Report to: Greater Cambridge Partnership Joint Assembly 18 January 2018

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A10 Foxton level crossing bypass and travel hub

1. Purpose

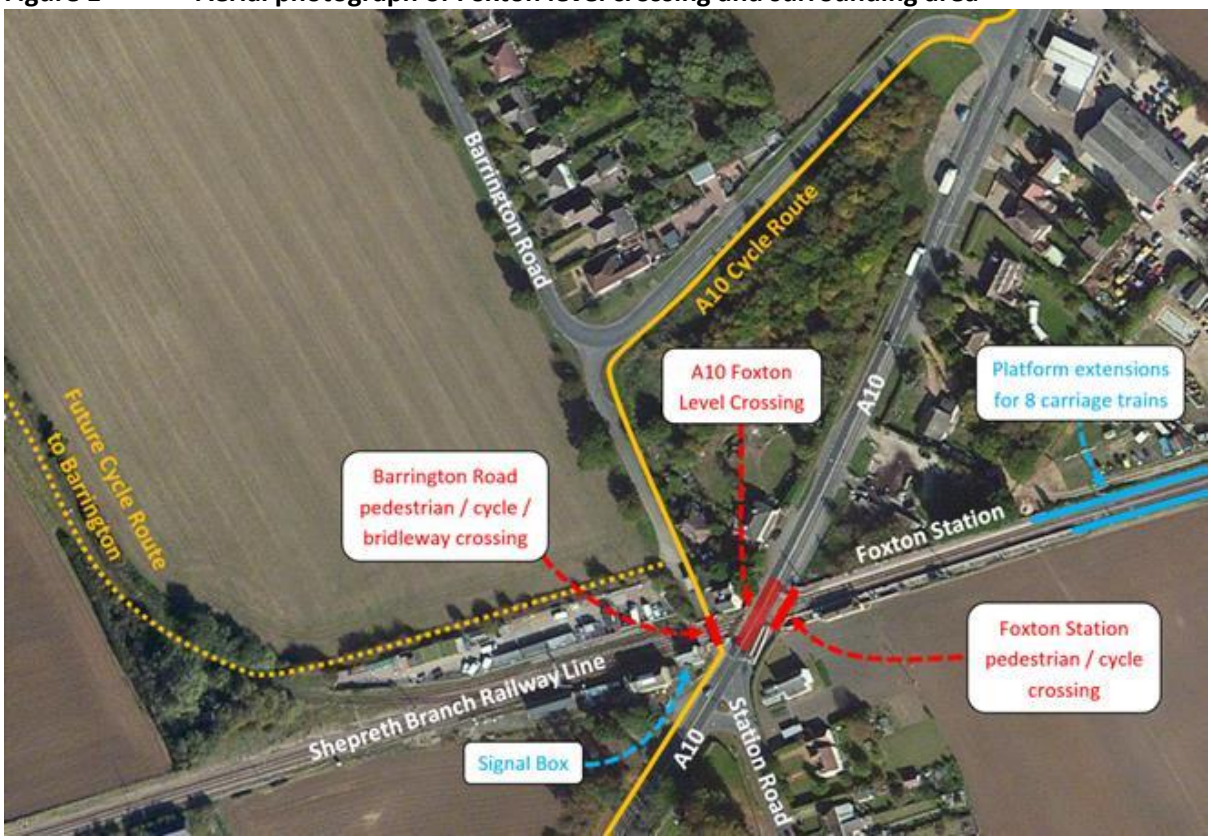
1.1 The list of priority schemes for support from the Greater Cambridge Partnership (GCP) was agreed at the Executive Board meeting of 28th January 2015. The A10 Foxton level crossing bypass whilst not within the list of prioritised schemes, was included as a relatively high priority for future consideration within later funding streams. It is now being recommended for further development as part of the Future Investment Strategy.

1.2 Whilst the original scheme initially only considered a level crossing bypass the revised proposals will also be consider a more extensive 'travel hub' with the provision of additional parking facilities to complement both our existing Park and Ride and Rural Travel Hub proposals.

