



Auckland Light Rail

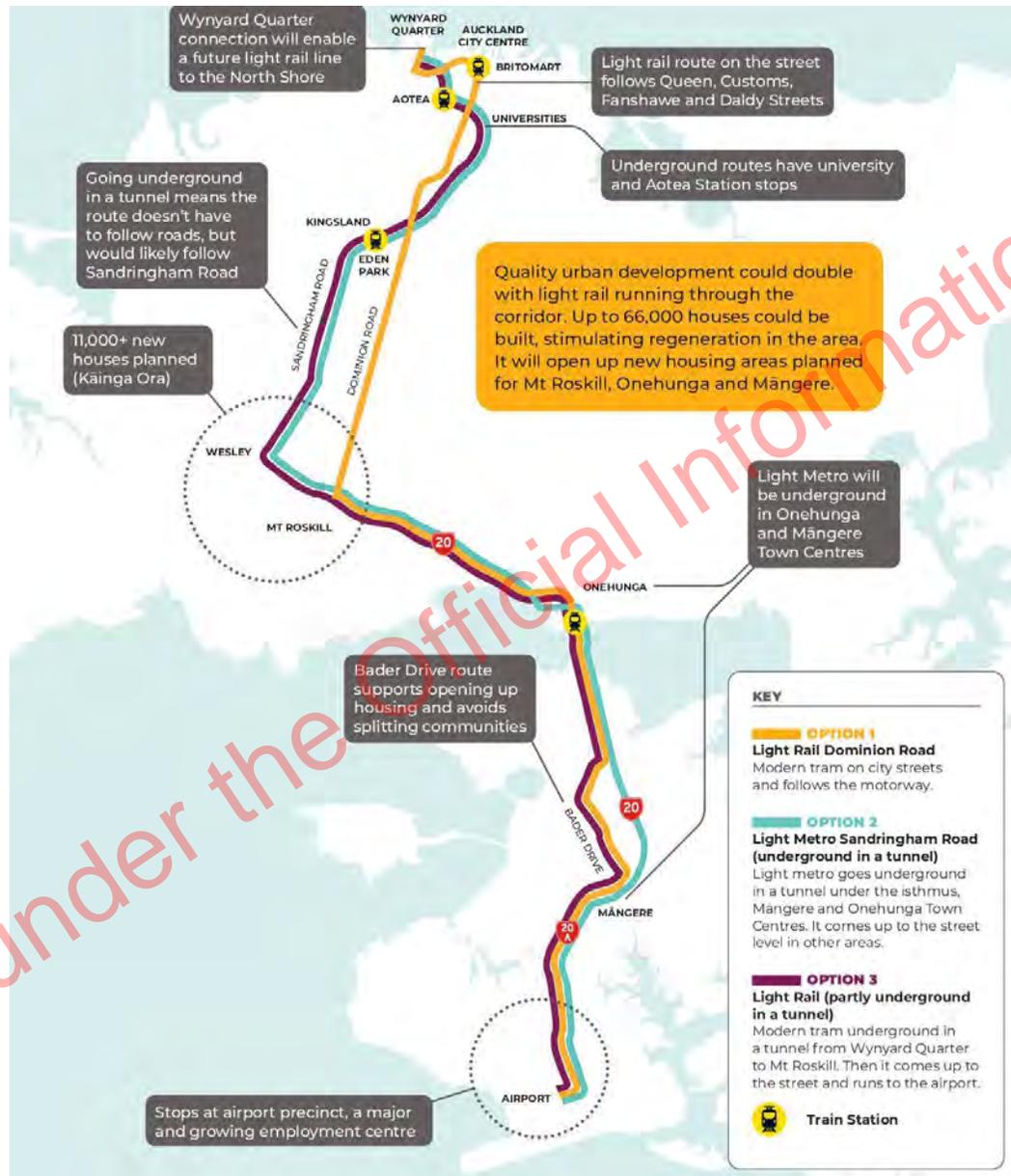
Waka Kotahi Board, July 2023

Future Rapid Transit Network

- CC2M, WHC and NW rapid transit lines are part of an integrated public transport network for Auckland
- Current thinking is that ultimately, in future decades, all three lines will be the same light rail system
- Discussions are ongoing between the three projects on how to integrate and stage their delivery
- Intermediate comparator for CC2M business case under consideration



Short List Options



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Establishment Unit's Preferred Option

TUNNELLED LIGHT RAIL was shared as the preferred option of the Establishment Unit because it provides the greatest level of transport and urban benefit within the corridor, the least disruption, and the best opportunities for future network integration.

