

MASS RAPID TRANSIT CONSULTATION

Questions & Answers

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1 MASS RAPID TRANSIT

What is mass rapid transit?

Mass rapid transit is the latest type of public transport for moving more people, more conveniently and comfortably. We know from cities like ours overseas that mass rapid transit systems encourage surrounding suburbs to flourish and grow.

We've been investigating a mass transit system to connect Wellington Railway Station with Wellington's Regional Hospital, Newtown, Island Bay, as well as Wellington International Airport and Miramar. Mass rapid transit will change the way we get around and through our city. Mass rapid transit will be:

- **Frequent:** It operates from early in the morning until late at night, seven days a week. It runs at least every 10 minutes, and more often during peak times.
- **Convenient:** It takes the most direct route to get you where you need to go quickly.
- **Reliable:** It picks you up and drops you off on time. You can rely on it to get you to your destination without worrying about running late.
- **Comfortable:** It's a quiet and smooth ride in a modern electric vehicle with lots of space so there is no overcrowding. It's easy to get on and off with level-boarding, which is ideal for people with, wheelchairs or mobility aids.
- **Safe:** You feel safer waiting for it, when you're on it, and getting on and off it.
- **Low-carbon:** The vehicles are electric, powered with New Zealand's renewable electricity.

Attractive and dense urban development to support our growing city cannot be achieved without a mass rapid transit system to support it. We also need mass rapid transit to meet the city's ambitious carbon reduction goals.

What type of mass rapid transit vehicles are being proposed?

Mass rapid transit systems can use a range of different vehicles. We've investigated which mass rapid transit vehicle would be right for the people using it, the environment, and Wellington's geography. There are two types of vehicles that we are considering for our proposed options – and there are pros and cons to each.

- **Light Rail Transit (LRT)** – the electric vehicles we are considering for Wellington can carry up to 300 people per vehicle and run on steel tracks. How does it compare to other options? It can be noisier than other modes, especially around corners. It costs more but encourages more urban development along the route. Construction disruption is also greater and could take longer to build than BRT options.
- **Bus Rapid Transit (BRT)** – the latest generation of electric bus technology that can carry up to 110 people per vehicle. It offers a comfortable ride with level boarding for passengers and more space inside than a regular bus. Depending on the level of investment modern BRT vehicles can look, feel, function, and perform like light rail. Unlike light rail, where the vehicles can only travel along their track, BRT buses can continue beyond their dedicated lanes to reach more destinations.

Type of MRT vehicle	How many passengers per vehicle? Are they seated or standing? Does it cater for people with accessibility needs?	How does it share the road?	Does it work for Wellington's geography/geology?	Does it encourage more housing along the route?	Cost to purchase and install?	Installation time and disruption levels?	How noisy is it?
Light rail Different sizes available, up to 43 metres long	<p>Different sizes available, up to 300 people per vehicle.</p> <p>Generally, there will be more people standing than seated, especially compared to a double decker bus.</p> <p>This is why services need to be made as fast as possible, and the ride quality smooth.</p> <p>Level boarding, a roomier interior and priority seating allow for people with mobility challenges.</p>	<p>It runs on steel tracks, which are embedded in the road in dedicated lanes.</p> <p>Other vehicles (regular buses, cars, trucks) can also use these track lanes.</p> <p>Light rail tracks can cause problems for cyclists and we will focus on keeping them away from each other.</p>	<p>The recovery time could take longer after a very large earthquake or flood because of the need to repair light rail tracks</p> <p>·</p> <p>Light rail is limited to flatter routes meaning less options for future extension.</p>	<p>Enables the most new housing and transforms neighbourhoods along the route.</p> <p>Investing in making public transport faster and more reliable, attracts people to live near to it, and that creates demand for urban development.</p> <p>International research suggests this response is stronger for light rail than Bus Rapid Transit.</p>	<p>Most expensive option</p>	<p>Significant construction needed from Wellington Railway Station to Island Bay and some buildings will need to be removed along the route.</p> <p>Some disruption, and removal of parking will be needed in some places.</p>	<p>Because it is electric, light rail is quiet to ride in but can be noisier outside the vehicle due to steel wheels, especially when it travels around corners.</p>

