

SOCIAL RESEARCH NUMBER:

05/2018

PUBLICATION DATE:

25/01/2018

Central Valleys Railway Package Final Evaluation: Executive Summary

1. Introduction

- 1.1 AECOM was commissioned by the Welsh Government in December 2014 to undertake a Final Evaluation of the Central Valleys Railway (CVR) project. The project, funded by Welsh Government and the European Regional Development Fund (ERDF), was developed to encourage modal shift from car to rail through the provision of the following packages of rail infrastructure:
- i. An additional intermodal facility at Energlyn, in the form of a new railway station and associated facilities including:
 - a. Provision of two platforms of 6-car length.
 - b. Improved underpass with stair and ramp access to platforms.
 - c. Waiting shelters.
 - d. Passenger information boards.
 - e. Real time passenger information displays.
 - f. CCTV and passenger help points.
 - g. Three disabled car parking spaces.
 - h. Improved lighting on all approaches.
 - ii. A new passing loop at Tir-Phil station, including:
 - a. A second platform at Tir-Phil station.
 - b. A Disability Discrimination Act (DDA) compliant access ramps.
 - c. 850m of additional track.
 - d. Loop entries/exits with heated switches.
 - e. Colour light signalling north of Bargoed with axle counters.
 - f. Power supplies.

2. Key findings

- 2.1 The station at Energlyn was completed in December 2013. The platform and passing loop at Tir-Phil was completed in 2014 but DDA compliant access and the full length of the new platform was still outstanding at the time of evaluation due to the co-location of Dwr Cymru Welsh Water assets. This additional infrastructure was designed to facilitate the running of additional rail services (1 train per hour) between Bargoed and Rhymney, increasing the number of services continuing upstream from Bargoed from one to two per hour. The results of this project will be influenced by the provision of a turn-back at Caerphilly station, to permit an additional two trains per hour operating between Cardiff and Caerphilly. However, at the time of the final evaluation no additional rail services are operating on either section of the Rhymney Valley Line. This is due to the requirement to complete the ongoing Cardiff Area Signalling Renewal (CASR) programme, including the opening of Platform 8 at Cardiff Central which is now scheduled to be operational in 2017.
- 2.2 The scope of the Final Evaluation included a process evaluation of the implementation and management approaches adopted on the project. The project outturn cost of £13.195m exceeded the forecast cost of £11.248m, and variance was observed in forecast costs during implementation.
- 2.3 The project was procured and commenced construction later than forecast, and delays were experienced on specific elements of the Tir-Phil scheme. The programme synergies with CASR introduced delays which impacted on the CVR project, leading to significant delays in the completion of the Tir-Phil scheme.
- 2.4 A key issue which affected the benefits achieved by the project was that the planned service improvements were not implemented at the time of evaluation. Despite this lack of service improvement, the operator has been able to make use of the passing loop at Tir-Phil to provide additional network resilience to existing services and to serve Energlyn station utilising existing service frequencies.
- 2.5 The level of stakeholder engagement varied across the project. Engagement and liaison between strategic delivery stakeholders, such as Welsh Government, Network Rail and Arriva Trains Wales, was good, enhanced by the introduction of the Programme Management Board in January 2014. The Welsh Government and Welsh European Funding Office (WEFO) Rail Programme Board was also considered effective by stakeholders, a view endorsed by the evaluators. The approach to public engagement for Energlyn station was considered good. However, consultation on Tir-Phil station was considered by some stakeholders to be less effective. Improve on current capabilities and build on new innovative methods of operation piloted previously.
- 2.6 The overarching management and oversight of the project was also significantly enhanced by the introduction of the Programme Management Board. This monthly meeting increased the level of scrutiny across project delivery.
- 2.7 An ex-post impact evaluation could only be undertaken for the new station at Energlyn as there were no additional services operating to Tir-Phil at the time of evaluation (June 2015). The number of passenger journeys to/from Energlyn, is approximately 117,000 per year. Applying standard rail industry guidance, this figure would reasonably be expected to ramp up to approximately 167,000 over the first few years as people become aware of the new station, and therefore will be largely in line with forecasts given the timetable in operation and actual growth rates. However, a significantly lower modal shift than forecast, a higher abstraction from other stations (with 55% of passengers transferring from other rail stations instead of 8%) and a shorter average trip distance (16.7km against a forecast of 24.3km) were key contributors to an outturn net increase in passenger kilometres of 0.76m compared with the forecast 4.25m for the reduced timetable.

- 2.8 The cross-cutting themes were evaluated and the CVR project will provide fully accessible facilities for all potential users, alongside bi-lingual information. The level of accessibility to train services has also been enhanced through the implementation of the new station at Energlyn.

