Indicative Business Case for Wellington Bus Rapid Transit

A report for the NZ Transport Agency, GWRC and WCC

July 2015

EXECUTIVE SUMMARY

BRT – Indicative Business Case

29 July 2015

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Executive summary

This business case assesses the case for a proposed investment in Bus Rapid Transit (BRT) in Wellington City.

BRT in its most comprehensive form is a high-quality, high capacity bus system that improves upon traditional bus systems. Modern, comfortable, high-capacity buses travel in dedicated lanes, separated from general traffic, parking, turning traffic and other impediments. Passengers board from raised platforms (slightly higher than street level), having paid their fares electronically.

BRT is the proposed solution to improving public transport (PT) through the PT Spine, from the Railway Station to Newtown and Kilbirnie. In its entirety, BRT will involve increasing the amount of roadspace dedicated to buses, increased intersection priority for buses, using high-capacity buses and delivering operational and user improvements. This business case focuses on BRT infrastructure only that will provide dedicated roadspace and intersection priority for buses.

This business case follows the New Zealand Transport Agency (the Transport Agency) business case approach. This approach is based on the Treasury Better Business Cases guidelines, which are organised around the five case model designed to systematically test whether an investment proposal:

- is supported by a robust case for change – the 'strategic case'
- will deliver optimal value for money – the 'economic case'
- is commercially viable – the 'commercial case'
- is financially affordable – the 'financial case', and
- is achievable – the 'management case'.

This document is an **Indicative Business Case** (IBC). Its objectives are to confirm the preferred way forward for the proposal and to develop a short-list of options for further detailed analysis. It focuses on developing the strategic and economic cases for the project and includes an outline of the financial, commercial and management cases.

It is anticipated that this IBC will be followed by a Detailed Business Case (DBC), which will develop the preferred BRT option in detail, including detailed design and a detailed economic evaluation, as well as detailed consideration of financial, commercial and management aspects.

The IBC has been developed collaboratively between three partner organisations – the Transport Agency, Greater Wellington Regional Council (GWRC) and Wellington City Council (WCC).

This executive summary, as an extract from the full report, is provided in accordance with the terms of our engagement letter with the Transport Agency dated 29 May 2014 and the change of scope letter dated 17 February 2015, and is subject to the restrictions set out in Appendix A of this report. This executive summary should be read in conjunction with the full IBC document. The authors of this report are Bruce Wattie and Craig Rice.

Strategic Case

Background

The Ngauranga to Wellington Airport Corridor Plan 2008 (N2A Plan), developed by GWRC in collaboration with WCC and the Transport Agency and now included in the Regional Land Transport Plan 2015 (RLTP), outlined a multi-modal strategic plan to improve the way people travel around Wellington City and their access to key destinations and amenities.

The Wellington Public Transport Spine Study (PTSS) was a key action arising from the N2A Plan. The PTSS investigated the feasibility of a large number of different options for creating a high-quality 'PT spine', arriving at a short-list of three options: bus priority, BRT and Light Rail Transit.

BRT was identified as the preferred option. Following community consultation in March 2014, the Regional Transport Committee agreed to progress BRT detailed planning and design, and to enable its implementation to be included in the 2015 RLTP[1]. GWRC, WCC and the Transport Agency agreed to work together to develop an IBC for BRT to provide clarity on the option to be taken forward for detailed design.

The BRT solution proposed for Wellington, developed for Wellington's unique context, involves:

- running of low-emission high-capacity buses:
    - along dedicated bus lanes, separate from general traffic (at grade, and using the same intersections)
    - between the Railway Station and Newtown/Kilbirnie (see Figure 1 overleaf)
    - at a frequency sufficient to cater for demand and growth
- signal priority for buses at intersections (where deemed feasible)
- improved stop and station facilities
- integration with the new simpler and more efficient bus network for Wellington City
- a number of operational improvements, including integrated fares and ticketing, the development of mobile timetables and improvements in the provision of real-time bus location information.

