

MetroWest Phase 1 Design and Cost Update

Purpose

1. To provide an update on the scheme design and report a significant increase in the estimated scheme cost. To consider the options for taking the scheme forward based on the discussions with Network Rail and the Department for Transport (DfT), which recognise the strategic benefits of the scheme and recommend a staged approach for the delivery of the scheme.

Background

2. MetroWest Phase 1 is a jointly promoted scheme between the four Councils in the West of England. The aim of the MetroWest Programme is to deliver a 'Metro' local rail network, similar to comparable sized city regions, through targeted investments, making use of strategic rail corridors, including freight only lines and dis-used lines.
3. The scheme objectives are to:
 - support economic growth
 - deliver a more resilient transport offer
 - reduce congestion on the highway network
 - improve accessibility to the rail network
 - make a positive contribution to social well-being
4. The scheme will result in a wide range of strategic and local benefits. These include giving 50,000 people access to the rail network, enhancing the level of service for tens of thousands of existing rail customers, increasing railway capacity, extending the benefits of GW electrification and supporting job creation and housing growth.
5. The scheme preliminary business case was reported to Joint Transport Board in September 2014. The headline outputs were as follows:

GRIP Stage ¹	2 (Feasibility)
Scheme Capital Cost	£58.2M
BCR ²	2.92 to 5.99
No of train sets required	6 gross (4 net)
Train type	Class 15x or 16x
Train service revenue support ³	£5.29m total for first three years

¹ The GRIP process (Governance for Railway Investment Projects) is the standard methodology by which all rail schemes are designed and delivered by Network Rail.

² The BCR (Benefit to Cost Ratio) is used to determine whether a scheme represents value for money. A BCR above 2 represents high value for money.

³ After the first three years operation the Government then meet future costs subject to criteria.

6. The preliminary business case also set out the key work streams needed to deliver the scheme. As well as the engineering design, the other most significant element was the requirement to secure a Development Consent Order (DCO). This requirement is determined by the Planning Act (2008) which states that all schemes with more than 2km of new railway need a DCO.
7. It is important to note that Phase 2 of MetroWest (Henbury/ Yate corridors), is not affected by the funding challenges of MetroWest Phase 1 and continues to be progressed as planned.

GRIP Stage 3

8. Since work on GRIP 3 began, a number of engineering and other challenges have emerged that have increased costs and these have been reported to previous Joint Transport Board meetings including the most recent in January 2017. The GRIP 3 design (Outline Design) is now complete and this has allowed Network Rail to complete the GRIP 3 cost estimate. In accordance with the GRIP process, this is only possible once the design has been agreed and signed off by all the relevant Route Asset Managers within Network Rail and a full cost validation undertaken.
9. The overall capital cost ranges from £145M to £175M to deliver the full project scope (railway, highway, DCO, environmental mitigation etc), compared with a scheme budget of £58.2M, based on GRIP stage 2.
10. The key drivers for the increase are as follows:
 - A significant increase in the scope of work through the Avon Gorge in order to; meet modern safety standards to enable operation of a scheduled passenger train service, to deliver the necessary line speeds to achieve the 2 trains per hour aspiration and the poor access reducing construction productivity.
 - The impact of the full service pattern (2 passenger trains per hour all day) alongside existing freight services, at the Ashton Vale Level crossing on rail safety, highway safety, traffic and the industrial estate resulting in the need to consider an alternative access from the A370/ rear of the site.
 - The consequential impact from the above on the amount of land, DCO (planning) requirements and environmental mitigation needed for the scheme.
 - The increased risks associated with the project following the expanded works and recently identified constraints. As currently configured, the scheme has significantly more delivery risks than previously identified, relating in particular to the construction programme, technical interface, and environmental mitigation.