Tunnelled Light Rail



Update on progress since IBC

- Review of demand parameters
- Segregated light metro - greater capacity to meet demand
- Single bore tunnel selected
- Stations and route proposed
- Interfaces – KiwiRail, Waka Kotahi, Airport, Utility providers
- Staging
- Public engagement
- Mana whenua partnership
- Depot location
- Manukau harbour crossing
- Intermediate comparator option

Demand profile (peak) CC2M

- Removing crowding shows high level of 'suppressed demand'
- Congestion pricing and parking initiative has uplift of approximately 20%
- Demand indicates surface light rail will be overcrowded by the late 2040s, even at base demand levels.



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Light rail - on street “tram”

Maximum length and frequency limits capacity

Driver needed for street running

Average speed of this system is 28 km/hr

Speed up to 80kph in segregated sections

Mixes with street traffic, pedestrians etc

Drivers cab at the end of each unit

Low floor – for shared running areas

Standard width of the car is around 2.5 meters.

Cost c. \$5m per 33m unit



Light metro – “separated” running

Longer trains at higher frequency possible – greater capacity

No driver’s cab (if driverless system)

Can be fully automated – lower operating cost

Design speed up to 90 Km/hr

Average speeds up to 45 Km/hr

Platform height 1m – like conventional rail

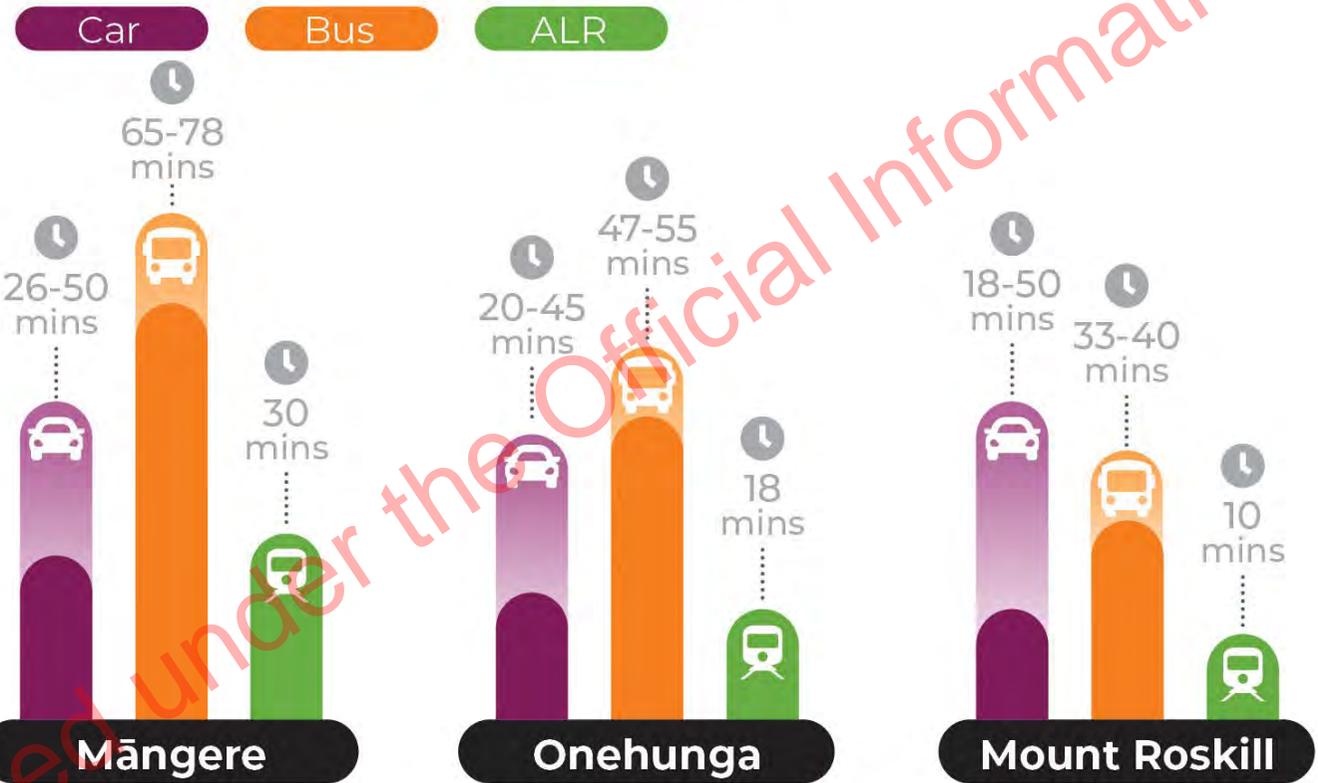
Standard width is around 2.65 meters.