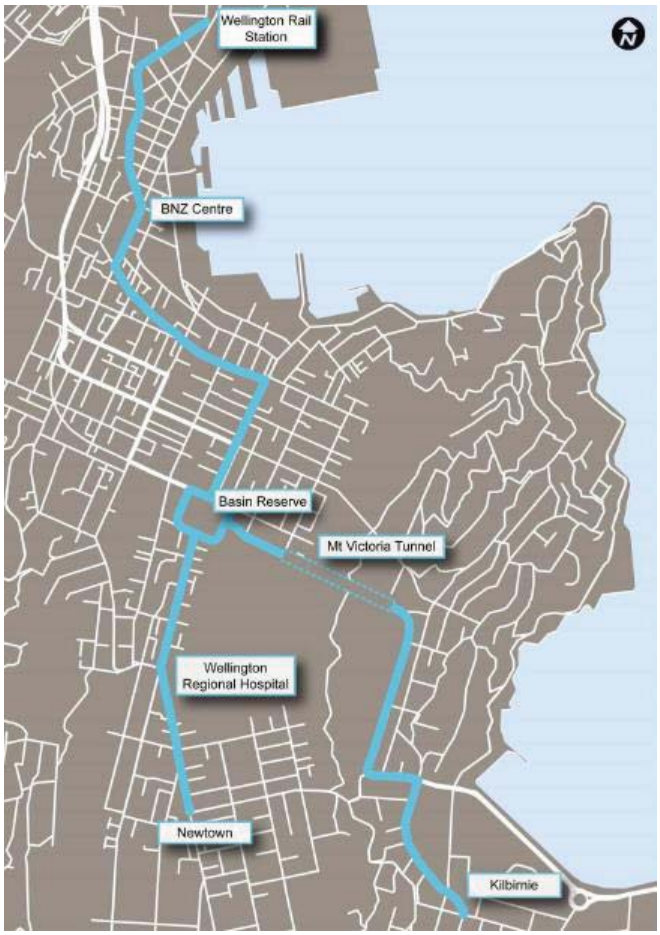
This business case is for one part of this BRT solution – the physical infrastructure (roadspace and intersection priority, and stop/station infrastructure). The other elements of the BRT solution are currently undergoing their own assessment processes. For example, a business case for integrated fares and ticketing has been recently prepared.

The physical BRT infrastructure is a key element of the wider solution, as it is the part that enables faster and more reliable PT journeys. However, it is only one element – it needs to be considered as part of the full BRT solution. The full benefits of the physical infrastructure can only be achieved with the implementation of all the other parts of BRT.

In addition, the BRT solution is itself just one part of a wider transport solution planned for the Ngauranga to Airport corridor. Other aspects of this transport solution include state highway improvements, cycling infrastructure improvements, and addressing conflicting traffic demands at key locations.

[1] Greater Wellington Regional Council (13 May 2014), Minutes of the Regional Transport Committee, 4 March 2014; minute 3.2.b.

Figure 1. Proposed BRT route



Source: PTSS presentation to stakeholders and interest groups (August 2013)

The case for change

People travelling in Wellington consistently experience congestion, particularly at peak periods and at key network bottlenecks. The PT Spine corridor is particularly congested.

Bus users who travel along the PT Spine currently experience longer journey times compared to private vehicles. Bus services can also be unreliable. This is primarily a result of congestion along the PT Spine and buses having to compete with general traffic (and other buses) along the majority of the route. This limits the attractiveness of PT services to Wellington commuters. It restricts the ability for PT to attract new users and to shift private vehicle users to PT.

Together, these issues harm productivity – both for commuters who spend longer getting to and from work, and for organisations for which moving from place to place is a key part of their business. Congestion also impacts on freight movements. This limits Wellington's economic growth potential.

Giving buses priority both over roadspace and at intersections will enable faster and more reliable PT journeys. This will help make bus travel more attractive relative to private vehicles, which will remain in general traffic congestion. Because buses can carry far more people than private vehicles, giving them priority increases the carrying capacity of the whole corridor, and allows more people to travel along the PT Spine at peak periods.

Faster and more reliable journeys via BRT will drive improvements in the productivity of workers and businesses, and drive increases in Wellington's economic growth. Empirical evidence suggests that the

economic benefits from even relatively small improvements to speed and reliability could be substantial, particularly for individual businesses[2].

Relatively slow and unreliable PT services, and the lack of a coherent and permanent PT Spine, has not helped the development potential of land around the PT Spine for higher-value uses, which is part of WCC's land-use plans. Consequently, Wellington is not maximising the potential land-use along the PT Spine corridor.