Options for MetroWest Phase 1 moving forward

11. The scheme has now reached a stage where the original full scope cannot be delivered by the currently available budget. Some £8M has already been invested in the technical development of the scheme, by the Councils and the Local Enterprise Partnership through the Local Growth Fund, and a further £950k has been invested by North Somerset Council in strategic land acquisition. A variety of options for the scheme are available, ranging from the delivery of the scheme as a whole to delivery of the scheme in stages with sub-options relating to the train service pattern, rolling

stock length, stations and cross-Bristol connectivity. The broad options for the scheme are:

- Option 1 - Do nothing – cancel the entire scheme
- Option 2 - Continue to promote the scheme as currently proposed
- Option 3 - Deliver the scheme in stages

12. Option 1: Do nothing – cancel the entire scheme. This would have a number of detrimental implications. It would leave the M5 Junction 19 / A369 corridor without a resilient transport offer. This would not be a tenable situation over the medium to long term; putting job creation, environmental sustainability and economic growth at risk. It would also result in revenue reversion costs falling to the four Councils.
13. Option 2: Continue to promote the scheme as currently proposed. Meeting a funding gap of around £100M would be very challenging. Given the size of the gap it would require additional funding from Government and securing this scale of additional investment in the timescales required is unlikely to be achieved. It would also likely require a substantial local contribution which could only be managed by reprioritisation of existing funding sources i.e. Local Growth Fund, City Deal and any other funding the Councils have access to in order to reduce the gap, necessitating postponing the delivery of other strategic transport priorities.
14. This option would be a high risk approach because the Development Consent Order requires the promoter to confirm all the funding to deliver the scheme is in place. If we were to proceed as originally planned then we would anticipate making the DCO application at the end of this year which effectively sets the deadline by which the funding gap would need to be resolved. Furthermore, there would also continue to be a significant level of expenditure preparing the DCO application, including statutory consultation and further technical work to complete GRIP stage 4, highway design, land assembly, environmental assessment and legal work-streams. On balance therefore, this option is not recommended at this time.
15. Option 3: Deliver the scheme in stages. Since the likely increase in cost was first realised the project team have been working to reduce the cost of the scheme, re-scoping some elements and looking at a potential staged delivery of the scheme to better match both total available budget and the spend profile of the available budget.
16. Stage A would be to deliver the Severn Beach Line and Bath Spa Line infrastructure and train service upgrade. This would require the completion of design of infrastructure at Bathampton and Avonmouth and delivering it using Permitted Development rights. It would also require revisions to the train timetable to ensure that linking just the Seven Beach Line with the Bath Spa Line could be achieved efficiently (without additional train rolling stock). The revenue support implications would also require further investigation. The capital cost of this stage could be delivered within the existing scheme budget, and delivered within the current programme by 2020. This is subject to technical & funding approval and detailed operational arrangements with Great Western Railway and the DfT.
17. Stage B would be to deliver an initial passenger service for the Portishead Line. This has the advantage of reducing the funding requirement in the short-term and also

allow the early demonstration of some of the benefits of the project. It would potentially make securing the full funding more achievable and reduce risk exposure at each stage. While further design and cost estimation for Stages A and B needs to be undertaken, the extent of infrastructure required for Stage B could be significantly reduced. For example, the line speed for the existing Portbury Freight Line is unlikely to require increasing, also the extent of double tracking works and junction enhancement works is likely to be much more limited, for a reduced passenger service specification. While this would potentially substantially reduce costs, it is likely that some additional funding above the current budget would still be required. Further technical work needs to be undertaken to identify the extent of the potential cost savings and this will be reported to the next available Joint Transport Decision Making Meeting and Joint West of England Committee. Therefore it is recommended this work is investigated further.

18. A further stage (Stage C) would be to deliver the full two passenger trains per hour service to Portishead. The delivery of Stage B would bring the Portishead Line back into the national rail network. This would place a responsibility on Network Rail and the wider rail industry to respond to growth in passenger demand and increase operating capacity subject to overall strategic priorities and availability of funding and business case. See para 26 and 27 which provide an overview of how Network Rail is funded. In summary Option 3 could entail the following stages:

Stage	Description
Stage A	Deliver the service improvements on the Severn Beach & Bath corridors.
Stage B	Deliver an initial rail passenger service to Portishead
Stage C	Deliver the full two trains per hour passenger service to Portishead at a later date.

Stakeholder Engagement

19. Stakeholder meetings are normally held soon after Joint Transport Board meetings. The next stakeholder meeting is planned for May 2017, time and venue to be confirmed.