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Bus Rapid Transit 18 metres long	<p>Up to 110 people per vehicle.</p> <p>Generally, there will be more people standing than seated, especially compared to a double decker bus.</p> <p>This is why services need to be made as fast as possible, with smooth ride quality.</p> <p>Level boarding, a roomier interior and priority seating allow for people with mobility challenges.</p>	<p>In the inner suburbs and city, BRT will operate in dedicated lanes located in the middle of the road.</p> <p>BRT vehicles can also travel beyond the dedicated lanes and share lanes with other vehicles if needed (buses, cars, trucks).</p>	<p>Quicker recovery time after a very large earthquake or flood because BRT buses can deviate on to most roads, not constrained to steel tracks.</p> <p>Better able to handle steeper streets.</p>	<p>Investing in making public transport faster and more reliable, attracts people to live near to it, and that creates demand for urban development.</p> <p>BRT enables some new housing and transforms neighbourhoods along the route, but not as much as Light Rail.</p>	<p>Expensive option but less than light rail</p>	<p>Significant construction needed from Wellington Railway Station to Newtown and from Basin Reserve to Miramar via Kilbirnie to provide dedicated lanes. Some buildings will need to be removed along the route.</p> <p>Some disruption, and removal of parking will be needed in some places.</p> <p>Quicker to install than light rail.</p>	<p>Quieter than light rail due to rubber tyres.</p>

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Enhanced Bus Regular Metlink buses	Up to 100 people on a double decker bus Up to 75 on a single deck bus. Not easy for people with mobility challenges.	Regular buses can travel anywhere on the road network	Yes	Limited, unlikely to stimulate.	Lowest cost, with modest improvements to existing roads	Moderate construction needed from Hataitai to Miramar to deliver bus priority. Some disruption, and removal of parking will be needed in some places.	Metlink's new electric buses are quiet and the entire fleet will be electrified by 2030.

Overseas evidence in cities similar to Wellington typically shows that light rail provides greater urban development and mode shift potential than Bus Rapid Transit. Is this true?

This is generally true, though the scale of urban development is also connected to the quality of service provided by an LRT or BRT system. It is also influenced by the quality and type of other integrated facilities like walking, cycling, parks and public spaces etc along the route. Investment in these types of facilities alongside an LRT or BRT transport system attract new development and people to locations.

For Wellington, the same quality of corridor improvements is proposed for both LRT and BRT systems which is not always the case in overseas examples. High quality BRT using quiet, electric buses is quite new technology, so there are not many international examples available to compare to Wellington's situation.

One advantage that LRT has is the use of bigger vehicles, which provides more capacity on a route. This becomes important as the level of urban development increases and the demand to use public transport grows.

Is Bus Rapid Transit just another name for bus lanes?

No. There are a range of benefits that Bus Rapid Transit offers that regular buses don't, such as level boarding, greater investment in bus priority, more reliable journeys, larger vehicles and a more comfortable ride. Through the inner suburbs and city centre, Bus Rapid Transit will have dedicated lanes in the middle of road, minimising issues like passing side streets, driveways and navigating other vehicles trying to turn. We will also reconstruct the road so that the pavement surface is smooth, to improve the ride quality for customers. And just like our light rail options, we can relocate and improve underground pipes below the road so that they don't disrupt the corridor if they need to be repaired in the future.

[>Link to pros and cons](#)

How many options were considered for mass rapid transit and the Basin/tunnel? Why did some options not get shortlisted?

We considered hundreds of complex option combinations, including different mass rapid transit vehicle types and routes, multiple Mt Victoria Tunnel designs and a range of different ways of improving the Basin Reserve.

Some combination options didn't perform well against the programme objectives and assessment criteria and some were too expensive so didn't make the final shortlist. The options we are presenting give the best performance against the programme's objectives, while still having acceptable costs and levels of construction impact.

[>link to MCA criteria in next answer,](#)

How did you decide on these options?

Technical specialists reviewed all the options to filter out those that weren't suitable for Wellington. Once feasible options were agreed, we used a multi-criteria analysis assessment, involving a team of technical specialists weighing up different options to identify which of them would best meet the project's objectives and the future city vision. The people undertaking the assessment considered social, cultural, economic and environmental impacts, as well as an option's sustainability and ability to be delivered and maintained. This work also involved partner input, review and challenge.

The current round of engagement is looking for specific feedback on the four options that met the technical and project objectives to test the assumptions we have made and to include the community views in future decisions.

How are the new Basin options different from the failed Basin Bridge proposal?