There are benefits to acting now. Congestion is already heavy at peak times and is limiting productivity and economic growth. Future population and economic growth will exacerbate it, but the problem exists today. Furthermore, PT patronage has begun to plateau.

However, one of the key benefits of BRT as a PT initiative is that it can be implemented incrementally. There may be merit in staging the implementation, or altering the timing to coordinate with other transport projects.

Implementation of BRT, along with other planned PT initiatives, has the potential to create a major step-change in the delivery of PT in Wellington. PT will become increasingly attractive and competitive with private vehicle travel, allowing more people to travel along the PT Spine corridor at peak times, with many achieving much faster and more reliable journeys, as well as freeing up road space on other corridors.

As an example of the impact that investment in PT can have, significant recent investment in Wellington's rail network has seen corresponding increases in patronage, as potential users respond to improved levels of service.

If Wellington wants to be a 21st century city, it needs to have a 21st century transport network, of which a 21st century PT network is a vital component. Wellingtonians and their goods need to be able to move around the city quickly, reliably, comfortably, and in large numbers. This is how Wellington can continue to grow, while still providing a high quality of life for its residents.

Strategic context

BRT is consistent with the strategic direction set by Central Government, the Transport Agency, GWRC and WCC, as outlined in the relevant strategic and planning documents. It is consistent with the plans for increasing PT mode share, and it will help alleviate congestion and improve productivity and economic growth. The relevant strategic and planning documents include:

- The Government Policy Statement on Land Transport Funding (GPS)
- The Transport Agency Statement of Intent 2014-18
- The Wellington Regional Land Transport Plan 2015 (RLTP)
- The Wellington Regional Public Transport Plan 2014 (RPTP)
- WCC's 2015-25 Long-Term Plan (LTP)
- WCC's draft Urban Growth Plan.

The GPS has increasing economic growth and improving productivity as the primary objectives for land transport expenditure. The expectation is that land transport funding will be directed into high-quality projects and activities that will support this objective. Consistent with this, economic growth is a key objective in the RLTP.

[2] See for example: Eddington, R. (December 2006), The Eddington Transport Study: Main report: Transport's role in sustaining the UK's productivity and competitiveness.

The RLTP notes a number of regional pressures, including traffic congestion and network capacity constraints, reliability of the transport network, and PT capacity and mode share.

Making quality investments in the area of public transport is highlighted in the GPS as an important strategic response to the goals of improved productivity and economic growth. Increasing peak period PT mode share is stated as a key outcome desired by the RLTP, as is reducing severe road congestion.

The N2A Plan is now included as a chapter in the RLTP, titled the Ngauranga to Airport Corridor Strategy (N2A Strategy). One of the seven strategic responses set out in the N2A Strategy is "developing a high quality and frequency PT priority 'spine'". Other strategic responses relate to capacity improvements on State Highway 1 (SH1) and addressing conflicting transport demands at the Basin Reserve.

The RPTP sets out the current programme for improvements to Wellington's PT services over the next 10 years. The PT Spine, from the Railway Station to Newtown and Kilbirnie, is central to the delivery of the overall plan. Implementing BRT along the PT Spine is considered the "immediate priority" for the Ngauranga to Airport corridor, alongside addressing conflicting transport demands around the Basin Reserve.

While BRT is clearly well-aligned with the relevant strategic documents, a key issue is the alignment and dependencies with the Transport Agency's Roads of National Significance (RONS) programme – in particular, the Basin Bridge and Mt Victoria tunnel duplication projects. These projects are another part of the response to the N2A Strategy.

The PTSS assumed that both of these projects would occur before BRT was implemented and the BRT option was assessed as such. However, resource consent for the Basin Bridge has since been declined (this is currently under appeal), and this has led to the Transport Agency re-evaluating the Mt Victoria tunnel duplication (this process is ongoing). In the economic case, we consider options that allow for a BRT solution without these RONS projects.

Key findings

There is a demonstrable problem with the current PT network along the PT Spine.

- The corridor is congested, particularly at peak times and this is forecast to worsen.
- It is difficult to increase PT patronage and mode share under the current circumstances. Buses are not segregated from general traffic. Wellington's bus services are perceived by the public as being less attractive and less reliable than private vehicle journeys.
- The issues with PT are restricting envisaged redevelopment of land around the southern and eastern ends of the PT Spine into higher-value uses, and limiting the potential economic activity in these areas.

