



**Report** PE19.446  
**Date** 25 September 2019  
**File** CCAB-8-2487

**Committee** Council  
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## Fleet capacity and renewal - rail

### 1. Purpose

To seek Council endorsement of the Business Case for Lower North Island Longer Distance Rolling Stock.

### 2. Exclusion of the public

Grounds for exclusion of the public under section 48(1) of the Local Government Official Information and Meetings Act 1987 are:

*Certain information contained in this report relates to future rail service procurement and contracting in the Wellington Region. Release of this information would be likely to prejudice or disadvantage the ability of Greater Wellington Regional Council (GWRC) to carry on negotiations with potential suppliers of rolling stock for the Metlink public transport network. GWRC has not been able to identify a public interest favouring disclosure of this particular information in public proceedings of the meeting that would override the need to withhold the information.*

### 3. Background

On 7 August 2019 the Sustainable Transport Committee was presented with a draft Business Case for Lower North Island Longer Distance Rolling Stock (draft Business Case) for endorsement (Report PE19.308 refers). At that meeting the Committee endorsed the draft Business Case.

The draft Business Case was sent to stakeholders for comment. Comments received from stakeholders are set out below

### 4. Stakeholder comments

The draft Business Case was shared with the following key stakeholders: Horizons Regional Council, NZ Transport Agency (NZTA), KiwiRail, Transdev, Ministry of Transport, Let's Get Wellington Moving, and territorial authorities within the Wellington Region. Horizons Regional Council has also had some engagement with the respective territorial authorities in their region.

Overall, the reaction and feedback received has been positive, supportive of the concept of operations, increased service levels and the preferred rolling stock option.

Horizons Regional Council formally endorsed the draft Business Case in a public excluded section of its Council Meeting on 24 September 2019.

NZTA requested that the Business Case as a whole be independently peer reviewed (alongside the purely economic peer review already performed).

#### 4.1 Changes proposed as a result of stakeholder feedback

As a result of the feedback received on the draft Business Case, a number of changes have been made to the final proposed Business Case. Stakeholder feedback recommended:

- Strengthening the urgency of the investment – to better recognise the investment is not only needed due to the asset condition of the current longer distance fleets, but also required to support patronage demand within the electrified area
- Bringing forward ██████ of funding to enable procurement and contract preparation activities to commence in 2020/21 – with the aim of contract signing occurring in mid-2021 – note this is will require changes to our current Long-term Plan (LTP) and National Land Transport Plan (NLTP)
- Bringing forward ██████ of funding to enable Capital Connection renewal works to be undertaken to ensure continued operation beyond mid-2021 – note this is will require changes to the current National Land Transport Plan
- Strengthening the strategic section to better describe the relationships between the:
  - Government Policy Statement (GPS)
  - Regional Land Transport Plan (RLTP)
  - Regional Public Transport Plan (RPTP)
  - Wellington Regional Rail Plan (RRP)
  - Future of Rail and NZ Rail Plan
  - The Rail Network Investment Plan (RNIP)

and the various links to spatial planning and land use in general.

- Strengthening the affordability section, to illustrate why additional funding sources ██████ FAR from National Land Transport Fund (NLTF) is required
- Strengthening the environmental benefits of the proposed solution
- Strengthening the detail of the proposed procurement processes
- Including a benefits realisation plan

- Including greater detail of the long list options considered and discounted
- Undertaking more detailed analysis of the Multi Criteria Analysis - as a result the priority order of the options changed and the status quo (do minimum) is now the least preferred option.

#### **4.2 Independent peer review**

A key part of NZTA's feedback was a full independent peer review of the Business Case as a whole, rather than just the purely economic peer review already performed. The peer review will be performed in October 2019. In the event that any minor changes are required as a result of the review, officers propose that these are able to be approved by the Chief Executive before submission of the entire business case to NZTA.

### **5. Overview of the proposed business case**

#### **5.1 Strategic case**

The number one issue facing the Wellington Region's rail network is providing sufficient capacity to meet future demand. Peak patronage growth on both major rail lines, specifically in the electrified metro area, is running about 5% ahead of the boldest forecasts.

Outside the metro area (i.e. south of Waikanae and Upper Hutt) the trains operating the longer distance services between Wellington and Masterton, and between Wellington and Palmerston North (currently operated by KiwiRail), are requiring refurbishment and/or replacement. Patronage growth on these longer distance services has already exceeded the available capacity of both fleets. The existing operation of both fleets, utilising locomotive hauled trains, creates a number of operational constraints and inefficiencies.

Due to the increase patronage growth pressure both within and beyond the electrified metro network, it is critical that we urgently plan and fund a train fleet solution that avoids an acute capacity shortage across the whole network as early as the mid-2020s.