The previous Basin Bridge proposal provided a new bridge that took northbound State Highway 1 (SH1) traffic over the top of the existing road, around the north side of the Basin to the Arras Tunnel entrance. The road space around the Basin was reconfigured to provide for public transport, walking and cycling. The circular movement around the Basin was maintained.

The new proposals at the Basin include two general concepts. This first concept, included in options 1, 2, and 3, removes the Basin operating as a roundabout. It uses an extended Arras Tunnel that allows north and south transport movements over the top of the tunnel extension to be separated from the State Highway east-west traffic underneath. The second concept, included in Option 4 provides minor alterations to the existing roundabout function of the Basin to allow Mass Rapid Transit to skirt around the southwestern corner of the Basin Reserve and connect to Adelaide Road.

What is the preferred Basin solution?

There is no preferred Basin solution at this stage. Two Basin concepts are presented within the four programme options proposed.

The first Basin concept presented in Options 1, 2 and 3 takes northbound SH1 traffic around the north side of the Basin at ground level, where it enters an extended Arras Tunnel. This means the Basin would no longer be a roundabout. The existing movement of traffic around the Basin would be replaced by a new two-way connection that physically separates transport movements, as follows:

- **Over Arras tunnel for local transport movements:** Arras Tunnel is made longer so light rail, bus rapid transit, regular buses, vehicles, and people can travel over it.
- **Through Arras tunnel for highway traffic:** Highway traffic heading north towards the motorway from Mt Victoria tunnel travels on the northern side of the Basin, passes into the extended Arras Tunnel, and is separated from the local north-south transport movements.

Walking, cycling and public transport facilities are significantly improved by this new connection.

The second Basin concept presented in Option 4 has light rail going past the Basin Reserve via Tasman Street and Rugby Street, so it doesn't require major changes like the other three options. Improvements will be made to the layout such as removing parking to free up lanes, extra lanes for LRT near Rugby Street, improved intersection at Adelaide Road, upgrading the signals at the intersections around the Basin, and improving ways for people to connect to the new Mt Victoria walking and cycling tunnel.

When the preferred programme option is confirmed it will confirm which of the Basin concepts will proceed, the next Detailed Business Case phase will then investigate the concept with more detailed options at the Basin.

[*Link to Basin, Mt Vic Renders and traffic movement animations as required to respond.*](#)

What is the preferred Mt Victoria Tunnel option? You show a diagonal tunnel in the engagement information, is this the preferred option?

The configuration of an extra Mt Victoria Tunnel is yet to be determined and will be investigated in the Detailed Business Case phase of our work.

A diagonal tunnel is shown on the maps for Options 1 and 2 for representative purposes only. It would likely be longer and slightly more expensive than a parallel tunnel and so, to be conservative, we have shown it in the engagement information for these options. A diagonal tunnel would likely have better public transport and mode shift benefits than a parallel tunnel.

How will a preferred Mt Victoria Tunnel option be determined?

If Option 1 or 2 goes forward as the preferred option from this current phase of work, the next phase – the Detailed Business Case – would:

1. Investigate in some detail options for an extra tunnel that adds new dedicated lanes through Mt Victoria for public transport and space for walking and cycling, and
2. Confirm a preferred tunnel with input from the community.

The new tunnel and existing tunnel combined would provide:

- A dedicated walking and cycle path
- One dedicated public transport lane in each direction
- One lane in each direction for all other vehicles

There are a number of tunnel options that could be considered if Option 1 or 2 goes forward including:

- A new diagonal tunnel that connects directly from Wellington Road to the western side of the existing Mt Victoria Tunnel. This could allow the conversion of the existing tunnel to walking and cycling (as shown on the maps for Options 1 and 2).
- A new tunnel parallel to the existing tunnel with alterations to Ruahine Street and Wellington Road.

If Option 3 or 4 goes forward as the preferred option from this current phase of work, a new Mt Victoria Tunnel would be for walking and cycling only.

As above, the Detailed Business Case would investigate in some detail the options for an extra tunnel and, with input from the community, confirm a preferred tunnel.

It is likely that a new walking and cycling tunnel would be parallel and to the north of the existing tunnel, and the existing Mt Victoria Tunnel would remain for vehicles.

Where is the long-tunnel option?

A long-tunnel option between Kilbirnie and the urban motorway (north of the Terrace Tunnel) was considered but it didn't meet the programme objectives of reducing carbon emissions and reducing reliance on private vehicles. It did little to assist public transport journeys and provided limited new space for pedestrians and cyclists. It was also very expensive and not affordable within the budget agreed by the project partners.