A BRT solution can help address these problems. BRT can:

- provide faster and more reliable bus journeys along the PT Spine
- increase the corridor carrying capacity along the route
- help improve the bus user experience
- contribute to increasing PT patronage and PT mode share along the PT Spine
- help grow the total number of people able to travel along the PT Spine during peak periods.

This will help drive Wellington's economic and productivity growth. It will also encourage greater economic activity in the areas surrounding the PT Spine.

BRT is consistent with the strategic direction set out by Central Government, GWRC and WCC. It is a key initiative in terms of implementing Central Government's focus on improving productivity and economic

growth. BRT will also help achieve a number of GWRC's and WCC's objectives, in particular economic growth, urban regeneration and improved accessibility. BRT along the PT Spine is the most important and most beneficial PT project currently being considered for Wellington, and is a key element of all current transport plans for the Wellington region.

Economic Case

This economic case is based on a best practice decision making approach for infrastructure projects and the level of detail appropriate for an IBC. A small set of options have been developed, differing across the key areas of material difference. These options are subjected to two types of economic assessment:

1. A qualitative assessment against a set of agreed criteria, typically referred to as a multi-criteria analysis (MCA).
2. A quantitative assessment, involving the development of benefit-cost ratios for the options. For a transport project such as this, this assessment is undertaken with reference to the Transport Agency's Economic Evaluation Manual (EEM).[3]

Options considered

The reference case

In the economic assessment, all options are assessed relative to a 'base case' scenario. This represents what is expected to happen if the project does not go ahead. The costs and benefits of the BRT options are determined relative to this reference case.

The reference case is not a 'do nothing'. It is a 'do minimum', and includes other projects along the PT Spine and ongoing maintenance spending for example.

The reference case for BRT includes or assumes:

- the current network of bus lanes and bus priority across Wellington City
- currently planned roading improvements. In particular:
    - The Basin Bridge and associated improvements; or another grade separated solution
    - Mt Victoria tunnel duplication, and associated improvements to Ruahine Street
    - All other Wellington RONS
- changes to Wellington bus services as a result of the Wellington City Bus Review, including:
    - Revisions to bus network running patterns
    - Optimisation of bus stops locations
    - Other user improvements
- the complete implementation of the Public Transport Operating Model (PTOM) contracts
- the introduction of integrated fares and ticketing (as currently envisaged by that project's business case)
- the use of high-capacity buses (eg double-decker) on some Wellington City bus routes, where warranted by demand

[3] NZ Transport Agency (1 July 2013), Economic evaluation manual.

- buses will run at a frequency necessary to cater for demand and growth.

The BRT options

The Working Group considered that the most material features of the options, and hence those where different variants should be considered, were the degree of dedication of the bus lanes and the degree of intersection priority given to buses.

The BRT option in the PTSS assumed complete dedication and intersection priority, such that buses could essentially move freely throughout the route without congestion. The Working Group wanted to consider some variants of this BRT solution that involved lower degrees of dedication and priority. In effect, the Working Group wanted to assess options that spanned a continuum from the PTSS BRT option to the PTSS Bus Priority option.

Four distinct options were developed to reflect this continuum:

- Physically separated bus lanes along the full route, operating at all times (in effect, the PTSS BRT option)
- Bus lanes along the full route, operating at all times
- Bus lanes along selected parts of the route to target key congestion areas, operating at all times
- Bus lanes along the full route, but only operating at peak times.

In addition, a separate option was considered, based on a detailed possible plan recently developed by WCC, for bus priority improvements along the Central and Newtown branches.

Table 1 sets out the type of roadspace and intersection priority assumed for each of the core options.

Table 1. Key elements of core options

Option #	Type of roadspace dedication	Level of intersection priority
1	Improved bus priority	Limited priority
2	Bus lanes, along the whole route, at peak periods	Limited priority
3	Bus lanes in targeted locations, 24/7	Limited priority
4	Bus lanes, along the whole route, 24/7	Full priority
5	Physically separated bus lanes, along the whole route, 24/7	Full priority

BCR and MCA results

Table 2 presents the estimated benefits, costs and the benefit-cost ratios (BCRs) for the core BRT options. All dollar values shown are net present values over 40 years. Table 3 shows the MCA scores for the core options.