2. Background

2.1 At the point where the Cambridge to Royston railway line crosses the A10, there are three at-grade crossings of the track: one for the road, and two pedestrian / cycle / bridleway crossings. The road crossing causes significant congestion on the A10, particularly in peak periods. The A10 Foxton level crossing bypass scheme involves provision of infrastructure to enable the closure of the level crossing on the A10 to the immediate south of Foxton Station. The closure would be facilitated by providing a bridge or underpass for the A10 on a bypass alignment to the north west of the existing road. A pedestrian bridge or underpass at Foxton Station could also be provided as part of the scheme. Figure 1 below shows a plan of the current layout of the level crossing, some annotated constrains and future considerations.

Figure 1 Aerial photograph of Foxton level crossing and surrounding area



2.2 This report summarises technical work carried by Cambridgeshire County Council, on behalf of Network Rail in 2013 (Appendix A). It also considers the present strategic objectives of the GCP and reflects more recent considerations of the, 'Cambridge to Royston cycle route', Cambridge North Station, East West Rail, Cambridge South Station proposals and Hauxton Travel Hub (Park and Ride).

2.3 There is a clear policy background supporting a strategic improvement to the transport network in the A10 Foxton area, particularly in the context of local growth, safety and reductions in journey times and congestion on the A10. The Third Cambridgeshire Local Transport Plan (LTP) 2011-2031: Policies and Strategy A10 Foxton Level Crossing states that 'a bridge or underpass across the railway, removing the conflict between trains and vehicular traffic, cyclists and pedestrians' is expected to be delivered. The 'scheme may also provide a new station footbridge or underpass, and improved interchange facilities'.

2.4 The Foxton level crossing bypass scheme supports many of the Greater Cambridge Partnership's aims and objectives including:

- Easing congestion and making it easier for people to travel by rail, cycle or on foot to improving average journey times
- Keeping the Greater Cambridge area well connected to the regional and national transport network, opening up opportunities by working closely with strategic partners
- Reallocating limited road space in the city centre and invest public transport
- Connect Cambridge with strategically important towns and cities by improving our rail stations and financing new rail links

2.5 The scheme has an interface with other GCP schemes including the Western Orbital Park and Ride interventions and the A10 Royston to Cambridge foot and cycleway. The connection to these schemes can be seen to further the additional GCP aims and objectives including:

- Invest in public transport (including Park & Ride) to make bus travel quicker and more reliable
- Build an extensive network of new cycle-ways, directly connecting people to homes, jobs, study and opportunity.
- Complementary to existing and proposed Park and Ride and Rural Travel Hubs.

2.6 It is intended to seek authority from the GCP Executive Board to review the existing work that has been undertaken and evaluate the options based on the GCP strategic objectives. It is programmed for such a review to be completed by June 2018. Work can then progress and an Options Appraisal Report (OAR) and an Outline Business Case (OBC) can be completed by end of 2018. Following a public consultation in the spring of 2019, approval for a Full Business Case (FBC) for the scheme will be sought.

3 Key issues and considerations

3.1 The A10 currently takes around 16,000 vehicles per day in the Foxton area, the level of traffic that a road of this type could be expected to cater for. However, the presence of a full barrier level crossing significantly limits the capacity of the route. Currently, the Shepreth Branch line typically takes four Great Northern passenger train an hour in each direction, one or two of which stop at Foxton Station. The spacing of the trains and volume of traffic mean that queues on the A10 do not always have the opportunity to clear between level crossing closures, particularly at peak periods.

3.2 From 2018, the number of passenger trains using the route will increase to six trains an hour in each direction, with at least two stops per hour at Foxton. This will increase the closure time at the level crossing. In addition Freight trains also impact the crossing down time using a siding at Foxton that provides access to Barrington Quarry.

