

Leicester
City Council

WARDS AFFECTED
Castle
Westcotes

DECISION TIMETABLE

Highways and Transportation Scrutiny Committee
Cabinet

14th July 2003
21st July 2003

Upperton Road Viaduct Major Scheme Bid Proposal

Report of the Corporate Director – Environment, Regeneration & Development

1.0 Purpose of Report

The purpose of this report is to seek Cabinet approval to submit a Major Scheme Bid to the Department for Transport (DfT), in the sum of approximately £19 million, by 31st July 2003, for funding the replacement of the Upperton Road Viaduct.

2.0 Summary

The Upperton Road Viaduct is in a poor state of repair and does not meet the current European Directive that requires such structures to carry vehicles up to 40 tonnes in weight. A scheme to refurbish, or replace, the Viaduct is included in the current Local Transport Plan (2001 to 2006) as a major scheme (i.e. over £5million). Consultants Babtie Group were commissioned to carry out a feasibility study to determine the preferred option for solving the problem posed by the current poor condition of the Viaduct and to prepare a bid document for submission to the DfT for funding the project. This report describes the key issues emerging from the feasibility study and the proposed project to replace the Viaduct with a new road at ground level and low-level bridge over the Old River Soar.

3.0 Recommendations

Cabinet is recommended to:

- a) approve "Option C" as the proposed project solution;

- b) approve the submission of a “Major Scheme Bid” for funding to the Department for Transport, in the sum of approximately £19 million, by the 31st July 2003;
- c) subject to the approval of the bid (by the DfT), authorise the Head of Legal Services to enter into an agreement with Network Rail pursuant to section 94 of the Highways Act for the transfer of the Viaduct and land to the Highway Authority in order that the demolition of the Viaduct can take place;
- d) subject to the approval of the bid (by the DfT), approve the appointment of a contractor from a Select List of works contractors to be drawn up according to the Council’s Contract Procurement Rules for the design and build of the works; and
- e) subject to the approval of the bid (by the DfT) receive proposed project management arrangements from the Project Director, following approval of the bid.

4.0 Headline Financial Implications

- 4.1 The bid to the DfT makes sufficient allowance for all the identified risks associated with the project, as set out in the report (Appendix B) so as not to place any pressure on existing Council budgets. If the DfT approves the bid, as expected, the funding for the scheme would be available as 50% capital grant and 50% supplementary credit approval. If, however, the bid was unsuccessful, or not actually submitted this July, and the imposition of a weight limit for traffic on the Viaduct became necessary there would be significant economic loss to the community and a financial liability incurred by the Council for the management and maintenance of the substandard structure. The on-going cost of maintenance of the Viaduct would then place great pressure on existing maintenance budgets.
- 4.2 All expenditure incurred in conducting the feasibility study, and preparing the bid, is funded from existing maintenance budgets.

5.0 Headline Legal Implications

- 5.1 The structure is in the ownership of Network Rail (formally Railtrack) except those parts of the structure which may be in the ownership of Rail Property. The ownership of individual spans is a matter being clarified at present by Network Rail and Rail Property.
- 5.2 The Council, as the Highway Authority, has a statutory duty of care to ensure all road over rail bridges in the city meet the current European Directive requiring such structures to have a load carrying capacity of at least 40 tonnes. Therefore, setting aside the issue of ownership mentioned in 5.1, in 1999 the Council signed a joint agreement with

Network Rail in order to be able to carry out an inspection and report on the condition of the Viaduct.

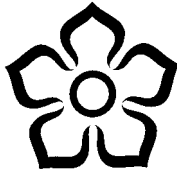
- 5.3** Though it has been shown by assessment that the strength of the Viaduct is significantly less than 40 tonnes, it should be borne in mind that the obligations of Network Rail, and Rail Property, for the strengthening of the structure would be legally restricted to a maximum of 26 tonnes – according to the Railway Bridges (Load Bearing Standards) (England and Wales) Order 1972. The strengthening of the structure from 26 tonnes to 40 tonnes to meet the European Directive is the responsibility of the Council as Highway Authority supported by Government approved expenditure. The need to impose a temporary 7½ tonne weight limit on the structure is not considered necessary at present (see supporting information report Section 6.2). However, if, as the Highway Authority, the Council were to apply a 7½ tonne weight limit at some future date, it would effectively relieve the “owners” of any responsibility for strengthening the structure from that date.
- 5.4** Discussions have taken place with Network Rail concerning the future of the Viaduct. Network Rail wish to work with the Council as much as possible to resolve this problem and have agreed to transfer the obligations for the Viaduct, and the land required for building a new section of highway to replace the Viaduct when required, to suit the Council’s programme of work. At this stage it has been agreed to enter into the process of transferring the obligations and land in accordance with Section 94 of the Highway Act, but to withhold from signing the agreement until the scheme is ready to go ahead. In settlement of the matter Network Rail have indicated a willingness to contribute a commuted sum, subject to validation of the assessment calculations, for the complete removal of the Viaduct on the assumption that the Highway Authority would take responsibility for the future maintenance liabilities.