Does the Hataitai Bus Tunnel limit public transport along this route?

Yes. The one-lane, one-way Hataitai Bus Tunnel does restrict movement on the public transport network. The signal operations safely permit alternate directional travel but can cause delays and uncertain journey times for eastern suburbs bus services. Options 3 & 4 continue to use the Hataitai bus tunnel, and this requires all buses to travel through the streets of Hataitai, as they do now, rather than allowing buses from Miramar and the airport to travel on dedicated bus lanes through a new tunnel.

2 THE CONSTRUCTION PROCESS

When would you start construction?

We haven't confirmed when construction of the Transformational Programme would begin because four steps need to be completed first:

1. **2021/22:** We're calling for public feedback now as part of the indicative business case (IBC) phase. The IBC reports will identify the preferred option.
2. **2022/24:** Once the reports are endorsed by the partner organisations, we start the detailed business case (DBC). This is where we get down into the details of the costs, risks, and benefits of the preferred option. We will again call for public feedback on the more detailed design.
3. **2024/27:** After the DBC is approved we begin pre-implementation, seek resource consent approvals, carry out detailed design and begin purchasing property where necessary.
4. **Implementation/construction** follows pre-implementation/design.

Based on this, we expect that the first parts of the project could possibly start construction in 2028. There are options to bring this forward, and these will continue to be explored as the Programme progresses (e.g. using different delivery models and consenting options).

What impact is COVID-19 going to have?

COVID-19 is unpredictable but we're mitigating the risks where possible, including supplier and resource issues. We can't be certain what the ongoing impact of COVID-19 will be, but we'll keep you informed if there are any impacts on our work.

How long would construction take?

Design and option depending, we'd expect construction to take 8-15 years. However, we'll confirm construction timing including how long we expect it to take, during the design phase. We'll take many factors into consideration, including the number of projects that make up the preferred option, resource availability, and other infrastructure improvements (i.e. water upgrades, urban development). But most importantly, we'll need to stage construction so the city can keep moving around construction.

Which parts would be constructed first?

We'll confirm construction order during the design stage. Once we know the preferred option, we can plan construction timing. We'll take many factors into consideration, most importantly, how we can best minimise disruption.

However, the section of the mass rapid transit network between Wellington Railway Station and Newtown, and improvements at the Basin Reserve are essential to all the consultation options and would most likely be first. But we'd look at this further in the detailed business case stage.

How will construction disruption be managed?

With a programme of this size, some disruption is unavoidable. We'll work with community and business groups, keep locals regularly informed, and plan construction in a way that minimises disruption.

Will there be compensation for affected businesses?

Compensation will be discussed at future stages, once we know more about the preferred option, and what the potential disruption could look like.

3 CHANGE TO WELLINGTON

How will you fit mass rapid transit through narrow Wellington streets?

We need dedicated public transport lanes in some parts of the city to ensure mass rapid transit can move with priority past traffic congestion and be operated as a quick, frequent, and reliable service. Some street changes would also be necessary. Depending on the location and option chosen, this might include:

- reducing the number of general traffic lanes
- widening the road by purchasing property
- making a street MRT-only
- removing parking

MRT will share lanes with general traffic along some sections of the route where roads are less congested.

What are you doing for people in the northern and western suburbs?

The City Streets project is considering improvements for buses and cyclists along key corridors to the north and west of the city. For more information, visit [City Streets: bus, bike and walking connections](#). The Travel Demand Management work will also provide opportunities for the wider city and Region.

Will properties be affected?

Major transport infrastructure programmes often affect neighbouring properties. We know that big announcements like this can create uncertainty for people who own property near the proposed projects.

It is likely that some properties will be affected, however we will not know which ones until our planning and design work is complete.

The transformational programme also provides significant opportunity for properties within the walking catchment of the MRT corridor and stations.

When will you be able to tell property owners if their property is affected or not?

Major transport infrastructure programmes often effect neighbouring properties. We know that project announcements like this can create uncertainty for people who own property near the proposed projects.

Before we build any of the proposed transport improvements, we'd need to get resource consents and have land designated for the construction and operation of each project. By the consent and designation stage, we'd know which properties would need to be acquired and would contact those owners to discuss further. As we move through investigation, evaluation, and design, we'll continue to consult with people who may be directly affected.

Does this mean that local businesses will have less passing trade – especially during construction?

