



Report to Leader

Decision Date: 1 July 2020

Reference number: L07.20

Title: EWR Western Section - Digital Connectivity

Relevant councillor(s): Martin Tett

Author and/or contact officer: Joan Hancox, Service Director: Strategic Transport & Infrastructure

Ward(s) affected: Grendon Underwood, Winslow, Great Brickhill, Stone and Waddesdon, Aylesbury North West.

Recommendations: That Buckinghamshire Council supports delivery of digital infrastructure alongside the construction of the Western Section of EWR and agrees to the use of Work In Kind (WiK) funding (a local Buckinghamshire contribution of £456,000) being used to deliver digital connectivity along the route.

Reason for decision: Buckinghamshire Council (BC) regards digital connectivity as important as physical connectivity for the growth and prosperity of the County. England's Economic Heartland /East West Rail have identified that delivering digital infrastructure alongside EWR during the construction period could be carried out at a fraction of the cost of retrofitting at a later stage. EEH/EWR has investigated different provision options and are proposing a preferred option, which would cost approximately £1.14 million. BC, as a supporter of EWR and digital connectivity, considers that the proposal provides a cost effective way of securing digital infrastructure along this rail corridor rather than retrofitting the digital infrastructure at a later time. The proposal is supported by EWR Consortium (of which BC is a member), England Economic Heartlands, DfT, Network Rail and EWR Company.

Executive summary

- 1.1 Through the East West Rail (EWR) Consortium and England's Economic Heartland (EEH), Buckinghamshire as the representative body for EEH has been advocating for

the Western Section of EWR to be delivered as a digitally connected corridor. Four options have been proposed by Network Rail:

Option 1: Fibre cable only

Option 1+: Fibre cable plus 'handover points'

Option 2: Fibre cable plus enhanced mobile antenna masts

Option 3: Do nothing

- 1.2 Preferred option is Option 1+: Fibre cable plus 'handover points' costing a total of £1.14 million of WiK. This proposal provides the most cost effective way of securing digital infrastructure along this rail corridor rather than retro-fitting the digital infrastructure - 10% of the retro-fitting cost. This option requires a financial commitment by the Council of £456,000 of Buckinghamshire's agreed local contributions towards the EWR Western Section (thereby reducing the final cash contribution that goes back into DfT).
- 1.3 Timescales for a decision are tight due to DfT asking for response from the Consortium if they are able to help deliver the digital connectivity on the Western Section in May 2020.

Content of report

- 1.4 The Council (via the EEH) has worked with DfT to create a digital corridor along the route of proposed revitalised railway to provide the much needed connectivity in the north of the county. We have emphasised that integrating the necessary infrastructure at this early stage has lower additional costs than retrofitting post project delivery.
- 1.5 Network Rail (NR) Telecoms have created a proposal with options for delivering fibre connectivity and infrastructure needed to provide superfast connectivity infrastructure as part of the EWR programme between Bicester and Bletchley.
- 1.6 In order to provide future proof infrastructure to enable connectivity to homes and settlements along the route, the proposal is to upgrade the fibre that is being laid as part of the build. Standard connectivity for the train and its passengers has to be included in the specification. However we are proposing to add additional capacity to the fibre spine along the route. This increases the fibre capacity from 48 fibres to 432 fibres which will enable a large number of future proof gigabit capable connections.

- 1.7 There is also an option to install upgraded masts that would support 5G connectivity; this brings significant extra cost but additional passenger and local benefits. DfT Telecoms have expressed concerns about installing masts at this 'premature' stage.
- 1.8 The cost of instructing Network Rail to lay the cable during railway construction is estimated to be 10% of the cost of retrofitting capacity later.
- 1.9 Only the section between Bicester and Bletchley is within scope, as it is the new build section and would only require the type of cable being laid to be upgraded. The rest of the Western Section route is relatively well served by both fixed and mobile internet connectivity. Work on connectivity for the Central Section has begun and will be dealt with separately.
- 1.10 Uncertainties relating to the funding and operating model still need to be worked through. We are currently conducting a SWOT analysis and options appraisal that will allow us to agree the preferred operating model. This could be a joint venture between the local bodies and Network Rail telecom, a commercial agreement with NRT or a special purpose vehicle.

Other options considered

- 1.11 Through the East West Rail (EWR) Consortium and England's Economic Heartland (EEH), Buckinghamshire has been pushing to ensure that the Western Section of EWR is delivered as a digitally connected corridor. All the options which have been proposed by Network Rail:

Option 1: Fibre cable only, approx. £330,000

Install upgraded 432-core (instead of standard 48-core) fibre cable only, with a small number of handover points installed at strategic locations.