6.0 Report Author/Officer to Contact

Keith Rowe – Highway Strategy Team Leader 6545

DECISION STATUS

Key Decision	Yes
Reason	Capital expenditure of over £1 Million
Appeared in Forward Plan	Yes
Executive or Council Decision	Executive (Cabinet)



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Supporting Information

1.0 Purpose of Report

The purpose of this report is to seek Cabinet approval to submit a Major Scheme Bid to the Department for Transport (DfT), in the sum of approximately £19 million, by 31st July 2003, for funding the replacement of the Upperton Road Viaduct.

2.0 Summary

The Upperton Road Viaduct is in a poor state of repair and does not meet the current European Directive that requires such structures to carry vehicles up to 40 tonnes in weight. A scheme to refurbish, or replace, the Viaduct is included in the current Local Transport Plan (2001 to 2006) as a major scheme (i.e. over £5million). Consultants Babtie Group were commissioned to carry out a feasibility study to determine the preferred option for solving the problem posed by the current poor condition of the Viaduct and to prepare a bid to the DfT for funding the project. This report describes the key issues emerging from the feasibility study and the proposed project to replace the Viaduct with a new road at ground level and low-level bridge over the Old River Soar.

3.0 Recommendations

Cabinet is recommended to:

- a) approve "Option C" as the proposed project solution;

- b) approve the submission of a “Major Scheme Bid” for funding to the Department for Transport, in the sum of approximately £19 million, by the 31st July 2003;
- c) subject to the approval of the bid (by the DfT) authorise the Head of Legal Services to enter into an agreement with Network Rail pursuant to section 94 of the Highways Act for the transfer of the Viaduct and land to the Highway Authority in order that the demolition of the Viaduct can take place ;
- d) subject to the approval of the bid (by the DfT), approve the appointment of a contractor from a Select List of works contractors to be drawn up according to the Council’s Contract Procurement Rules for the design and build of the works; and
- e) subject to the approval of the bid (by the DfT) receive proposed project management arrangements, from the Project Director, following approval of the bid.

4.0 Historical Background

4.1 The Great Central Railway Company (GCR) built the Viaduct about 1897. For about the next 60 years the land under the Viaduct was the GCR Nottingham to London main line and the area included associated railway sidings. The Company ceased operations in the late 1960’s. Demolition contractors used the site following the demise of the GCR for breaking up and disposal of obsolete rolling stock until the late 1980’s. The site soon became derelict after this date and has remained so up to the present time. There have been no changes made to the structure during its history, though there must have been some concern for its condition in the 1970’s as the central span was propped about this time to provide additional support.

4.2 The old wagon shed adjacent to the Viaduct still exists today for industrial purposes and some of the arches have been acquired by local businesses.

4.3 Three separate single span railway bridges that cross the Old River Soar exist to the east of the site and originally formed part of the railway sidings. The site as it exists at present is shown attached as Location Plan Appendix A.

5.0 Strategic Context

5.1 The structure provides the most direct east/west highway link between the Aylestone Road (A426) and the Narborough Road (A5460) and the only other suitable alternative east/west links are the Inner and Outer ring roads. Although Upperton Road and Walnut Street are not part of the classified road network, the Annual Average Daily Traffic flow (both ways) for a weekday is approximately 22,000 vehicles (1999 figures) and this link forms a vital part of the main road network in the City. Throughout its

length the carriageways and footways are adopted public highway. The Department for Transport designated it for abnormal loads (Route 13), though its use is restricted at present due to the deteriorating condition of the Viaduct. In addition, the route provides an important means of access to many commercial and industrial premises alongside the River Soar, the Rugby and Football Clubs and the Leicester Royal Infirmary.

- 5.2** The development plans for the Bede Island South (Barratt's site) provide an opportunity for the regeneration of the area, building on the progress made by City Challenge on adjoining sites. Discussions have taken place concerning future major development plans for the area, including using Upperton Road as the southern orbital route for a potential Light Rapid Transit system serving the area. The strategic importance of this link for such purposes is recognised in the adopted City of Leicester Local Plan (1994) and the emerging Replacement Local Plan.
- 5.3** As the Great Central Way is part of the National Cycleway Network and the area around the Great Central Way/Upperton Road "junction" is a site of significant interest for nature conservation it is extremely important that the "opening-up" of this space is considered in detail. The proposed bid includes for purchasing land and for designing this area demonstrating best practice in the provision of safe and attractive open space.
- 5.4** The DfT has shown considerable interest in the project since it was first brought to their attention in July 2000, when the Council submitted its first LTP (2001 – 2006). At the first meeting the DfT agreed to make a decision on funding the scheme before the end of the 2001 – 2006 LTP period, if the Council were to make further information available to them as to the options for resolving the problem. Babcie Group (Technical and Management Consultants, Wakefield) was commissioned to undertake a feasibility study and prepare a Major Scheme Bid document for the project. The aim of the study was to investigate and undertake all measures required for advising the Council as to the most appropriate and cost effective way of resolving the problem.