3.3 The East West Rail proposals would provide a new railway from the Bedford area to Cambridge, as part of a longer route from East Anglia to Oxford and potentially onwards to the west of England on existing lines. The route for the central section of East West Rail has yet to be determined, but it is possible that it could travel along the route of the Shepreth Branch through the Foxton area. The design of such a route would dictate no level crossings, meaning that an alignment through Foxton would have to provide a bridge or underpass across the A10. If the bypass scheme was progressed in advance of this process it would inform any option selection as opposed to be constrained by it.

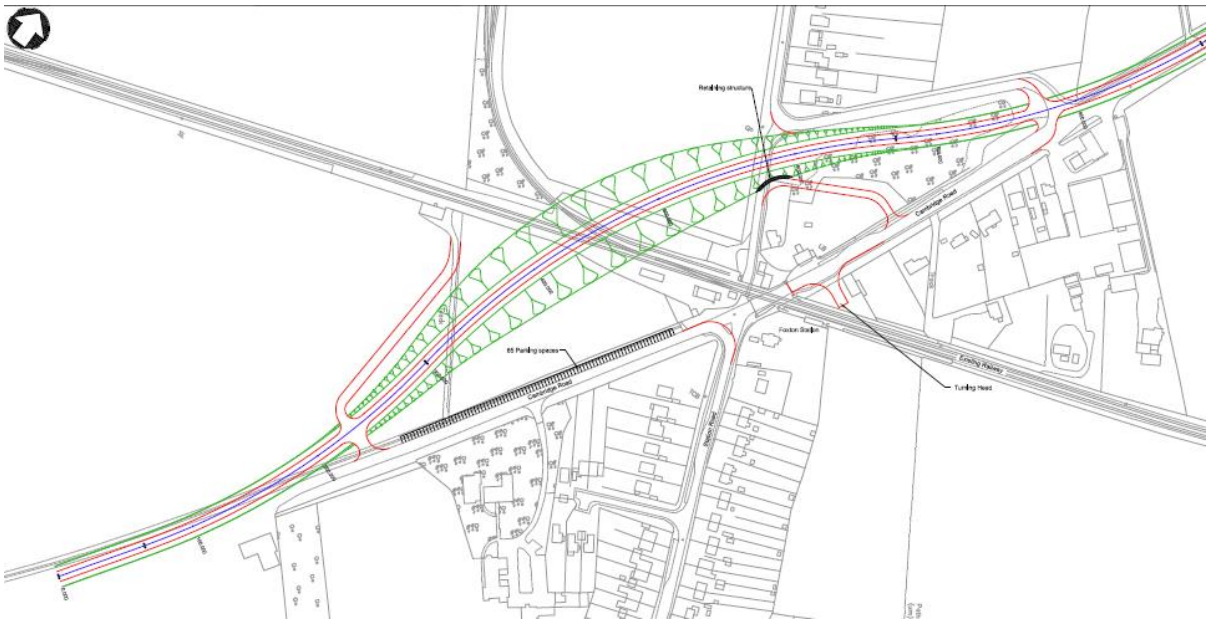
3.4 As part of the national programme to close level crossings Network Rail have committed to a risk reduction programme. The objective of the programme is to close and upgrade crossings across the network, which will improve safety for everyone and reduce the risk that level crossings present to the national rail network. Network Rail has identified the level crossings on the A10 at Foxton as a suitable site for evaluation.

3.5 The Foxton level crossing bypass scheme has currently progressed through the GRIP 1 and 2 (Governance for Railway Investment Projects) stages. GRIP1 established the scope of scheme and the investment needed and potentially asset renewal and GRIP2 defines the investment goals and identifies constraints to ensure that they can be achieved both economically and strategically. GRIP2 identifies the route Options and narrows the assessment to preferred options based on the requirements of the statutory undertakers, physical and environmental constrains and makes recommendations for further work.

3.6 In the 2013 GRIP2 work confirmed that the most feasible options were for a bridge or underpass taking the A10 across the railway on an alignment to the north of the current road. It also noted that while a bridge would be cheaper, an underpass would be likely to be less intrusive. Figures 2 and 3 below show an indicative bridge and underpass route option considered on the north side of the A10 from the GRIP2 report.

