

**CAMBRIDGESHIRE GUIDED BUSWAY**

**To:** Cabinet

**Date:** 15<sup>th</sup> June 2010

**From:** Acting Executive Director: Environment Services

**Electoral divisions:** The Hemingfords and Fenstanton, St Ives, Papworth and Swavesey, Willingham, Cottenham, Histon and Impington, Waterbeach, East Chesterton, King's Hedges, Petersfield, Trumpington, Gamlingay.

**Forward Plan ref:** Not applicable      **Key decision:** No

**Purpose:** This report sets down for consideration by Cabinet the progress being made towards opening of the Cambridge to St Ives section of the busway.

**Recommendation:** Cabinet is asked to:

1. note that while progress is being made towards sectional completion of the busway between Cambridge and St Ives, this progress is slower than had been promised, and
2. Note that in the absence of a programme from the Contractor for resolving the outstanding issues, no commitment can be made to either a handover date or an opening date.

<b><i>Officer contact:</i></b>		<b><i>Member contact:</i></b>	
Name:	Bob Menzies	Name:	Councillor Roy Pegram
Post:	Head of Delivery Cambridgeshire Guided Busway	Portfolio:	Growth and Infrastructure and Strategic Planning
Email:	<a href="mailto:Bob.menzies@cambridgeshire.gov.uk">Bob.menzies@cambridgeshire.gov.uk</a>	Email:	<a href="mailto:roy.pegram@cambridgeshire.gov.uk">roy.pegram@cambridgeshire.gov.uk</a>
Tel:	01223 717866	Tel:	699173

## **1 BACKGROUND**

- 1.1 At its meeting on 16<sup>th</sup> March, Cabinet was advised of the reasons for the delay in the opening of the busway between Cambridge and St Ives, which rested on the commitment by the contractor Bam Nuttall Limited (BNL) to rectify six key areas of work which had been notified as defects under the Contract.
- 1.2 At the subsequent meeting on 27<sup>th</sup> April, Cabinet was advised that Bam Nuttall had provided a timetable to enable progression of the six issues.
- 1.3 These six issues are:
  - 1 River Great Ouse Viaduct Expansion Joints;
  - 2 St Ives Park and Ride (P&R) surface ponding;
  - 3 Maintenance track flooding;
  - 4 Guideway shallow foundations;
  - 5 Thermal expansion gaps between the guideway beams;
  - 6 Rubber tyre infill between the guideway beams.
- 1.4 Some of these items require physical works to rectify them and for others, simply calculations and confirmation from the designers that the infrastructure will perform as planned and not present long-term maintenance liabilities. Either way, these issues must be addressed if the busway is to be launched successfully.
- 1.5 Progress against the timetable to rectify these issues was reported to the Cabinet meeting on 25<sup>th</sup> May 2010. At that meeting members expressed their concern at the slow progress achieved up to that point. This report provides a further update.

## **2 PROGRESS**

- 2.1 The progress since the meeting on 25<sup>th</sup> May is set out below with reference to the work that is required as noted in the report to the meeting of 27<sup>th</sup> April. Members will be advised of the latest position on each of these at the meeting.

### River Great Ouse

- 2.2 The River Great Ouse viaduct has been built without expansion joints between the bridge deck and the abutments, contrary to normal practice. As a result water from the bridge deck, which in the winter would contain de-icing salt, falls directly onto the main steel beams of the bridge and the bearings, with the potential to significantly reduce the life of both.

- 2.3 BNL submitted a design for the expansion joint by 30<sup>th</sup> April in accordance with their timetable. Our designers have made a number of comments on the design. BNL provided a response to these comments on Wednesday 12<sup>th</sup> May. However BNL's response has not resolved our concerns as Bam Nuttall are seeking a Departure from Standard for the proposed solutions. This is not necessary as the proposed solution was included and accepted in their initial outline design submission for the bridge. Agreeing a Departure would transfer some of the liability for the design from BNL to the County Council.
- 2.4 A meeting is being sought between the designers to try to resolve these issues. Once resolved, BNL will then be in a position to proceed to order and place the joint although at this time, there is no certainty as to when that will be.