6.0 Feasibility Report

- 6.1** In order to address the study aim, the feasibility report:
- Assesses the structural condition of the Viaduct.
 - Identifies the geotechnical, land use, planning, transportation, environmental and ownership issues and constraints in the area surrounding the Viaduct.
 - Identifies the key functions and problems associated with the existing Viaduct and devises the objectives that should be achieved by a solution to maintain, strengthen and/or replace the Viaduct.
 - Devises and appraises initial options to maintain, strengthen and/or replace the Viaduct and selects four preferred options to take forward.

- Describes the consultation exercise that has been undertaken as part of the study.
- Further appraises the four preferred options.
- Recommends a solution to maintain, strengthen and/or replace the Viaduct.

6.2 Structural Condition

The 12 span structure consists of a combination of brickwork arches and longitudinal wrought iron riveted plate girders. The brickwork arch elements of the superstructure are generally in good condition, but the wrought iron riveted plate girders (96 in total) are severely corroded and need replacing. All the brickwork and steel plate parapets are substandard. A theoretical assessment of the structure has shown that the weakest sections are unable to support live loads exceeding 7½ tonnes safely, and therefore the load carrying capacity of the Viaduct would be considerably less than the 40 tonne capacity required by the current EC regulations. As the structure is not showing any signs of distress i.e. sagging of beams, other than corroded sections, it is not deemed necessary to impose a weight limit at the present time. The structure is subject to regular safety inspections and appropriate action will be taken if deemed necessary.

6.3 Ownership Issues

- 6.3.1** The structure is in the ownership of Network Rail (formally Railtrack) except those parts of the structure which may be in the ownership of Rail Property. The ownership of individual spans is a matter being clarified at present by Network Rail and Rail Property.
- 6.3.2** The Council, as the Highway Authority, has a statutory duty of care to ensure all road over rail bridges in the City meet the current European Directive requiring such structures to have a load carrying capacity of at least forty tonnes. Therefore, setting aside the issue of ownership mentioned above, in 1999 the Council signed a joint agreement with Network Rail in order to be able to carry out an inspection and report on the condition of the Viaduct. Based on these findings an initial bid for a major scheme to strengthen, or replace, the Viaduct was submitted to the Government in the Central Leicestershire Local Transport Plan 2001 – 2006.
- 6.3.3** Though it has been shown by assessment that the strength of the Viaduct is significantly less than 40 tonnes, it should be borne in mind that the obligations of Network Rail and Rail Property for the strengthening of the structure would be legally restricted to a maximum of 26 tonnes – according to the Railway Bridges (Load Bearing Standards) (England and Wales) Order 1972. The strengthening of the structure from 26 tonnes to 40 tonnes to meet the EC regulations is the responsibility of the Council as Highway Authority supported by Government approved expenditure. The need

to impose a temporary 7½ tonne weight limit on the structure is not considered necessary at present (see Section 6.2). However, if as Highway Authority, the Council were to apply a 7½ tonne weight limit at some future date, it would effectively relieve the owners of any responsibility for strengthening the structure from that date.

6.3.4 Discussions have taken place with Network Rail concerning the future of the Viaduct. Network Rail wish to work with the Council as much as possible to resolve this problem and had agreed to transfer the obligations for the Viaduct, and the land required for building a new section of highway to replace the Viaduct when required, to suit the Council's programme of work. At this stage it has been agreed to enter into the process of transferring the obligations and land in accordance with Section 94 of the Highway Act but to withhold from signing the agreement until the scheme is ready to go ahead. In settlement of the matter Network Rail have indicated a willingness to contribute a commuted sum, subject to validation of the assessment calculations, for the complete removal of the Viaduct on the assumption that the Highway Authority would take responsibility for the future maintenance liabilities.

6.4 Public Consultation

6.4.1 The public consultation included a presentation to stakeholders and an exhibition to the general public of the four preferred options identified in the study – (see the consultation leaflet included at Appendix E). These options are listed below:

- Option A Support Old Viaduct with New Concrete Arches
- Option B Replace Old Viaduct with New Road on a Different Line
- Option C Replace Old Viaduct with New Road on the Same Line
- Option D Replace Old Viaduct with 2 New Bridges on the Same Line

6.4.2 The consultation and public exhibition attracted a significant amount of interest from local people and organisations alike. The event held on 29th January 2003 at the Leicester Rowing Club was attended by a total of 75 people, and 175 questionnaires were returned. Questionnaire results highlighted that there was no clear winner or loser as all four options received fairly equal backing. It could be argued that Options A and B were more disliked by the public than Option C and D.

7.0 Feasibility Study Recommendations

7.1 Babtie submitted their final report at the end of March 2003 and a copy is available at the meeting. In conclusion of the study Babtie recommend that Option C be progressed by the Council as the preferred option.

7.2 This option involves the complete demolition of the existing Viaduct and replacement with a new low level road and bridge over the Old River Soar. The new road will follow the existing straight horizontal alignment of this section of Upperton Road. Western Road and The Great Central Way footpath/cycleway currently run underneath the existing Viaduct at its west end. Both routes will be stopped up and a combined pedestrian and cycle crossing over Upperton Road provided. Works will be undertaken to ensure that 2-way traffic is maintained along Upperton Road during weekday peak periods throughout construction.