Cost c. \$5m per 33m unit

More structures to create and maintain to avoid shared running (viaduct/trench/fencing)



AM Travel Times to City Centre University from:



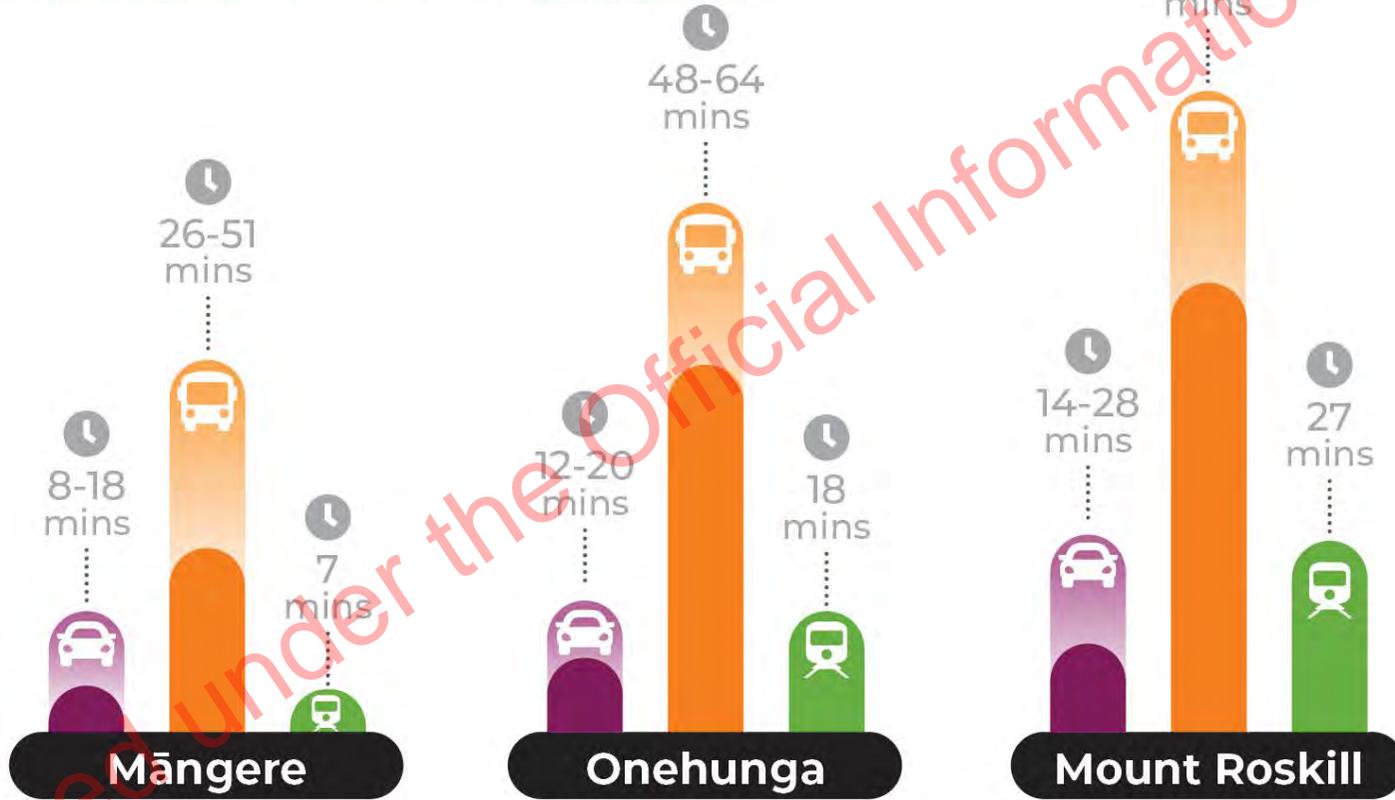
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AM Travel Times to Airport from:

Car

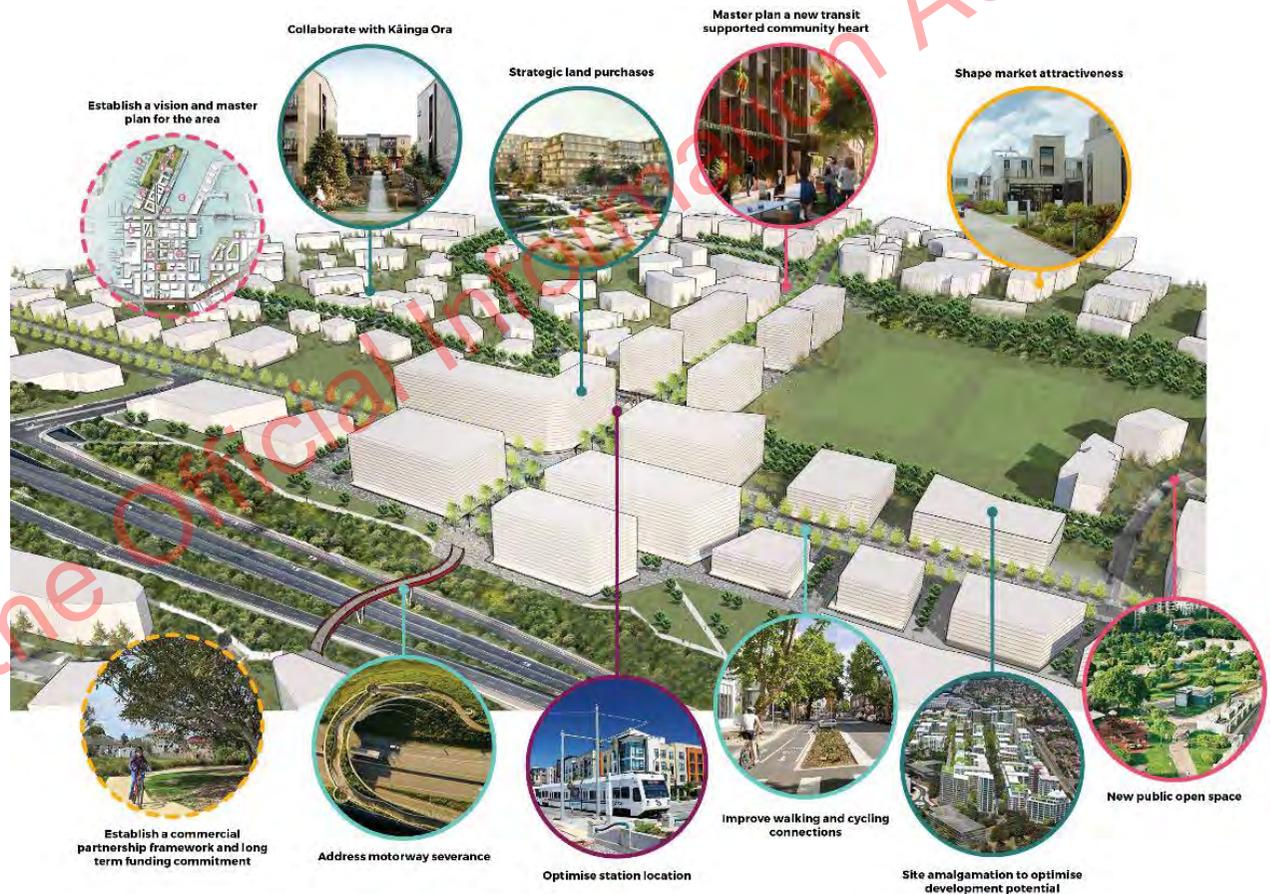
Bus

ALR



The urban opportunity

- Stimulating development opportunities and creating employment and housing choice
- Creating strong and vibrant communities.