Mass rapid transit will be a benefit for nearby businesses and the central city once it is complete because it will encourage more housing, urban development, and use of public transport. This means there will be more opportunities, more customers, and more business. The experience overseas consistently shows that the introduction of mass rapid transit results in growth and greater foot traffic along the route, particularly around the stations. Disruption during construction is unavoidable, but we're committed to minimising the impacts of this as much as possible.

Will the introduction of MRT affect car parks?

The main benefit of constructing a mass rapid transit system, is that it reduces the need for people to rely on a private vehicle. These routes are key for public transport, and under all options we'd need to remove some car parks to make moving people around our streets safer and more efficient. The location of removed car parks would depend on the option chosen, so will be explored further in the detailed business case stage.

How many car parks will be affected?

We're proposing public transport improvements on 15km of road in the south and east of Wellington, this could mean around 500-1000 on-street car parks would be required to make way for mass rapid transit. Using the road space now allocated to parking means we won't need to acquire as many properties. We'll know more when a preferred option is chosen, and we move to detailed design.

What other ideas are being considered to encourage people to drive less?

A number of 'soft' and 'hard' travel behaviour change tools are being considered. These include pricing tools such as a parking levy and congestion charging or cordon charging, which are effective ways to discourage drivers of private motor vehicles to consider other options of travelling into the city. This helps ensure the roads are less congested for those people who have no option but to use a private vehicle (e.g. trades people, deliveries, regional trips, people with disabilities etc). Congestion charging has been used in other large cities and was recently supported by a select committee for Auckland and other NZ cities. No decision has been made on applying this to Wellington and this would require further investigation and engagement.

Will I be able to travel through the Basin Reserve by bike or on foot?

We've made sure people can safely cycle or walk through the Basin under all options.

The proposed Basin Reserve concept (in options 1, 2 and 3) aims to make it easier for people walking and cycling around both sides of the Basin, and provides better connections between the schools, Mt Victoria Tunnel and Pukeahu National War Memorial Park.

In our alternative Basin concept included in option 4, the streets around the Basin would be largely the same as they are now. However, an improved north-south connection around the east side of the Basin Reserve would provide access to a new Mt Victoria walking and cycling tunnel, make it easier to get to the schools and would provide an alternate route for when the Basin Reserve is closed for events.

Why is mass rapid transit only going south and east – why not the north and/or the west?

The south and east of Wellington offer the greatest opportunity to provide better public transport to key regional destinations such as Wellington Regional Hospital, Wellington International Airport and growth areas identified in Wellington City Council's Spatial Plan. However, the possible extension of mass rapid transit to the north and west has been considered by technical specialists as part of the multi-criteria assessment. Future extensions would depend on the type of mass rapid transit vehicle chosen. Light rail can't be extended as easily to serve Wellington's northern suburbs. This is made clear in the consultation material as part of the key features of each option.

Where are the mass rapid transit stations? Why were these stations chosen?

In the proposed options, stations would be placed every 400m - 800m. This will help serve the greatest area, while also providing travel times competitive with driving. The stations will be placed at key destinations like Wellington Regional Hospital, Wellington Railway Station, Wellington International Airport, and suburban growth areas, making it easier for people to get to where they need to go, and avoiding the need to transfer. More work will be done to confirm station locations at the next stage.

Would emergency services experience delays if traffic lanes are required for MRT?

Emergency services would be able to use the dedicated mass rapid transit corridors to avoid known areas of congestion.

Why are we spending so much money on cycle paths?

Cycling contributes to the Let's Get Wellington Moving vision for Wellington as a great harbour city, accessible to all, with attractive places, shared streets, and efficient local and regional journeys. To achieve this, our aim is to move more people with fewer vehicles and help reduce our carbon emissions. To mitigate climate change we need to find a way to move more people more efficiently and without petrol. We're also asking for your feedback on the Bike Network Plan, which complements these mass rapid transit options and the City Streets projects, and will enable Wellingtonians to move about the city differently.

Will building this cause loss of character, heritage, and archaeological artefacts?

We're committed to mitigating impacts to character, heritage, and archaeology as much as possible. Mass rapid transit would improve our connection to areas of cultural and heritage significance. Transformative projects of this size inevitably impact the surrounding environment, but we'll be doing everything we can, including working with appropriate people and groups, to keep any impacts to a minimum.

Why can't we just use more buses on roads?