#### St Ives P&R

- 2.5 BNL committed to complete the design work on the car park by 19<sup>th</sup> May and have confirmed that when this design work is complete, they will implement the solution to address the ponding on the site as soon as possible. The construction work is likely to take a number of weeks to complete.
- 2.6 BNL's designers submitted proposals for resurfacing the car park on Monday 10<sup>th</sup> May. These proposals included extensive replacement of almost all of the existing drainage system, which in the view of both the County Council and Atkins was unnecessary. A meeting took place with the designer's on 18<sup>th</sup> May at which parameters for a simpler, less expensive and quicker to implement solution were agreed. Bam Nuttall undertook to provide a revised conceptual design by 28<sup>th</sup> May and in fact provided drawings for four options by that date.
- 2.7 The initial assessment is that all four options would achieve the desired result, albeit for some options with some minor relaxations in parameters. This was confirmed at a meeting with BNL and their designers on 7<sup>th</sup> June. Bam Nuttall will now develop their preferred solution into a detailed design and provide a programme for implementation.

#### Maintenance Track

- 2.8 Initial design work to identify the volume of material needed to raise the maintenance track to the level indicated at the public inquiry and to determine the volume of flood storage available was completed for 23<sup>rd</sup> April and discussed at a meeting with BNL's designers on 27<sup>th</sup> April.
- 2.9 A meeting was held with the Environment Agency on 18<sup>th</sup> May at which the Environment Agency agreed to a pragmatic approach to resolving the flooding issues by looking at the options for each problem area on a case by case basis at a site visit. This was a helpful development as it

may reduce the need for complex and time consuming flood modelling work.

- 2.10 It was agreed that BNL's designers would provide a list of problem areas, and options for each one, to the EA prior to setting up a site meeting. Regrettably BNL chose to wait until the minutes of the meeting had been agreed with the EA before issuing a draft instruction to their designers, and at the time of writing, had not issued a formal instruction to undertake this design work, choosing instead to re-visit the argument over liability for the defect. It has been made clear to Bam Nuttall that this is unacceptable. A programme for the work has been repeatedly requested but at the time of writing has not been received.

#### Foundations

- 2.11 It was agreed that additional soil testing boreholes would be carried out to establish the susceptibility of the soils under the foundations to shrinkage in dry weather, in particular where there are high water demand trees. The boreholes were completed by 28<sup>th</sup> May around two weeks later than indicated by BNL in their initial programme. The testing of the resulting samples will take a further three weeks. BNL have confirmed that the testing is underway and that the results should be received in the week commencing 21<sup>st</sup> June.
- 2.12 Once available the implications of the soil test results will need to be assessed by the respective experts, before conclusions can be drawn about the foundations. It is therefore likely to be into July before there is clarity on the foundations issue, when BNL had originally indicated that they hoped to resolve this by mid June.

#### Beam expansion gaps

- 2.13 As reported at the last meeting BNL have produced calculations which confirm that a number of the gaps between the guideway beams are not sufficiently wide to allow for the full effect of thermal expansion of the beams in hot weather. At a meeting on 6<sup>th</sup> May it was agreed that BNL's designers would undertake further calculations to assess how the guideway structure, i.e. the beams, spacer blocks, foundation blocks and the fixings between them, would perform when subjected to the stresses resulting if the beams were not able to freely expand in hot weather.
- 2.14 Calculations were subsequently provided and at the time of writing these were being reviewed to determine whether they satisfied the requirements. If the calculations show that the structure can withstand the stresses without permanent damage then the next step will be for the calculations to be formally submitted through the contractual design certification process.