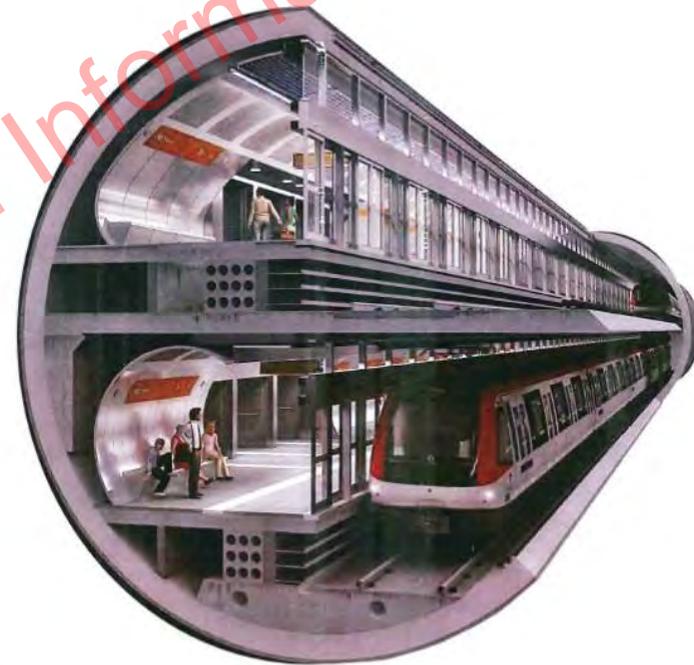
Tunnel Typology Options

Twin Tunnel

Stations are mix of Cut & Cover and Mined Cavern

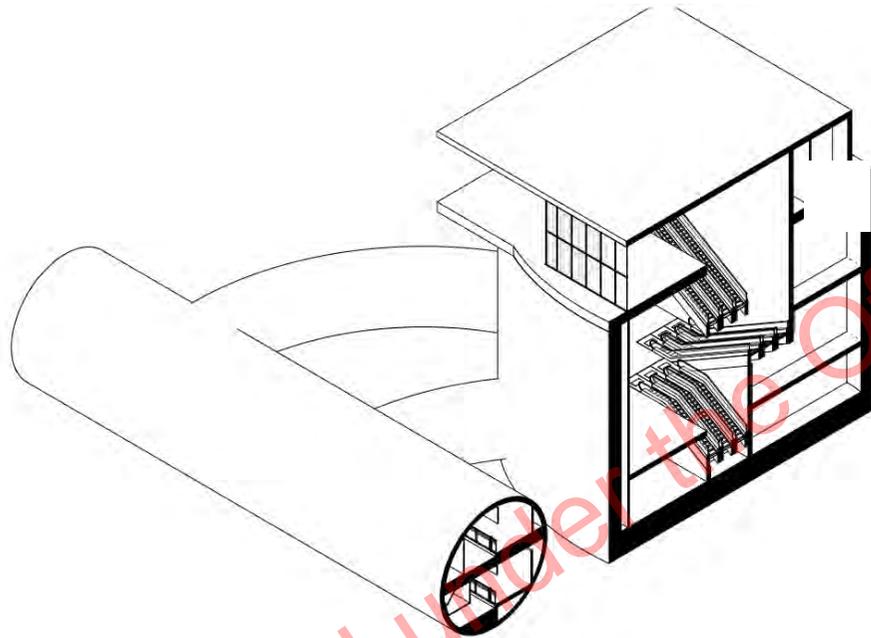


Large Single Tunnel (Monotube)



Source: VTA, 2016.

Typical Station - Monotube 13.8m outside diameter



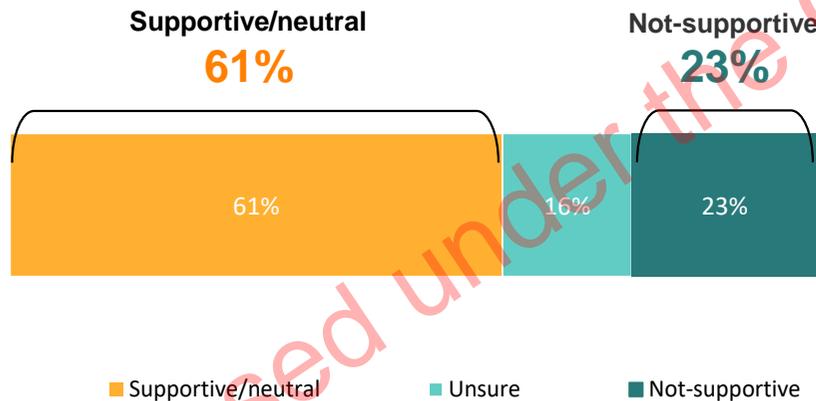
Public Support

The ALR team has heard from thousands of Aucklanders at more than 200 events - most say "just get on with it".

During the March-April engagement - 70% of submissions supported the project.