Table 2. Costs, benefits and BCRs – core BRT options

$m NPV	1	2	3	4	5
Benefits:					
Travel time benefits	5.9	15.3	19.0	28.1	32.9
Additional PT user benefits	0.0	0.0	0.0	5.8	6.0
Reliability benefits	5.9	15.3	19.0	28.1	32.9
Walking benefits	0.1	0.3	0.3	16.4	17.1
Emissions reductions benefits	0.1	0.3	0.3	0.3	0.4
Agglomeration benefits	0.9	2.3	2.8	4.2	4.9
Decongestion (dis)benefits	(4.9)	(4.4)	(4.3)	(4.0)	(3.7)
Reduction in vehicle operating cost benefits	3.8	10.7	11.0	13.3	17.5
Total benefits	**11.8**	**39.7**	**48.0**	**92.2**	**108.1**
Costs:					
Capex	24.3	72.1	43.4	97.2	132.9
Opex (savings)	(2.4)	(20.8)	(22.8)	(36.8)	(45.4)
Total costs	**21.9**	**51.3**	**20.6**	**60.4**	**87.5**
Benefit-cost ratio (benefits/costs)	**0.5**	**0.8**	**2.3**	**1.5**	**1.2**

Table 3. Results of multi-criteria analysis – core BRT options

	Ref case	1	2	3	4	5
1. Increased economic activity						
2. Improved multi-modal network efficiency						
3. Improved accessibility						
4. Increased PT patronage						
5. Improved PT user experience						
6. Minimise emissions						
7. Minimise impacts on physical environment / amenity						
8. Affordable / value for money						
9. Alignment / integration with other infrastructure & services						

Negative effects **Positive effects**

Discussion of trade-offs

The options involve a range of different types of BRT solution, each with different pros and cons.

Wellington can have the highest quality BRT system considered (Option 5), but this comes at a cost. The analysis of the intermediate options shows that there is an opportunity for Wellington to achieve a significant proportion of the benefits of a high-quality solution for a much lower cost.

For example, Option 4 is cheaper than Option 5, but still enables significant benefits to be achieved through having dedicated bus lanes along the full BRT route. Option 3 is considerably cheaper still, but still enables a considerable improvement over the reference case in terms of the ability to move people around the city.

All the options move people along the PT Spine faster and more reliably, to varying levels, than is currently the case. But they vary quite a lot according to the other objectives and strategic goals they satisfy.

Option 3 enables considerable improvements in moving people around the network. However, the discontinuous nature of the bus lanes means that it is unlikely to have the type of transformational effect that Option 5, and to a lesser extent Option 4, would have. Options 4 and 5 could provide a material step-change in Wellington's PT infrastructure.

BRT can be implemented incrementally. Instead of a one-off transformational step-change, incremental improvements could be made over time. For example, it is possible to deliver Option 3 now and then further develop the infrastructure by effectively moving to Option 4 or 5 at a later date.

As well as significant financial implications, high-quality BRT solutions also have costs in terms of their effects on other road users. As more dedication and priority is allocated to PT, more of the roadspace must be taken away from general traffic and/or parking (or the road is widened, with consequent environmental effects).

Finding a solution to conflicting transport demands at the Basin Reserve is critical to implementing a high-quality BRT system. Without such a solution, the Transport Agency will not duplicate the Mt Victoria tunnel and the Kilbirnie branch of the proposed BRT solution will not be able to proceed.

The BCRs for the option variants without the Kilbirnie branch are substantially lower than those that include it. Also, the option variants without the Kilbirnie branch are likely to overstate the true BCR of implementing BRT in the absence of the RONS – without the Basin Bridge (or a solution of similar effectiveness), the actual traffic outcomes for trips from Newtown will likely be inferior to those modelled.

Preferred options

The preferred options from the economic analysis are Options 3 and 4.

The PTSS envisaged a BRT solution with physically separated lanes along the full route from the Railway Station to Newtown and Kilbirnie. However, the economic analysis has demonstrated that this is not the only sensible approach to implementing a BRT solution.

The majority of the travel time benefits can be achieved by providing additional priority to buses at and around key intersections along the route. The economic analysis has shown that a targeted approach to BRT could provide a cost effective improvement to bus services along the PT Spine.