7.3 It is considered that this option represents the best long-term solution to the problem of the Upperton Road Viaduct. The benefits of Option C over the other options are discussed in the consultant’s final report and highlighted below:

- The retention of the existing horizontal alignment, combined with the reduced level of the road, minimises the impact on potential land use and development and similarly land acquisition and associated legal costs.
- The option enables the former Great Central Way wagon shed to be retained as a building of local heritage value.
- A direct intersection/crossing point is provided between Upperton Road and Great Central Way, affording increased freedom of pedestrian and cyclist movement and improving security for users of Great Central Way.
- Whilst this option reduces the connectivity of the wildlife corridor between the SINCS (Sites of Interest for Nature Conservation) North and South of the road it is considered that the design can accommodate effective mitigating measures.
- The existing Viaduct is completely demolished and replaced with a new low level road providing the greatest opportunity for enhancing the regeneration of the area in sympathy with the Council’s development policy/plans. The potential for creating an avenue like approach to the City is greatest with this option. It is considered that the lowering of the road below raised footways/house fronts to the west of Upperton Road will not detract from this effect and may actually enhance it through good quality design and finishing.
- As the only bridge on the scheme the new low level crossing of the Old River Soar offers the opportunity to provide a design of the highest quality, without impacting too severely on the overall cost of the scheme.
- Inspection and maintenance costs over the next 30 years are shown in the table below. It is considered that there are greater construction costs/risks associated with Option B than Option C.

Option A	Option B/C	Option D	Do Nothing
£107,889	£43,623	£90,166	£460,165

7.4 In the light of the above, it is considered that the long-term benefits and opportunities associated with this option elevate it above the others. As such it is recommended that this option be progressed by the Council as the approved preferred option for submission to the Department for Transport in the July 2003.

8.0 Submission of Option C as the Major Scheme Bid for Funding

8.1 Upon receipt of Babbie's final report recommending Option C advice was sought from the Department for Transport regarding the Council's bid to secure funding for the proposal as a major scheme (exceeding £5.0m). At these discussions the DfT praised the very high standard of the feasibility study. It was evident from the discussion that very few schemes in the country were competing for major scheme maintenance funding at present, and consequently a bid is likely to be successful in 2003. Delaying the bid is likely to reduce the chances of success as less money may become available in 2004 and more schemes may be competing for funding. Based on the information from the DfT it was decided to prepare a bid submission with a view to meeting the submission deadline of 31st July 2003. This was discussed at the meeting of the Cabinet Members Working Group held on the 26th March 2003.

8.2 Babbie have prepared the detailed bid in accordance with the DfT guidelines for submission of major schemes – this document will be available at the Cabinet meeting. A 1:400 scale tabletop model of the proposed preferred option, demonstrating how this proposal will transform the area, will also be available at the meeting to facilitate discussions.

9.0 Estimated Project Expenditure and Timescale

9.1 Details as to how the estimated project expenditure has been compiled are shown as Appendix B. The prices are based on similar works of civil engineering construction carried out in 2002/2003 and are put together according to current practices and industry standards. The estimate makes reasonable allowance for all the identified risks associated with the project which are also detailed in Appendix B. There has been an independent check of the estimate and risk assessment by the department's Bridges Team, who confirm the robustness of the figures.

9.2 The anticipated programme of work, and key dates for completing the project including the spending profile, is shown below.

		<u>Spend (£)</u> (rounded)
2003	Submit Bid	175,000
	Planning Consent and Consultation	
2004	Scheme Preparation	274,000
	Notices and Agreements	

2005	Acquisition of Land and Buildings Service Diversion	5,212,000
2006	Construction Year 1 Temporary Road and Demolition	5,871,000
2007	Construction Year 2 Construct new road and low level Bridge	4,181,000
2008	Commissioning and Handover	3,378,000
	Total of Bid	<hr/> 19,091,000

10.0 Acquisition of Land and Buildings

10.1 The agreement with Network Rail will permit the building of a new road to replace the Viaduct at ground level with no land purchase cost to the Council, as referred to in section 6.3 of this report. However, additional land and property will be required for the temporary road and for the provision of a high quality open space, as referred to in paragraph 5.3 of this report. The Council owns some of these sites, whilst the remaining sites are in private ownership. The Council's Property Surveyor has carried out an assessment of the potential costs associated with the property and legal issues. These costs amount to £2.61million (details shown in Appendix B) and also include an allowance for claims that could become payable under the Land Compensation Act 1973 for disturbance associated with the permanent road works.

11.0 Appointing the Works Contractor

11.1 Following consultation with Legal Services it is considered that the Council's traditional route of appointing a works contractor based on selective tendering to carry out employer designed works would be unsuitable in this instance due to the nature and complexities of the project. The main disadvantage is the formal nature of traditional procurement that would not easily allow for change so that it could be difficult for the Council to retain control over the cost of the project. As there is scope for innovation in the design and construction it is recommended, to ensure certainty of price and achieve best value, that the contractor is appointed at an early stage in the planning of the project for the design and build of the works. Also, by making use of the design and build procurement route, there would be time saving incentives for the contractor and less disruption for the public.