3. Recommendations

- 3.1 This final evaluation has identified a number of lessons for future projects which could help in improving project delivery for future rail projects in Wales. These recommendations are listed below in relation to the key areas of project delivery analysed as part of this process evaluation.

Finance

- (1) To ensure the accuracy of GRIP 3 estimates and ensure that suitable levels of optimism bias are included in these estimates; a figure of 40% is best practice for UK transport ex-ante evaluations .
- (2) Conduct site survey work, including ground investigations, earlier for complex sites, even if not required by the GRIP process, to assist in mitigating risks or factoring in the cost of additional works.
- (3) Consider the efficiencies and economies of scale that can be achieved with other projects when planning and designing a scheme, including detailing the potential programme and cost risks of delayed implementation.

Schedule/Programme

- (4) It is important that the interdependencies between projects are well defined at the pre-construction phase, with mitigation put in place to avoid delays being cascaded from one project to the next. Additionally, putting sufficient time contingencies within the project could assist with reducing delays.
- (5) Enhanced involvement from all delivery teams responsible for the development of Business Plans would assist in ensuring a more realistic programme of delivery.

Stakeholder Engagement

- (6) The development of project specific stakeholder management plans. These would allow project specific issues likely to be of consequence to stakeholders to be communicated and managed in an effective way. Such plans would also define the proposed means and timing of engagement for each stakeholder group, including the public.
- (7) Early engagement between Network Rail and Welsh Government/local councils to ensure that the equality impact requirements are fully understood and complied with as part of their implementation. The newly established PMB or Tactical Review Meeting should be used to ensure that this is achieved.

Risk Management

- (8) The review of risks should be added to the Tactical Review Meeting (see Section 7) to ensure that risks are visible and the planned mitigation is agreed. The review should consider new or escalated risks as by exception, to ensure that this approach remains practical.
- (9) For interlinked projects in the future it would be appropriate to produce a shared risk register to consider the interconnections between risks.
- (10) Sufficient time contingency should be added to future project programmes where new technologies are proposed to mitigate these impacts.

- (11) Early site investigations should therefore be undertaken for future projects where difficult ground conditions are predicted, with sufficient time and cost contingency in place to mitigate this risk.

Programme Management

- (12) Enhanced monitoring and evaluation activities should be undertaken for future projects. It is recommended that a data collation/collection plan be agreed between WEFO and the project team, to sit alongside the monitoring plan prepared for the business case. This would help to ensure that all required data is available for the interim and final evaluations. Logic mapping should also be prepared as part of the ex-ante business case or the aforementioned monitoring plan, to assist in identifying data requirements.
- (13) Project monitoring should commence with a baseline exercise to collate before implementation data, such as passenger demand (per line or station) and service frequencies. Where more than one year has elapsed between business case approval and project implementation, a review should be undertaken of the business case demand forecasts and assumptions to ensure that the baseline position reflects fully the base year.
- (14) An interim process evaluation should be undertaken to identify any systematic issues with project delivery, allowing improvements to be made during the duration of project delivery. This will also enhance the quality and data availability of the final evaluation consideration of project delivery issues.
- (15) An interim impact evaluation should also be undertaken, focusing on longitudinal datasets that are readily available; passenger data for example. It should be recognised that project implementation may generate disruption to services, but it remains important to consider changes in data to identify the potential impact of contextual factors. The interim impact evaluation should also collate all data required for the final evaluation. The logic mapping should be reviewed at the interim stage, and updated as necessary. Interviews with stakeholders and available quantitative data should be used to review and update the causal pathways. .
- (16) The final evaluation should include a full review of the project delivery, business case assumptions, outturn results and use logic mapping to consider the contribution of a project. It should build on the results of the interim evaluation.
- (17) Enhancements to specific data collection and analysis activities are also recommended. This should include the monitoring by contractors and Network Rail of the number of employment opportunities created during construction. Estimates of the net employment benefits to the local and regional economy should be undertaken at both the interim and final evaluation stages. This should include an agreement between Welsh Government and Network Rail on the levels of leakage and displacement.
- (18) Consideration should be given to introducing a programme level monitoring and evaluation activity, through which to track progress and ensure that the above recommendations are undertaken. This group or process would also enable a meta-evaluation of specific issues, such as the wider contribution of ERDF supported rail schemes to local employment and accessibility. This reflects the fact that some indicators, such as wider economic impacts, are better evaluated at the programme/route rather than project level.

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Full Research Report: AECOM. (2018). *Central Valleys Railway Package Final Evaluation: Final Report*. Cardiff: Welsh Government. GSR report number 05/2018

Available at: <http://gov.wales/statistics-and-research/evaluation-central-valleys-railway-package/?lang=en>

Views expressed in this report are those of the researchers and not necessarily those of the Welsh Government

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