Option 3 will deliver a very good outcome in terms of moving people around Wellington City faster and more reliably, for an up-front capital investment of $59m (compared to $174m for Option 5). It also has lower adverse impacts on traffic and parking than Options 4 and 5.

Options 3 and 4 have indicative benefit-cost ratios of 2.3 and 1.5 respectively. These are relatively high for a PT project. The roadspace dedication of Option 3 could also be combined with the intersection priority of Option 4 to deliver even greater benefits.

The economic analysis suggests that Options 3 and 4, or a combination of them, are appropriate options for further consideration. Option 3 appears the best value-for-money approach – a good outcome for a

relatively low cost. But if a high-quality, more transformational, outcome is desired, Option 4 appears the best approach – this is a lower cost version of Option 5, achieving a large proportion of the benefits.

Wellington can have the highest quality BRT solution possible (Option 5) if it desires. However, it will cost a lot more than Options 3 and 4 and involve more substantial effects on other road users and the physical environment. The economic analysis suggests that Option 5 may not be the best use of resources.

Options 3 and 4 have been identified as the preferred options on the basis that they deliver much of the benefits of Option 5 but with a more efficient use of resources.

These options also do not preclude upgrades to a higher-quality solution in the future. If Option 3 is chosen today, Options 4 or 5 could still be implemented at a later date if warranted.

It is also recommended that, if physically possible, only options that include the Kilbirnie branch are considered further. A key result from the consideration of the different option variants is that the Kilbirnie branch is essential to the viability of a BRT solution. This helps to partially illustrate the effect of complete transport networks. Designing a network as a whole enables optimisation across the PT network, as well as other road users.

Financial Case

Expected costs

BRT is expected to involve a capital investment of between $31m and $174m, depending on the option chosen. This may be spread over time, depending on the form and timing of the implementation.

Assuming the current funding arrangements for PT in Wellington are retained, the Transport Agency will fund 51% of BRT, with the remainder to be funded by GWRC and WCC. It is expected that WCC will fund the majority of this remainder, as current arrangements involve WCC funding road-related infrastructure, which comprises most of the expected capital cost.

In addition, operating savings are expected from BRT due to more efficient bus operations. These savings will benefit GWRC, as the funder of bus operations.

Current funding status

The National Land Transport Programme (NLTP) sets out the items to be funded by the Transport Agency via the National Land Transport Fund (NLTF) for a 3-year period, based on the programmes and activities submitted through RLTPs. This is set every 3 years, but can be varied during that period. The NLTP 2015-18 includes two BRT related activities: GWRC's Bus Rapid Transit Implementation Plan 2015-18 (intended for DBC phase, total cost approximately $3m) and WCC Wellington City BRT Infrastructure Improvements (total cost $60m). Both activities have 'proposed' status, which means that funding approval may be given when an application is made in 2015-18 provided further evidence is required to confirm the assessment profile and provide confidence in the funding priority and availability of funds.

The DBC phase will provide further certainty about the total cost of BRT implementation. To ensure enough local share is available for BRT implementation, WCC and GWRC will need to continue to factor the results of the IBC and future DBC phase into their respective annual and long term planning processes.

Commercial Case

There is a range of possible procurement models across a spectrum of public and private sector participation with associated risk transfer. These models include: traditional models, relationship based models, privately financed models, and managing contractor procurement models.

The most appropriate procurement model for BRT will be determined in the detailed business case. Factors that will impact the assessment of the procurement approach will include:

- Implementing BRT could be relatively straight forward with well-defined objectives and tangible outcomes. There might be few identifiable factors that would of themselves suggest a change from a traditional procurement model.
- The BRT project is likely to be funded through standard methods by the Project Partners.
- The BRT project is not overly complex. Costs, risks and scope can be well defined. Traditional models fare better in these situations, and there are not likely to be factors which would prohibit traditional models from being applied.
- There are three Project Partners. However, this can be well managed as roles and responsibilities are clearly defined, for example continuing existing policy delineating local roads, state highways and PT operations. The BRT project should be able to follow existing policy.
- The cost of designing and constructing the BRT infrastructure will vary considerably depending on the preferred option chosen. Option 3 is a low cost for an infrastructure project. Option 5 is far more substantial.
- The practicalities, or otherwise, of bundling the design and construction of the BRT infrastructure with the delivery of BRT services (and allied services as appropriate).