#### **5.2 The proposed solution**

The Business Case proposes to replace both fleets with fifteen 4-car Dual Mode Multiple Units (15 4-car DMMUs). These modern rail vehicles will both upgrade the customer experience and allow an increase in service frequency during the peak, inter-peak and weekends on both Wairarapa and Manawatu corridors. The earliest the new trains and services could commence operations would be from 2025. The additional capacity will be sufficient to provide a boost to peak capacity on the Kapiti and Hutt Lines, which have recently experienced peak growth of over 8.5%.

A fleet of DMMUs will be able to run on electricity from the overhead power wires south of Waikanae, and Upper Hutt, switching to an alternative energy source such as diesel, or if technology allows at the time of procurement batteries and/or hydrogen fuel cells. The hybrid, or dual operating mode, capability also offers resilience benefits in the case of a power outage.

The General Manager, Public Transport has also had specific discussions with KiwiRail's GM Capital Programmes and Asset Development, regarding the proposed new rolling stock being designed with the ability to be a base model for inter-regional rail services across New Zealand.

### 5.3 Economic case

A capital investment of **\$415 million** is required to deliver the new rolling stock and associated network improvements to enable the increase in service frequency (this figure represents a 30 year net cost of between \$202-381 million over the do minimum, in 2019 dollars).

Depending on the patronage assumptions, discount rates, and evaluation years the preferred solution has a benefit cost ratio (BCR) ranging between **1.1 and 2.9**. The mid-range BCR is 1.9.

This represents a significant investment that will require multiple funding sources.

## 6. Next steps

Once officers have received the results independent peer review of the business case, any minor amendments required will be made. It is proposed that the Chief Executive approve the formal submission of the Business Case for the Lower North Island Longer Distance Rolling Stock to NZTA for funding consideration.

The indicative timing of key milestones following formal submission are set out in the table below:

| Key Milestone  | Indicative Date |
|--|-----------------|
| Formal submission of a funding proposal to the NZTA                        | December 2019   |
| Confirmation of funding and partnering arrangements                        | June 2020       |
| Formal project inception   | July 2020       |
| DMU/DMMU specification and tender development completed                    | December 2020   |
| DMU/DMMU tender process completed  | June 2021       |
| \$ fleet life extension completed  | June 2022       |
| Infrastructure design and procurement completed                            | June 2022       |
| DMU/DMMU maintenance facility completed                                    | June 2024       |
| Initial DMU/DMMU delivery completed  | July 2024       |
| Introduction of DMU/DMMU rolling stock on existing Manawatu Line services  | October 2024    |
| Introduction of DMU/DMMU rolling stock on existing Wairarapa Line services | January 2025    |
| Final DMU/DMMU delivery completed  | May 2025        |
| Network infrastructure improvements completed                              | June 2025       |
| Manawatu Line station and park and ride upgrades completed                 | June 2025       |
| Service level improvements commence  | July 2025       |

## 7. Communication

It is not intended to make the full Business Case public at this stage. High level details can be made public once the finalised document has been formally presented to NZTA.

## 8. Consideration of climate change

The matters requiring decision in this report have been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide. Officers note that the public transport network is designed to increase public transport capacity which will contribute to an overall reduction in gross regional greenhouse gas emissions.

In addition, we have recommended that Dual Mode Multiple Units are procured, which enables lower emissions and provides increased resilience, in the event of a major power failure.

## 9. The decision-making process and significance

The decision to endorse a Business Case for submission to the NZTA is a preliminary decision that will lead to a decision of high significance within the meaning of the Local Government Act 2002.

If the Business Case is approved by NZTA, it will be included in the Annual Plan 2020/21 and subsequent Long-term Plan 2021-2031. The decision-making process for these documents is explicitly set out in the Local Government Act 2002.

### 9.1 Engagement

The procurement of new rolling stock was included in the Long-term Plan 2018-28. Stakeholders have been asked to provide feedback on the draft Business Case (as noted in section 4 above). As this is a preliminary decision there is no further engagement required at this stage in the process.

## 10. Recommendations

*That the Council:*

1. *Receives the report.*
2. *Notes the content of the report.*
3. *Endorses the Business Case for Lower North Island Longer Distance Rolling Stock attached as Attachment 1 to this report.*
4. *Notes that, once endorsed, the Business Case will be independently peer reviewed.*
5. *Notes that, in the event the peer review identifies substantive changes to the Business Case, it will be brought back to Council for reconsideration.*
6. *Authorises the Chief Executive to make any minor changes requested to the Business Case as a result of the Independent Peer Review.*
7. *Authorises the Chief Executive to approve the submission of the Business Case to NZ Transport Agency for funding consideration.*

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**Attachment 1:** Business Case for Lower North Island Long Distance Rolling Stock

Released under LGOMA, d1987