Risk

20. Key risks form part of the quarterly reporting to the Board. Risks at the project and programme level are managed through the Rail Programme Board.

Equalities Implications

21. New stations and services provided under MetroWest will be designed to meet all statutory accessibility standards. Consultation will ensure wide opportunities for diverse groups to have their say. Equality Impact Assessments will be undertaken and maintained and updated as the scheme progresses.

Resources (financial and personnel)

22. The estimated spend for 2016/17 is £2.76M, comprising of Local Enterprise Partnership Local Growth Funding. The proposed train services will require financial support from the local authorities for the first three years. Subject to meeting value for money criteria the Department for Transport may fund the services from then on. Continued development of the scheme Business Case will refine the levels of financial support required.

Environmental Impact Assessment

23. Modern rolling stock contributes less carbon emissions than other forms of transport, on a passenger kilometre basis. Reinstating the railway line between Pill and Portishead, new services on the Portishead and the construction of new stations will have environmental impacts. Detailed environmental assessment is ongoing which includes engagement with the relevant statutory bodies. This work will be taken forward through the Development Consent Order formal consultation process.

Working with the Rail Industry

24. The Department for Transport and Network Rail recognise that infrastructure costs are increasing in the rail industry and along with Great Western Railway, are working with us to find a resolution to the funding challenges to deliver an affordable and deliverable outcome. All three organisations acknowledge the strategic benefits of the scheme and the significant contribution the scheme will make to increasing the capacity and connectivity of the local rail network. While the rail industry acknowledges our ambition to deliver the half hourly scheme as a whole i.e. in one go, their collective advice is the councils should take a staged approach (reference attached letters).
25. In respect of Option 3, further design work with Network Rail is needed to identify the options for Stage A and B in more detail and potential for cost reduction. This will then be reported to the Joint Transport Decision Making Meeting and the Joint West of England Committee, along with details on timescales, benefit cost ratios, passenger numbers and revenue support requirements. In addition, the Department for Transport will be engaged further as the scope of the scheme will also impact on the next Greater Western rail franchise for the area and their support will be crucial to taking the project forward. There will also need to be further engagement with Great Western Railway and other train operators. Consequently the scheme programme will need to be revised and it is necessary to delay work on GRIP4 and the Development Consent Order formal consultation (2008 Planning Act section 42/47 consultation) while the above work is conducted.
26. The funding priorities of the rail industry are set out in five year tranches known as control periods. The current control period (CP5) which is up to March 2019, includes Network Rail's Western Route Modernisation Programme, which is likely to continue into the following control period (CP6), from 2019 to 2024. Priorities for investment in the rail network through control periods are set by the Government

through the publication of the High Level Output Specification (HLOS). The HLOS for CP6 is due to be published by the government in summer 2017.

27. There is a major opportunity to lobby the Government to include the scheme in the HLOS, given that the rail industry support the scheme and acknowledge the benefits it will deliver and given that the councils and the WoE Local Enterprise Partnership have £58M (out-turn) available for the scheme. However in order to increase the prospect of securing a funding contribution from the rail industry, it may be necessary for the councils to review whether some additional local funding could be made available.
28. Great Western Railway have confirmed the cascade of higher quality class 165/6 trains is planned to start entering service on the Severn Beach Line in July 2017, with more trains to follow across the local network. These trains will start to make a real difference for local rail passengers, addressing the overcrowding issues as they have much higher seating capacity, circa 280 seats compared to class 150 trains with 2 carriages and 140 seats. This is subject to the completion of gauge clearance works under way across the local network and the completion of the electrification works to Maidenhead, which triggers the start of the cascade of class 165/6 trains to the West of England.

Recommendations

That the Board:

- 1) Note the capital cost range, is above the existing scheme budget, which primarily arises from the rail engineering elements of the scheme and a consequential increased scope across the rest of the scheme.
- 2) Agree that option 3 (to take a staged approach to the delivery of the scheme) provides the most practical way forward, with the following indicative programme:
 - i) Progress technical development of Stage A and B, and
 - ii) Pending the outcome of Stage A & B, investigate Stage C, in due course;

subject to further details on Stages A, B and C including funding profile and delivery programme, being brought to the next Joint Transport Decision Making Meeting and the Joint West of England Committee.
- 3) Agree for further engagement with Network Rail, Department for Transport, Great Western Railway and other train operators, on the potential sub-options and scope of the scheme.