Over time, it's going to become more difficult to ensure that buses are fast and reliable enough to encourage people to take the bus. Our City Streets programme will provide more bus priority on many corridors throughout the city – but there's a limit to how much capacity and performance the bus network can provide.

Wellington City is planning to accommodate between 50,000 and 80,000 more people over the next 30 years, so we need a step change in our public transport system to enable transformational urban development and new housing, while keeping Wellington moving. Mass rapid transit is the most practical way to increase capacity and offer a quick, reliable and attractive service that are comparable or better than private vehicles.

With people working from home post-COVID is mass rapid transit necessary?

Even with more people working from home, there will always be people who want or need to go out to work, or simply moving about the city for recreation, shopping and socialising. Mass rapid transit will also make it easier to get to important regional destinations like Wellington International Airport and Wellington Regional Hospital.

How much is Wellington's population likely to grow?

Between 50,000 and 80,000 more people are expected to come and live in Wellington City over the next 30 years. This growth is planned for in the [Wellington City Spatial Plan](#), which determines the best places to grow and considers things like climate change, ease of getting around and costs of services.

Let's Get Wellington Moving will enable this growth. It's clear that we can't fit all these people on the existing streets without some change, and we can't afford the climate cost of *all* those extra people moving about by car. Which is why we're thinking about moving more people with fewer vehicles. Mass rapid transit supports inner-city living, and encourages people to live closer to where they work or study or spend time, so there's less need to move short distances by car. This frees up more street space for the people who need to drive.

Where will all the new people in Wellington live?

Wellington City Council has mapped this in the [Wellington City Spatial Plan](#). It's planned that more people will live along the key public transport spines that follow the flatter routes to the south, east and at suburban centres such as Johnsonville which have transport options, and good local facilities like shops, libraries, schools etc. There are significant opportunities for more intensive development along the MRT corridor, particularly throughout the central city, Te Aro, Mt Cook and along the southern corridor through to Newtown and onward to Berhampore and Island Bay. MRT and the urban development it can support will enable more people to live, and more businesses and community facilities to be located in areas well-served by public transport.

4 CLIMATE CHANGE

How has climate change been addressed in these options? How do these options reduce carbon emissions?

Carbon reduction and mode shift is the most important objective of Let's Get Wellington Moving. Working with our partners, we've used a range of carbon assessment tools to evaluate the carbon reduction potential of each option. The carbon from how we move around the city is the key reduction opportunity. There is carbon involved in construction, but longer term more carbon is expected to be removed than created by the options proposed.

Let's Get Wellington Moving is looking to move more people with fewer vehicles. Public transport options like the light rail and bus rapid transit technologies considered in this consultation, are run on electricity and are significantly lower in emissions per person than travelling through town in a car using petrol.

Walking and cycling produce no carbon emissions. Let's Get Wellington Moving places greater emphasis than ever before on how to shape land use and urban street design in a way that reduces our dependency on cars and makes walking, cycling and e-bikes, e-scooters and electric skateboards safe and attractive travel choices.

Mass rapid transit will also enable more people to live in inner-city areas, reducing travel distances to work, school or the shops, making it more likely that we can choose lower carbon transport options to get where we need to go.

The focus of our carbon reduction efforts has been:

- **Inclusive access** – Designing transport access for all modes, encouraging a shift in urban areas from private vehicles to public transport, walking, and cycling, and supporting efforts to reduce carbon emissions.
- **Supporting urban form and development** – Developing higher density, mixed-use (residential, business and leisure) spaces within walking distance of transport hubs. If people live closer to where they work, learn and play, this helps reduce carbon emissions by promoting the use of public transport and active modes, reducing reliance on cars.
- **Design** – Ensuring best-practice design, construction and maintenance standards are used during transport infrastructure projects, to avoid or minimise adverse effects on the environment.
- **Seeking new technology** – Identifying suitable low-carbon transport systems and vehicles that support emissions reduction, while improving safety and inclusive access.

Do we need mass rapid transit if we all have electric vehicles?

Electric vehicles reduce carbon emissions, but they won't fix congestion or safety, and they won't support higher levels of urban development. We need bigger, more space-efficient vehicles to move people around our city.

There are also supply constraints on getting electric vehicles into the country, and they are still more expensive than petrol or diesel vehicles. New Zealand has committed to achieving net-zero carbon production by 2050, while Wellington City's carbon reduction target is to more than halve our carbon emissions by 2030, which means significant change to how we move around, and this won't be achieved fast enough if we rely on buying electric vehicles. We need to have options to move around the city that are cheap, easy, safe, reliable, and zero/low carbon like walking, biking, catching the bus, and hopping onto mass rapid transit.