11.2 It is proposed, therefore, to seek expressions of interest from contractors subject to the approval of the bid later this year for inclusion on a Select List for the Upperton Road Viaduct. In due course contractors on the Select List will be invited to submit proposals for carrying out the works with design to the Council's specification and quality standards. The process of appointing a contractor will be carried out in accordance with the Council's Contract Procurement Rules and an in-house project team

in ER&D will manage the project. The Department for Transport favours this method of procurement as it brings together all the parties as early as possible to enable the risks associated with the project to be properly assessed and managed.

- 11.3** Following approval of the bid it is recommended that the Project Director proposes project management arrangements to ensure the successful completion of the project, giving particular consideration to the early and full involvement of Members.

12.0 DETAILS OF FURTHER RESEARCH AND CONSULTATION

12.1 Feedback from the Study

As the findings of the presentation and public exhibition last January were inconclusive (see Section 6.4) consultations have been continuing up to the date of finalising this report. A complete listing of all the authorities and interest groups consulted during the study period is shown as Appendix C. With regard to the preferred Option C the concerns most commonly raised by stakeholders, residents and the public are listed below in order of priority.

- Impact on the Great Central Way Cycle Path
- Environmental Protection
- Heritage Issues linked to the Viaduct
- Impact on Western Road
- Minimising disruption to traffic during construction

These particular issues are set out under the above headings with the response of the Council project team shown alongside, as follows:

12.2 Impact of the Great Central Way Cycle Path

Issue

Insufficient weighting given to the importance of Great Central Way as part of national cycle route. If the preferred option C is favoured consideration should be given to a carefully designed underpass for the cycle path. Alternatively a link up on to Upperton Road would be a benefit, which would outweigh the disadvantages of severing the route.

Response

A simple weighting technique was used to gain an understanding of the possible benefits – other factors, including cost and feasibility, were used to identify the preferred options. Option selection was based on technical, economic and environmental factors. Appraisal of the options was carried out according to Government guidelines. It is considered inappropriate to provide a subway that would most likely lead to an increase in crime. An existing subway in the city was recently

If the bridge over the Great Central Way was retained its use for committing acts of crime (due to the quietness under the arch as referred to in the report) would be less likely to occur than a cyclist or pedestrian being run down by a vehicle on a Toucan crossing, if the new road is constructed at grade in Option C. There has been too much weighting given to the squalor and anti-social behaviour beneath the arches that is not considered to be a major problem.

It is likely that the “canyon” effect of the existing road would be shifted further west along Upperton Road under Option C.

filled-in, as it was unusable due to antisocial behaviour. The link up to Upperton Road is not practical to provide, as the gradient would make it too steep for users.

The Police report 3 serious incidents every year for the past 3 years on the GCW. The Police regard it as an area of high risk. Though the proposals would not solve the crime problem in the area they would help to improve security and reduce the opportunity for criminals to gain access to the rear of properties on Western Road. Public consultation on this issue was inconclusive – whilst some felt that an interruption would be of little consequence, many others saw this as a significant deterrent to existing and future use of the route. The cycling audit, completed as part of the technical appraisal of the scheme, and also the investigations into the acceptability of an at grade junction by LCC’s Traffic Section have concluded that the “cycle friendliness” of the preferred option is very similar to that of the existing situation and Option D and that it is possible to provide at grade facilities that minimise the likelihood of casualties. The conclusions of a GCW Non-motorised User Survey Report states that Option C makes a small improvement in social safety.

The existing high parapets contain noise and pollution generated by traffic. Access and egress from the Viaduct is also limited for some considerable length. Option C would overcome this problem, though it is recognised as having a negative affect elsewhere. To the west of the scheme the road would be below the level of the pavement and so traffic will not affect pedestrians and adjoining properties.

12.3 Environmental Protection

Issue

What mitigation measures would be carried out to reduce the impact on the biodiversity of the area especially with regard to bats that are likely to be roosting in the bridge?

The areas of land immediately adjacent to the Great Central Way and Upperton Road are identified in the Council's Local Plan as Sites of Interest for Nature Conservation (SINCs) and development could only be justified under exceptional circumstances. Any bid should incorporate mitigation measures as appropriate.

Response

Bats were found to be roosting in parts of the Viaduct. Further survey is required to determine the estimated population. Mitigation measures would be developed following this survey including identification of replacement bat habitat, and a method of bridge demolition selected that would not harm the resident bats. All British bats are protected by the Wildlife and Countryside Act and under European law.

In terms of the assessment of this policy, it is considered that the functions outweigh the ecological value of the site. Also, it should be noted that provision of a wider bank to the river under the new bridge structure would help to maintain the green corridor and offset some of the impact of the at grade solution. As further mitigation, to maintain the integrity of the corridor, a section of pipe could be installed under the road at ground level at the western end of the Viaduct. See Paragraphs 5.3 and 10.1 which give further information related to addressing this issue.