Appendices: None

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Local Government (Access to Information) Act 1985

Background Papers:

Letter from Network Rail, dated 28th February 2017

Letter from Department for Transport to Liam Fox MP, dated 27th February 2017



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28 February 2017

David Carter
Director of Development and Environment, North Somerset Council

Louise Fradd
Strategic Director - Place, Bath & North East Somerset Council

Barra Mac Ruairi
Strategic Director - Place, Bristol City Council

Steve Evans
Director of Environment and Communities, South Gloucestershire Council

Dear Directors,

MetroWest Phase 1

Further to the completion of the MetroWest Phase 1 GRIP 3 study, I am writing to confirm Network Rail's continued support to the scheme.

There is a clear strategic alignment of the scheme, with our rail industry Western Route Study, which demonstrates the potential that this scheme can deliver in terms of improved connectivity and improved capacity. The wider economic benefits to the Greater Bristol area promoting further economic growth and inward investment are also clear to see.

We are keen to continue our work with you to help achieve these desired outputs, and would propose a number of options for further consideration:

- alternative service specifications, specifically on the route between Bristol Temple Meads and Portishead
- a review of the implementation programme for the scheme, with opportunities to stage the interventions over the medium to longer term - for example, initial progression of the infrastructure requirements on the Severn Beach and Bath corridors; and a phased introduction of the service level on the route to Portishead
- a review of the train service structure for both Phase 1 and Phase 2, in line with the Department for Transport's franchising proposals, to include potential extensions to Westbury and Gloucester which could reduce infrastructure requirements
- a review of the wider economic growth benefits that the two phases provide to optimise delivery timeframes in accordance with where the greatest benefits can be achieved i.e. reverse the order of the phases (potentially combined with the second point above).

We would strongly support reviewing the delivery of the schemes to enable an initial delivery to be made which is affordable and achievable, and assist in demonstrating the benefits, value and success of the scheme to stakeholders in the Greater Bristol area.

Progressing MetroWest is a key priority for us so please be assured of our continued focus and support to deliver this exciting project.

Yours sincerely

A handwritten signature in black ink that reads "Mark Langman". The signature is written in a cursive style with a large, looped initial "M".

Mark Langman
Route Managing Director, Western

Copied to:

Sir Peter Hendy, Chairman, Network Rail

Rhydian Phillips, Programme Director, Network Services, Department for Transport

Matthew Golton, Commercial Development Director, Great Western Railways



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Our Ref: MC/190697

DLi-

27 Feb

Thank you for your letter of 9 February 2017 about MetroWest Phase 1.

The Department recognises the benefits of the MetroWest scheme and in particular the positive impacts it will have for the people of Bristol and has been engaged for several years.

As you note, MetroWest is a Network Rail third party funded scheme. The risk and commitment to meeting the cost is held by the local councils who sponsor the scheme throughout the process, including from investigating feasibility at the GRIP 2 stage to option selection at the GRIP 3 stage.

Cost escalation within rail infrastructure projects has also been prevalent at national level in recent years. This is why the previous Secretary of State asked Sir Peter Hendy, in November 2015, to re-plan the enhancements programme in a way that was affordable and deliverable. Since then, the department has been focused on ensuring that the promised improvements are delivered in a way that is affordable and provides value to the taxpayer.

With this context in mind, my officials held a productive meeting to discuss the cost escalation issue for MetroWest Phase1 with Network Rail and representatives from North Somerset Council and the Local Enterprise Partnership. The group took away several actions and will continue to work together. It is important that Network Rail and the local councils who sponsor the scheme find a more efficient way of delivering this project.

I have asked my officials to continue working with all parties to find a workable resolution to this issue and to keep me updated on developments.

I hope this reply is helpful.

Wol best wish



Rt Hon Chris Grayling MP

SECRETARY OF STATE FOR TRANSPORT