Figure 2: Indicative overbridge option layout from GRIP2 report

Figure 3: Indicative underpass option layout from GRIP2 report



Travel Hub - Park and Ride

3.7 The 2013 GRIP2 report shows that an additional 85 car parking spaces could be provided as an option to be delivered within the scheme. However, in light of the current forecast growth

and the possible investments in the rail service and potential for station improvements consideration should be given for Foxton Station to act as a Travel Hub (Park and Ride / Rail facility) with sufficient car parking provision to accommodate demand for onward rail trips into Cambridge.

4. Options and emerging recommendations

4.1 The assessment work undertaken in 2013 did not conclude a Benefit to Cost Ratio (BCR) as the scheme was not fully costed. However, the assessment of similar schemes and the forecast growth of train and traffic travel patterns in Foxton indicates that the likely BCR value would be 'high' or 'very high' (The Department for Transport uses the following categories in relation to Benefit Cost Ratios: Low Value for Money if BCR = 1.0 to 1.5; Medium Value for Money (VfM) if BCR = 1.5 to 2.0; High Value for Money if BCR = 2.0 to 4.0; very high VfM if the BCR is greater than 4.0). The LTP estimates costs for the scheme within the range of £14-24M and the GRIP2 report estimated costs between £11-19M, but these costs are now considerably out of date.

4.2 It is recommended that the costs for Foxton would need to be assessed in more detail, further work on proposals should seek to develop and assess options that:

- Provide a bridge or underpass for the A10 across the Shepreth Branch to the north of the current A10 alignment, allowing for the closure of all three level crossings in the Foxton Station area.
- Provide pedestrian and cycle facilities that allow grade separated crossing of both the railway and the A10:
  - for journeys between Foxton and the A10 cycle route;
  - for journeys between Barrington and Foxton / Foxton Station; and
  - across the railway at a footbridge at Foxton Station.
- Consider the junction strategy for the terminal points of the A10 bypass alignment, in the context of the above, and also of the additional points noted below.
- Provide enhanced facilities at Foxton Station including car and cycle parking, passenger waiting facilities, ticket machines.

4.3 In addition it is recommended that the development of options should:

- Explore the opportunity for Foxton Station to act as a Travel Hub with a Park and Ride facility for onward rail trips into Cambridge and Cambridge North stations, and the future Cambridge South station.
- In discussion with Network Rail, consider the implications of an East West Rail alignment through the Foxton area and how it would impact on the level crossing and station improvement options (including whether East West Rail trains might stop at Foxton).
- Be future-proofed against a possible future requirement for further platform lengthening to allow 12 carriage trains to stop at Foxton.

5. Next steps and milestones

5.1 This report has identified a number of feasible proposals for interventions at the Foxton level crossing. It is now proposed to recommend the review of these options and the development of a 'full business case' for a preferred option.

5.2 The proposed timetable for the business case development work is as set out below in Table 1:

Activity	**Target completion date**
Review the existing GRIP 2 report and options recommended	June 2017
Develop series of distinct options for bypassing the level crossing (including consideration of developing additional parking arrangements)	August 2018
Present options for consultation to GCP Executive Board	December 2018
Public Consultation on Options	March / April 2019
Final Option recommendation to GCP Executive Board to be considered for approval subject to other investment priorities.	October 2019

5.3 Subject to the above the following key milestones will be undertaken:

Detailed design and other preparatory tasks for planning process	2020
Obtain relevant planning powers to construct	January 2021
Start construction	Summer 2022
Scheme completion	December 2023

Table 1 – Key Milestones (s*ubject to statutory permissions)*

6 Recommendations to Joint Assembly

6.1 Joint Assembly is asked to comment on the overall approach being recommended to the Executive Board.

List of appendices

Appendix 1	NR Foxton Level Crossing Closure: GRIP 2 Feasibility Study Report. May 2013