12.4 Heritage Issues linked to the Viaduct

Issue

Reducing the number of bridges is given undue weighting compared to the benefits of retaining or replacing them. There is a particular desire to preserve the brick arch spans over the Old River Soar

Response

It is considered that reducing the future maintenance costs and liabilities of the Council in this particular case are more important than retaining the structure or replacing it with bridges that are no longer required. The single span railway bridge to the north of the site and the wagon shed would not be demolished in Option C.

12.5 Impact on Western Road

Issue

Interruption of Western Road would be detrimental to local residents, businesses and pedestrians alike, as the proposals favour road users.

Response

Option C would close Western Road to vehicles thus preventing it being used as a “rat-run”. The objectives relating to maintaining north south movements, improving security beneath the Viaduct and improving access between the Great Central Way and Upperton Road are all addressed in Option C by means of a properly designed, at grade traffic junction.

12.6 Minimising disruption to traffic during construction

Issue

Disruption to the public and businesses due to the works should be minimised as much as possible.

Response

All the preferred options keep disruption to a minimum. Included as part of Option C is a temporary access road that would ensure traffic flows across the site with the minimum of disruption. Details of the duration of the works are given in the programme of works – see section 9.2

13.0 SUSTAINABILITY IMPLICATIONS

- 13.1** The Council’s Sustainability Checklist is used as a device for testing the sustainability of new projects and proposals. The advantages and disadvantages of Options C and D (D is considered the next best option to C) have been considered and a record of the conclusions for each heading in the Checklist are set out in the attached table – Appendix D. This exercise was discussed at the meeting of the Sustainable City Officers Group on the 19th June, where it was recognised that there are a variety of sustainability implications associated with Options C and D.

14.0 Headline Financial Implications

- 14.1** The bid to the DfT will make sufficient allowance for all the identified risks associated with the project, as set out in the report (Appendix B) so as not to place any pressure on existing Council budgets. If the DfT approves the bid, as expected, the funding for the scheme would be available as 50% capital grant and 50% supplementary credit approval. If, however, the bid were unsuccessful or not actually submitted this July and the imposition of a weight limit for traffic on the Viaduct became

necessary there would be significant economic loss to the community and a financial liability incurred by the Council for the management and maintenance of the substandard structure. The on-going cost of maintenance of the Viaduct would then place great pressure on existing maintenance budgets.

- 14.2** All expenditure incurred in conducting the feasibility study and preparing the bid is funded from existing maintenance budgets.

15.0 **Headline Legal Implications**

- 15.1** The Council, as the Highway Authority, has a statutory duty of care to ensure all road over rail bridges in the city meet the current European Directive requiring such structures to have a load carrying capacity of at least 40 tonnes. Therefore, setting aside the issue of ownership, in 1999 the Council signed a joint agreement with Network Rail in order to be able to carry out an inspection and report on the condition of the Viaduct.

- 15.2** Though it has been shown by assessment that the strength of the Viaduct is significantly less than 40 tonnes, it should be borne in mind that the obligations of Network Rail and Rail Property for the strengthening of the structure would be legally restricted to a maximum of 26 tonnes – according to the Railway Bridges (Load Bearing Standards) (England and Wales) Order 1972. The strengthening of the structure from 26 tonnes to 40 tonnes to meet the European Directive is the responsibility of the Council, as the Highway Authority, supported by Government approved expenditure. Furthermore, the need to impose a temporary 7½ tonne weight limit on the structure is not considered necessary at present (see Section 6.2). However, if as Highway Authority the Council were to apply a 7½ tonne weight limit at some future date, it would effectively relieve the owners of any responsibility for strengthening the structure from that date.

- 15.3** Discussions have taken place with Network Rail concerning the future of the Viaduct. Network Rail wish to work with the Council as much as possible to resolve this problem and have agreed to transfer the obligations for the Viaduct, and the land required for building a new section of highway to replace the Viaduct when required, to suit the Council's programme of work. At this stage it has been agreed to enter into the process of transferring the obligations and land in accordance with Section 94 of the Highway Act but to withhold from signing the agreement until the scheme is ready to go ahead. In settlement of the matter Network Rail have indicated a willingness to contribute a commuted sum, subject to validation of the assessment calculations, for the complete removal of the Viaduct on the assumption that the Highway Authority would take responsibility for the future maintenance liabilities

16.0 **Other Implications**

OTHER IMPLICATIONS	YES/NO	Paragraph References With Supporting information
Equal Opportunities	YES	13.0, Appendix D
Policy	YES	5.0
Sustainable and Environmental	YES	12,13
Crime and Disorder	YES	12,13
Human Rights Act	NO	
Elderly / People on Low Income	NO	

17.0 Background Papers

- 17.1** Upperton Road Viaduct Feasibility Study Final Report dated March 2003
- 17.2** Report of the Service Director, Highways and Transportation Division to Members Working Group dated 26th March 2003
- 17.3** Upperton Road Viaduct – Great Central Way Non-motorised User Survey Report dated June 2003
- 17.4** Central Leicestershire Local Transport Plan 2001 – 2006 Third Annual Progress Report Upperton Road Viaduct Major Maintenance Scheme Annex E Submission dated July 2003
- 17.5** Leicestershire Constabulary Crime Report for the Great Central Way dated June 2003.
- 17.6** Upperton Road Bridge and Great Central Way report of the Traffic Group dated 17th June 2003.

