub entrance
17. Bus access to hub + vehicle access to future development

Frankton Hub

Future layout - Pedestrian and Cycle Movement



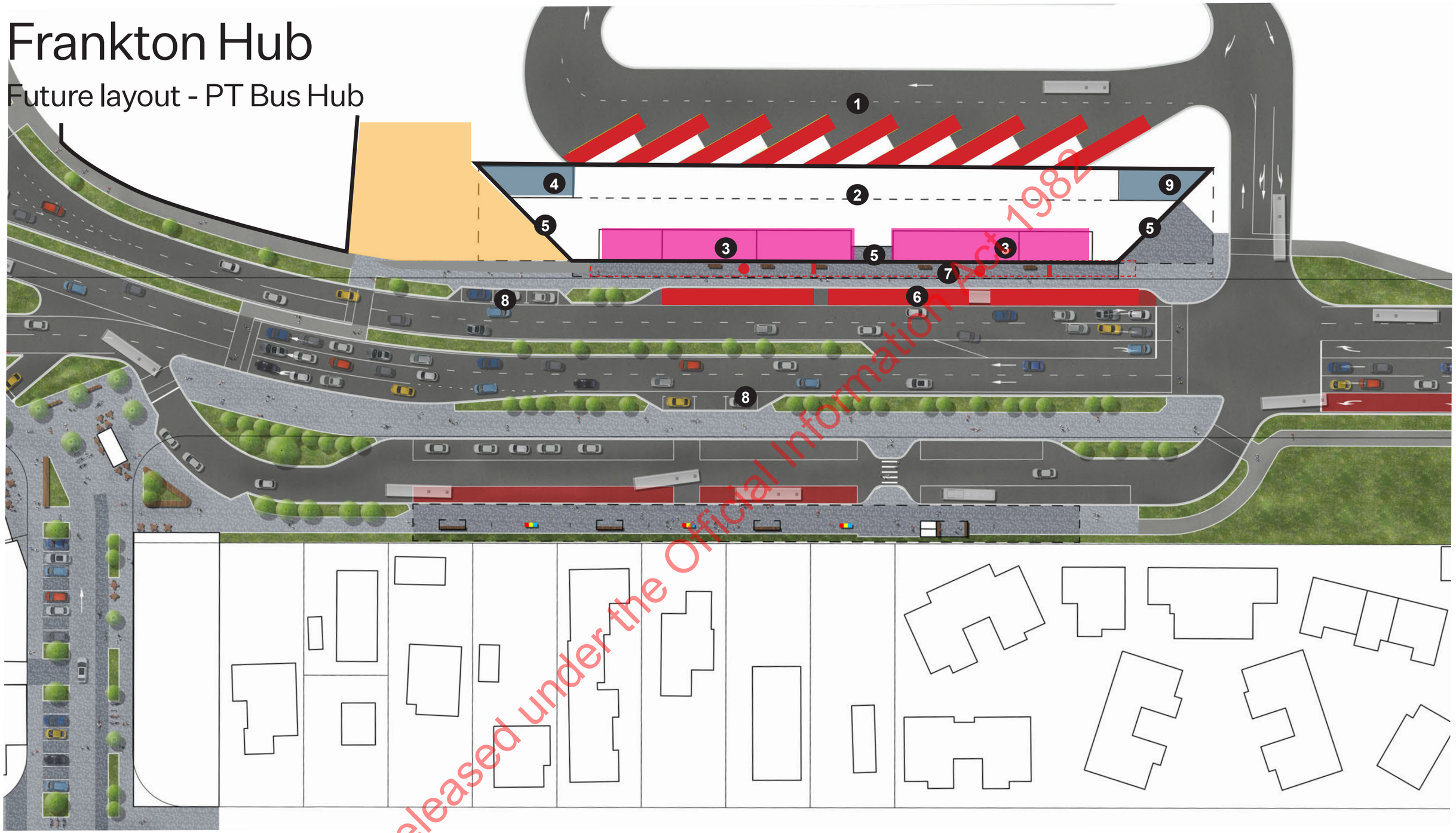
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Key

- Cycling route
- Pedestrian Pathways
- Possible Bike Racks
- PT Hub Pedestrian access