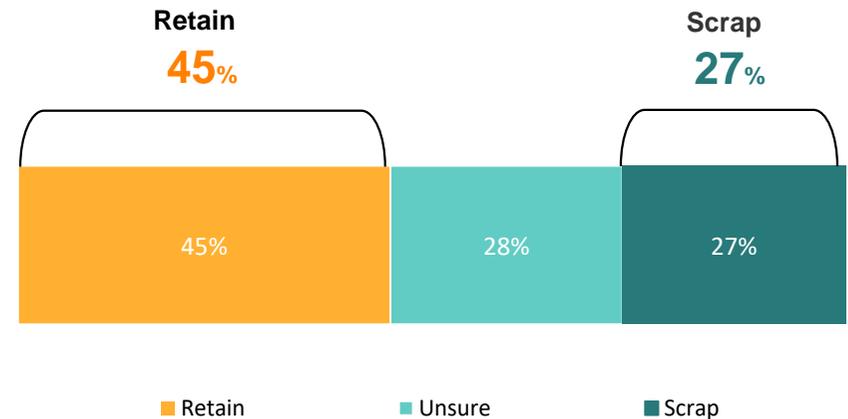
Kantar Public Research

Among those aware of the Auckland Light Rail project, support outweighs opposition.



Curia Poll

Support for Auckland Light Rail



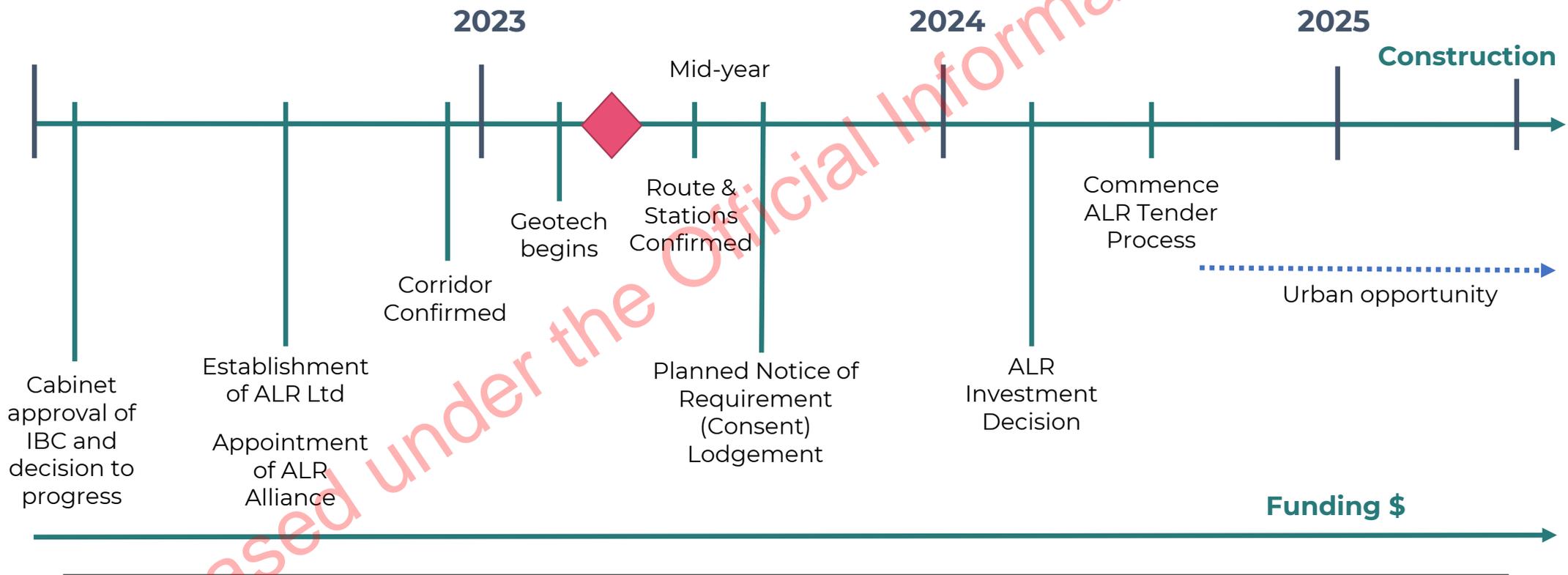
Waka Kotahi: Levels of Engagement

1. General Manager to ARL CE/GM
2. Partners' Forum
3. Boards inter-governance alignment meetings
4. Fortnightly interface working group
5. Technical specialists meetings
6. Expert advice forum – huihuinga

Next steps

- Ahead of lodgement - identify and resolve red flags on preferred alignment/stations footprint
- Waka Kotahi will be requested to give a letter of conditional support to accompany lodgement
- Final sponsor sign off for lodgement –mid August
- Lodgement to notification - continued work to resolve design issues, agree conditions and management plans
- Waka Kotahi letter of support in principle for notification

Making this happen



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