18.0 Report Author

Keith Rowe Highway Strategy Team Leader extension 6545

LOCATION PLAN

APPENDIX B

UPPERTON ROAD VIADUCT
ESTIMATED PROJECT EXPENDITURE

<u>OPTION C - REPLACE OLD VIADUCT WITH NEW ROAD ON THE SAME LINE</u>		<u>£'000</u>
<u>Item</u>		
1.0	Traffic Management	250
2.0	Demolition of existing structures	930
3.0	Temporary Road Diversion / Removal	910
4.0	Temporary Bridge over River Soar	75
5.0	Construction of New Road	440
6.0	Off-Lone road works (incl. Earthworks, pavement etc)	716
7.0	Lighting / Traffic Signs / Road Markings (New Road)	110
8.0	New structure over River Soar (inc. wing walls)	1,434
9.0	Road crossing at cycleway (inc. treatment at junctions)	245
	Sub Total	5,110
	Add 10% for measurement inaccuracies	511
	Preliminaries @ 25% (rounded)	1,278
	Sub Total	6,899
	Design, Tenders, Site Supervision @ 12%	828
	Sub Total	7,727
	Utilities Diversion / Protection Works	3,100
	Sub Total	10,827
	<u>Add allowance for Design and Construction Risks.</u> (See Quantified Risk Assessment - overleaf)	2,117
	<u>Add land acquisition costs (incl. Buildings)</u> (incl. Allowance for Legal fees and Part 1 Claims)	2,610
	Sub Total	15,554
	<u>Add preparation costs</u>	530
	Sub Total (current prices, rounded up)	16,100
	<u>Add General Inflation Factor for Construcion &</u> <u>Land Costs plus Construction Cost Inflation plus</u> <u>Land Cost Inflation over six years period ending 2008</u>	3,019
	<u>TOTAL OF BID TO DEPARTMENT OF TRANSPORT</u>	<u>£19,119</u>

Upperton Road Feasibility Study

Investment Costs - Option C (preferred)

RPI_{2003Q1} = 179.2
 RPI₁₉₉₈ = 162.9
 Present Value year 1998

n = no. years from 1998 (e.g. for 2006, n = 8)

Year =	2003	2004	2005	2006	2007	2008		
n =	5	6	7	8	9	10		
Scheme preparation costs (2003 Q1)	(a) 170,000	260,000	100,000	0	0	0	530,000	
Scheme preparation costs (1998) b = a x RPI _{2003Q1} /RPI ₁₉₉₈	(b) 154,537	236,350	90,904	0	0	0		481,791
Expected outturn preparation costs assuming 2.5% inflation, c = b x 1.025 ⁿ	(c) 174,844	274,094	108,056	0	0	0		556,995
Construction Cost Estimate (2003 Q1)	(d) 0	0	2,000,000	5,000,000	3,375,000	2,585,000	12,960,000	
Construction Cost Estimate (1998) assuming 5.5% inflation (1998-2003), e = d/(1.055 ⁵)	(e) 0	0	1,530,269	3,825,672	2,582,328	1,977,872		9,916,141
Expected outturn construction costs assuming 5.5% inflation, f = e x 1.055 ⁿ	(f) 0	0	2,226,050	5,871,207	4,181,033	3,378,492		15,656,782
2003 land cost estimate	(g) 0	0	2,610,000	0	0	0	2,610,000	
1998 land cost estimate, assuming 5% inflation (1998-2003), h = g/(1.05 ⁵)	(h) 0	0	2,045,003	0	0	0		2,045,003
Expected outturn land costs assuming 5% inflation, j = h x 1.05 ⁿ	(j) 0	0	2,877,525	0	0	0		2,877,525
Total Costs in 2003 prices	£170,000	£260,000	£4,710,000	£5,000,000	£3,375,000	£2,585,000	16,100,000	
Total expected costs EXPECTED SPEND PROFILE	(j1) £174,844	£274,094	£5,211,631	£5,871,207	£4,181,033	£3,378,492		19,091,301

Risk Assessment Matrix

Construction Risks				
Ref	Risk	Likelihood L/M/H	Severity Impact L/M/H	Control Actions/Risk Management
1	Piled Retaining Wall – unforeseen ground conditions	Medium	Low	Allowance for bigger piles if necessary. Additional Ground Investigation as appropriate. 90% Probability that Piles will not need to be increased to 900 dia or increased in length by 50%
2	Piled Bridge Abuts – ditto -	Medium	Low	As 1 above
3	Western Rd Stats. Diversions	High	High	Allowance for increase in costs made for additional diversions. Early and continued liaison with SU's. 90% Probability that costs will not increase by 25%.. Costs based on estimates from Utility Companies
4	Upperton Rd Stats. Diversions	Medium	High	As 3 above.
5	Barratts Access Stats.	High	High	As 3 above.
6	Adverse Weather	High	Low	Allowance made in programme and for increased cost. Allow reasonable float in works programme. Monitor long range forecasts. 90% Probability that cost will not increase by 100% of estimate.
7	Flooding	Low	Low	Allowance made for cost increase Implement flood management plan. Liaise with EA. Allow reasonable float in works programme. 90% Probability that cost will not increase by 100% of estimate.