5 THE DECISION-MAKING PROCESS

What has happened since the Programme Business Case consultation?

In June 2019 the Programme Business Case outlined a vision for an improved transport system for Wellington. A Programme Business Case outlines the strategic response to the problems identified. It recommended investment that had a strong focus on people and improved quality of life. From this, a final package of transport changes was developed for Wellington that complemented transport investments for the wider Wellington region.

Since then we've:

1. **carried out a range of investigations** on a range of projects and potential benefits
2. **revised our programme objectives** following investigations and considerations. This included a much greater focus on urban development and the opportunity this provides to achieve outcomes that fulfil the objectives.
3. **developed and assessed a long list of options.** The mass rapid transit and state highway improvement investigations were the starting point for the development of the LGWM programme long list – because they are the largest components. Each programme long-list option has also been supplemented by elements from the wider LGWM packages. We carried out multi-criteria assessments on the 16 long-list options, testing against programme objectives, environmental and social impacts and design, delivery and operational criteria.
4. **arrived at four high-level options** to consider.

What short-term improvements are underway, while we wait for the more complex improvements?

Strategic highway improvements and mass rapid transit are large, complex projects that take time to design and refine, and get resource consents.

While we work on the wider programme, we need to make a start now on moving more people with fewer vehicles. Our priorities in the Three-Year early delivery programme and City Streets programme are making travel by bus to and through the central city faster and more reliable and creating a better environment for people walking and on bikes. They will help ensure that any disruption caused by construction of the major projects is kept to a minimum, and people still have great options to get around the city.

Find out more about our [three-year early delivery programme](#) and the improvements already underway.

How will my feedback influence the decisions?

After consultation closes, your feedback will be analysed and a summary of what you told us will be shared online.

This feedback will help to decide which option moves to the next stage. This is where the preferred option is explored in more detail. At this point, we will check in with you again to make sure we have got it right and to talk with people whose homes or businesses will be most affected.

What happens next?

We're currently in the indicative business case phase, which includes consultation. Once consultation closes, we'll analyse all your feedback, incorporating that into the indicative business case report.

Once these reports are endorsed by the partner organisations, we start the detailed business case which would involve detailed analysis of the costs, risks and benefits of the preferred option identified in the indicative business case.

What is a benefit-cost-ratio?

A benefit-cost ratio (BCR) is used when assessing different projects or project options and is the primary measure of economic efficiency. It allows us to see whether an investment will generate more monetised benefits than cost. The higher the BCR the greater the economic efficiency of the investment. It is important to note that this analysis helps compare the economic efficiency between options, but is an estimate only, and doesn't fully capture benefits that are difficult to monetise.

Does a benefit-cost-ratio of less than 1 mean that it is not economically viable/worth investing?

An investment framework is used to consider whether or not an investment will deliver the full range of benefits we're seeking. When we think about the benefits that we might get from an infrastructure proposal, we consider quantitative measures – number based – and qualitative measures – description based – so that we get the best understanding of the good things and the bad things an infrastructure proposal will create. The Benefit Cost Ratio is one part of this investment framework, so alone, does not confirm if an investment is worth making.

It can be difficult to translate all benefits into dollar values, as happens in a Benefit Cost Ratio. Some of the benefits that might be delivered through an investment proposal that are difficult to capture just through a benefit cost ratio include:

- healthy and safe people
- resilience and security
- economic prosperity
- environmental sustainability
- inclusive access.

What is a transport / traffic model – how does it work and what does it show me?

A traffic model is a mathematical model that attempts to imitate a real-world transport system. A base model is created and calibrated with real transport / traffic data to provide the most accurate simulation of the existing transport system. Changes are made to the base model by creating future-year scenarios. The scenario models can be used to compare the impacts of different options and interventions. For example, travel times are forecast to be 12 minutes faster than current public transport for people using light rail or Bus Rapid Transit from Island Bay to the Wellington Railway Station. Models can indicate what may happen in the future, but they are never 100 percent accurate.

Who was involved in the multi-criteria analysis assessment?

A group of independent technical specialists assessed how each option performed against programme evaluation metrics. Their assessments were tested by the programme partner organisations to make sure the evaluation results and evidence base were robust.