- Laying upgraded cable now estimated to be 10% of cost to retrofit later.
- Anticipated huge future demand for fibre connectivity, and therefore many commercial opportunities.
- Relatively low cost intervention, although additional handover points and roadside cabinets do increase cost.
- Futureproofing for future railway connectivity interventions. Allows time to then consider more extensive connectivity options for the Central Section.
- DfT Telecoms supportive of solution.

Option 1+: Fibre cable plus handover points, £1.14m

Install upgraded 432-core (instead of standard 48-core) fibre cable installing 432-core plus 10 basic handover points, reachable via drop-in points delivered by 48-core spur cables accessible via highway footpath or railway perimeter footpath

- As above but with additional handover points which account for the difference in cost compared to Option 1.
- Handover points are physical points on the fibre backbone where future connections can be made. From a technical perspective the maximum distance from a point is 2km.

Option 2: Fibre cable plus enhanced mobile antenna masts, ~ £1.14m plus ~ £6.4m

Install upgraded 432-core fibre cable and additional enhanced masts, that would allow more equipment (such as 5G antenna) to be attached to them.

- Without known telecoms solution or railway operational model, it would be premature to install masts that may be in the wrong position or underutilised.
- Significant risk that masts will be installed but not used by mobile network operators (MNOs). In other rail projects, MNOs have required government incentives to provide connectivity to less densely populated areas (e.g. West Coast Partnership).
- Land needed for mast installation not included in TWAO.
- Masts can be more easily and cheaply retrofitted than fibre cable.

Option 3: Do nothing

Lay 24-core cable and only the masts necessary for railway operation.

- Significant cost of retrofitting 432-core cable if it was later wanted.

Legal and financial implications

- 1.12 The Government's commitment to delivering East West but was conditional on local partners along the route that benefit from the investment raising 'a local contribution' totalling £50m.

- 1.13 Local contributions can include such things as Section 106 contributions and projects that form 'Work in Kind' towards the project: this could include the capital investment in highway measures required to deliver an effective scheme.
- 1.14 BC has committed to contributing £10m to EWR over a 10 year period with £3m of this to be provided over the current MTFP. BC is then able to claim some of this funding back for Work in Kind i.e. work undertaken by Officers to progress EWR. In the lead up to the Transport and Works Act Order hearings, the EWR Alliance (the body responsible for the delivery of EWR) agreed that BC could also use the Work in Kind arrangement to fund mitigation measures needed as a result of EWR such as additional HGVs and increased travel demand at Aylesbury Station.
- 1.15 There is currently no defined funding model and neither improved fibre cabling or 5G are included in the current EWR scope. An options appraisal regarding the future commercial model for the enhanced dark fibre will be prepared in May.
- 1.16 Following a meeting between DfT, NR EWR Sponsor, NR Telecoms and Buckinghamshire County Council in December 2019, an England's Economic Heartland Leaders' Meeting was supportive of connectivity proposals but did not commit funding. They may consider providing some money, but have requested DfT support to create a business case.
- 1.17 There is no funding available from Network Rail, DfT Telecoms and DCMS funding is fully committed.
- 1.18 No specific legal advice has been given at this time of this report but will be sought as the project progresses specific legal advice on the operating model and agreements will be obtained.

Corporate implications

- 1.19 This supports the key priority of 'Increasing Prosperity' in the Buckinghamshire Council Corporate Plan 20120-2023, through working with England's Economic Heartland to maximise investment in strategic digital infrastructure.

Consultation and communication

- 1.20 It is not anticipated that any public consultation will be carried out on this. The impact on the build process of EWR from a public perspective will be nil. The fibre that has to be laid is physically little different whether it is 48 or 432 fibres. These are the only two types of fibre that are allowed to be deployed on the rail network.

- 1.21 Enhanced digital connectivity will help advance equality of opportunity for protected groups, however advice from Legal is that as this is a Network Rail project, specific equality issues which could arise from the delivery of the project are not known at this time. Legal has said that BC should ensure that Network Rail should undertake an EqlA (and contribute as necessary) which should be kept under review as the project progresses in order to ensure equalities issues are considered and taken into account as appropriate.
- 1.22 It is not thought that any public communications will be needed at this time.

Next steps and review

Members along the route will be briefed as and when there is new information and updates on the project if their wards are affected. When breakout points are agreed (i.e. where we will make available connectivity) we will consult with local members if deemed appropriate.

Background papers

Buckinghamshire Council Corporate Plan 2020-2023:

<https://www.buckinghamshire.gov.uk/your-council/corporate-plan/>

Your questions and views (for key decisions)

If you have any questions about the matters contained in this report please get in touch with the author of this report. If you have any views that you would like the cabinet member to consider please inform the democratic services team. This can be done by telephone 01296 382343 or email democracy@buckinghamshire.gov.uk