## Rubber Tyres

- 2.15 BNL has substituted shredded rubber tyres for gravel infill between the guideway tracks, with environmental and cost benefits. However the Council and their advisors Atkins, need to be satisfied that in doing so BNL have properly considered the potential fire risk through their Designer's Risk Assessment.
- 2.16 The Fire Safety Report prepared by the designers has now been accepted. A further revision of the Designer's Risk Assessment was submitted by BNL on 21<sup>st</sup> May. Unfortunately this did not fully address the outstanding issue of the risk of damage to the communication cables, that run in ducts between the tracks, with the result that it has again been returned 'not accepted'. BNL have previously been advised of the need to quantify the risk of a fire in this area, which is considered a straightforward issue to resolve. We have asked on a number of occasions for this additional information to be provided but to date it has not been made available.

## **3 Southern Section**

- 3.1 BNL current programme for completion of the southern section from Cambridge Railway Station to Addenbrooke's and Trumpington Park and ride shows that BNL expect to complete the construction in mid-December. There would then be a period of checking and commissioning prior to handover. Work is currently concentrated on Hills Road Bridge, Trumpington Cutting and the connection to Trumpington Park and Ride. Work is currently on target to meet BNL's programmed completion.

## **4 Summary**

- 4.1 At the meeting on 27<sup>th</sup> April it was expected that sufficient progress would have been made on the six defects which are preventing the Council from accepting the northern section by early June to give some degree of certainty over a handover and opening date. This has not proved to be the case, and, while there has been more progress on these issues in the last six weeks than in the preceding six months, none has yet been resolved.
- 4.2 The BNL programme, shared at the meeting on 27<sup>th</sup> April, only covered the first step in the processes for resolving these defects. From the information above it can be seen that although the first step has been taken in each case, progressing beyond that step to a conclusion is proving slow. BNL have been repeatedly asked to produce a programme that will map out the whole process to resolution, but this has not been forthcoming.
- 4.3 It remains premature to commit to an opening date for the northern section of the route and until there is a clear programme for resolving

the issues then it would be unwise to speculate on when such a commitment will be possible.

## **5 IMPLICATIONS**

### **Resources and Performance**

- 5.1 Finance and risk management – the report sets out the latest progress towards resolving the issues that have prevented the opening of the northern section of the busway. The busway is a high profile project and whilst the Council is keen to secure beneficial use as soon as possible, this should not be at any cost, particularly in terms of future maintenance liabilities. At present, whilst the notified defects are not expected to cost a very large amount of money to rectify, that is not yet clear, particularly for the foundations and beam gaps issue and so resolving these technically is essential to protect the Council's interests.

### **Statutory Requirements and Partnership Working**

- 5.2 There are no significant implications for any of the headings within this category.

### **Climate Change**

- 5.3 The busway will provide a good alternative to use of the car for travel into Cambridge, St Ives, Huntingdon and other villages along the route. When operational, it is expected to significantly increase the bus patronage in this corridor and as such assist in our objectives to reduce the emission of greenhouse gasses from vehicles.
- 5.4 The buses which are already running, run on bio fuel and this also has environmental benefits. These environmental benefits have been partly secured as a result of the guided buses currently running on ordinary roads, where it has believed even on the existing services, patronage has increased. Patronage will increase significantly further when the busway is fully operational.
- 5.5 The busway should also have a high quality track alongside that is available for pedestrians and cyclists and this again will increase its environmental benefits. This is already being used unofficially and usage will increase when the scheme is formally open.

### **Access and Inclusion**

- 5.6 The busway will provide good public transport and cycle/foot links between St Ives, the intervening villages and Cambridge. This will open up travel opportunities by increasing the quality of bus services in those communities and benefit particularly those without use of a car.

## Engagement and Consultation

- 5.7 There are no significant implications for any of the headings within this category.

Source Documents	Location
Agenda and Minutes, Cabinet 1/3/2005, 7/2/06, 13/6/06, 11/7/06, 16/10/07, 16/12/08, 29/9/09, 16/3/10, 27/4/10, 25/5/10 Cambridgeshire Guided Busway Order	CGB Team Office, Old Police House, Shire Hall, Cambridge