Frankton Hub

Future layout - PT Bus Hub



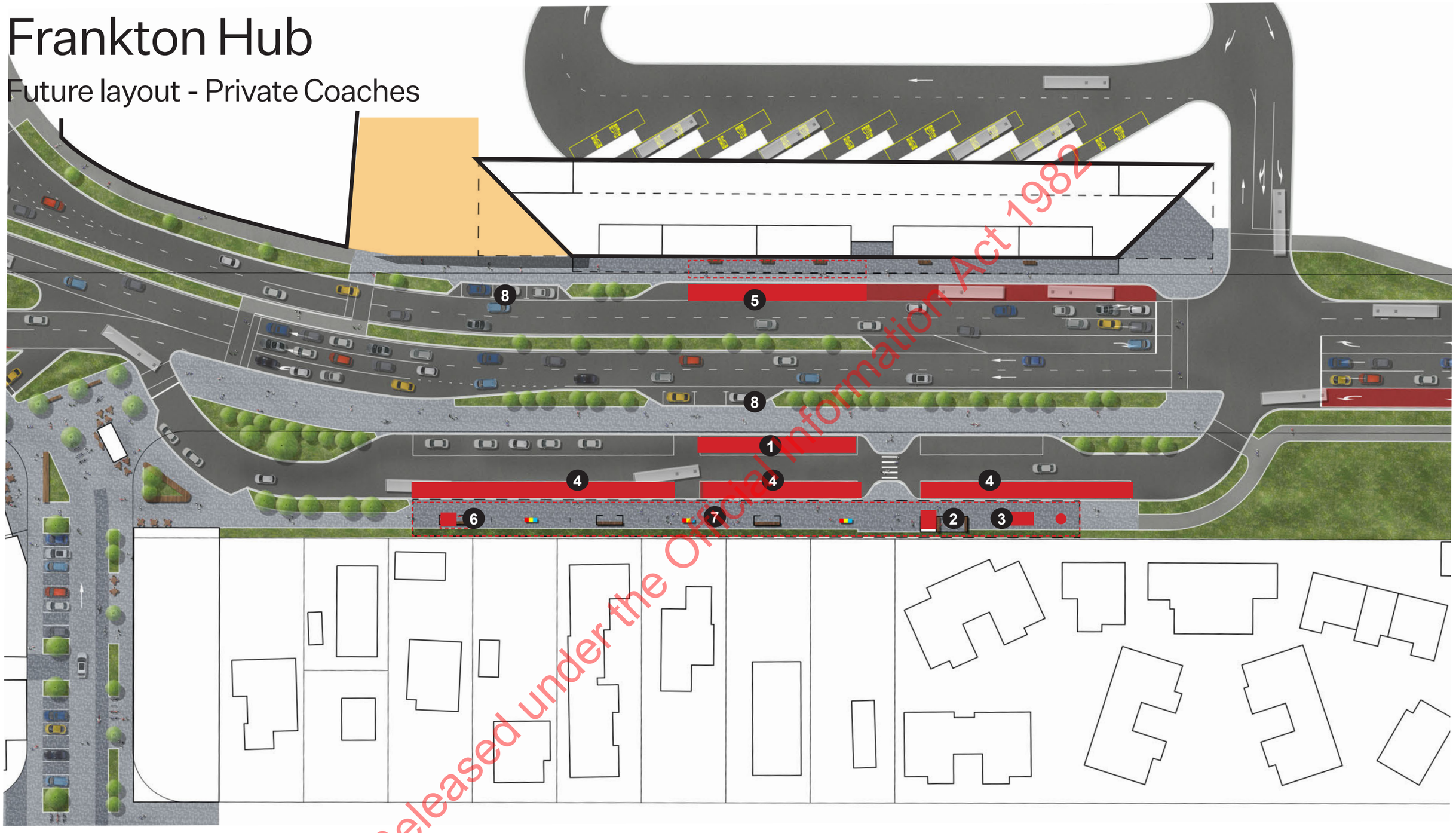
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Key

1. Local East and West PT Bus Stops
2. Concourse
3. Retail units
4. WC
5. PT Hub entrances
6. Local PT Bus Stops Frankton and Kawarau Bridge
7. Bus Hub Shelter and cover for Boarding and Alighting
8. Pick up Drop off
9. Secure cycle parking

Frankton Hub

Future layout - Private Coaches



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Key

1. Coach Layover
2. WC, Waiting Shelter, info
3. Covered waiting area, Furniture Zone
4. Private Coach Stop
5. Private Coach Stop
6. WC, Waiting Shelter, info
7. Covered waiting area, Furniture zone
8. Pick up Drop off