Management Case

There are a number of projects along the PT Spine and wider Ngauranga to Airport corridor that the BRT project needs to coordinate with. A separate workstream is currently underway, developing a sequencing and programming plan for all the corridor projects. At the moment, it makes sense for the BRT project team to continue to be a part of that workstream. However during any subsequent DBC the specifics around timing and integration with other projects will need to be determined.

The physical BRT infrastructure could be delivered as a single project or in multiple stages. It could also be combined with the delivery of other projects in the same location, including potentially combining consenting processes.

There are a number of project risks, many of which could lead to BRT not being fully delivered. However, these should be able to be adequately managed.

There is nothing in terms of delivery which, at this stage, appears prohibitively difficult or likely to suggest that this project should not proceed. There is nothing in the management case that suggests that the next stage of more detailed assessment should not be undertaken.

The next step in the assessment process is a DBC. Key items not undertaken at the IBC stage are: detailed design and optimisation of BRT options; detailed transport modelling of all options; fully quantifying all the costs and benefits for all options; and detailed development of the financial requirements, and the funding, procurement and management plans. These will all be part of a DBC.

A key decision to be made before any DBC begins is whether the different elements of the detailed assessment are to be undertaken together or separately. The entire DBC, including all the design work, could be procured and undertaken as one project. Alternatively, it could be split into multiple pieces and undertaken in stages.

Recommendations

This IBC provides support for more detailed analysis of BRT to be undertaken in a DBC. The economic analysis suggests that the options that are most appropriate for further consideration are Options 3 and 4.

Furthermore, nothing in the financial, commercial or management cases has indicated that a DBC should not proceed. There are a number of items that will need to be addressed at that stage, such as approval of funding, determining the appropriate sequencing and coordination with other projects and determining a procurement strategy. However none of these are sufficiently problematic that a DBC should not proceed.

Finding a solution to conflicting transport demands at the Basin Reserve is critical to the ability to implement a high-quality BRT system. Without such a solution, the economic viability of the BRT project is reduced considerably. We understand that the Transport Agency is committed to finding such a solution and it is recommended that the BRT project continue to proceed on that basis (with additional consideration given during a DBC).

A DBC for BRT is recommended – of Options 3 and 4, or a combination of both, or Option 3 moving to Option 4 at a later date.

Appendix A Restrictions

This report has been prepared for the New Zealand Transport Agency (the Transport Agency), Greater Wellington Regional Council (GWRC) and Wellington City Council (WCC), to set out the indicative business case for Bus Rapid Transit in Wellington. This report has been prepared solely for this purpose and should not be relied upon for any other purpose. We accept no liability to any party should it used for any purpose other than that for which it was prepared.

This report has been prepared solely for use by the Transport Agency, GWRC and WCC and may not be copied or distributed to third parties without our prior written consent.

To the fullest extent permitted by law, PwC accepts no duty of care to any third party in connection with the provision of this report and/or any related information or explanation (together, the "Information"). Accordingly, regardless of the form of action, whether in contract, tort (including without limitation, negligence) or otherwise, and to the extent permitted by applicable law, PwC accepts no liability of any kind to any third party and disclaims all responsibility for the consequences of any third party acting or refraining to act in reliance on the Information.

We have not independently verified the accuracy of information provided to us, and have not conducted any form of audit in respect of the Transport Agency, GWRC and WCC. Accordingly, we express no opinion on the reliability, accuracy, or completeness of the information provided to us and upon which we have relied.

The statements and opinions expressed herein have been made in good faith, and on the basis that all information relied upon is true and accurate in all material respects, and not misleading by reason of omission or otherwise.

The statements and opinions expressed in this report are based on information available as at the date of the report.

We reserve the right, but will be under no obligation, to review or amend our report, if any additional information, which was in existence on the date of this report, was not brought to our attention, or subsequently comes to light.

We have relied on forecasts and assumptions prepared by the Transport Agency, GWRC and WCC about future events which, by their nature, are not able to be independently verified. Inevitably, some assumptions may not materialise and unanticipated events and circumstances are likely to occur. Therefore, actual results in the future will vary from the forecasts upon which we have relied. These variations may be material.

This report is issued pursuant to the terms and conditions applicable to our engagement letter dated 29 May 2014 and the change of scope letter dated 17 February 2015.