Risk Assessment Matrix

8	Larger Bailey Bridge	Medium	Low	Allowance made for cost increase. Plan early. Early liaison with contractor, bridge supplier, SU's. 90% Probability that bridge size will not increase by 50%
9	Delays from Stats. Diversions "knock-on" costs	Medium	Low	Additional allowance for cost increase. Early and continued liaison with SU's. 90% Probability that cost will not increase by 50%.
10	Contaminated Viaduct Fill	High	Medium	Additional allowance for cost increase. Additional sampling/testing as appropriate. Allowance made for cost of removing all contaminated fill.
11	Contaminated Paintwork (Lead Based)	High	Low	Additional allowance for cost increase. Additional sampling/testing as appropriate. Allowance made for cost of removing all contaminated paint.
12	Demolition Cost Increase	Low	Low	Additional allowance for cost increase. Provision of all structure record data to demolition contractor. Effective supervision. 90% Probability that cost will not increase by 20%.
13	Lack of local resources (labour)	Low	Medium	Additional allowance for cost increase in bringing in outside resources. Plan early. Advance notice of works/sub-contracts.
14	Protestor Action	Low	Low	Cost allowance for additional security. Effective and continued consultation. Effective mitigation of objections.

Risk Assessment Matrix

15	Stage 3 RSA (Road Safety Audit)	Low	Low	Careful design should avoid this however, additional allowance made for cost increases. Undertake virtual RSA of design as it develops.
16	Operation & Maintenance (Construction only)	Low	Low	Allowance made for additional cost increase for short-term works. Monitor existing bridge during works. Approved safe methods of working.
17	Damage to New/Existing services	Low	Medium	Allowance made for additional cost increase.
18	Part 1 Claims	Low	Low	Allowance made within the land acquisition figures. Unlikely to be many claims.
19	Contractor Liquidation	Low	Low	Bond will be required from Contractor.

Inflation Allowance over spend Profile				
Ref	Risk	Likelihood L/M/H	Severity Impact L/M/H	Control Actions
1	Construction Inflation	High	High	3% extra allowance over treasury rate (of 2.5%) was made in the Bid
2	Land acquisition	High	High	2.5% extra allowance over treasury rate (of 2.5%) was made in the Bid. Allowance made for slippage in the spend profile.

L – Low
M – Medium
H - High

L – Low
M – Medium
H - High

Upperton Road Viaduct Public Consultation
List of Authorities and Interest Groups Invited to Comment

List of Stakeholders

The Auto-Cycle Union
APT Design
Arriva Fox County

The Byways and Bridleways Trust
The British Horse Society
The British Cyclists Federation
British Telecom
Barratt East Midlands
British Waterways

The Commons – Open Spaces and Footpaths Preservation Society
Cyclist Touring Club
CPH Thurmaston
Colin Cartwright and Iris Cartwright
Countryside Commission
J Coats (HGV Services) Ltd

De Montfort University

Energis Communications Ltd
Environment Agency
English Nature
English Heritage
ENVIRON
East Midlands Electricity

First Leicester Bus
Friends of the Earth
Freight Transport Association

Jhan Hussain

Leicestershire Ambulance Service
The Leicester Bridleways Association
Leicestershire Chamber of Commerce and Industry
Leicestershire County Council
Leicester City Football Club
Leicester Civic Society
Leicestershire Constabulary
Leicestershire Fire and Rescue
The Leicestershire Footpaths Association

Leicester Regeneration Company
Leicester Rowing Club
Leicester Royal Infirmary
Leicester Spokes
Local Transport Day (presentation to the public)

Mercury Communications Limited
Metro Cable TV Ltd
Mawby and King Ltd

National Grid Company
Ntl Midlands Ltd
Network Rail (formally Railtrack)

Offside Residents Association

The Rambler's Association
Ram Pal Singla and Sarbjit Singh Kullar
Remit Centre
Road Haulage Association
Rail Property Ltd

Sturgess Land Rover
Student Living Ltd
Severn Trent Water
SUSTRANS

Malcolm Toon and Diana Toon
Transport 2000
Transco

Ward Councillors

Zibcroft Estates Limited

Note 1500 consultation leaflets were distributed to residents and small businesses in the area around the Viaduct, and the leaflet was on display in the libraries and available on the Council's website.

Upperton Road Viaduct Sustainability Checklist Exercise May 2003

Sustainability Criteria	Option C (Demolish Viaduct, new bridge over River, new road on existing line)	Option D (Demolish Viaduct, new bridge over River, new bridge over GCW and SINC, new road on existing line over bridges)	Comments
Economy and Work	Jobs may be created during construction	Jobs may be created during construction	
Buildings, Planning and Land Use	Potential crime spot below arches removed One road and bridge to maintain in future	Bridge over GCW leaves potential crime spot Two bridges and one road to maintain in future	Option C is probably better than D on this criteria, it has a less intrusive elevation
Housing	Allows level access from Upperton Rd onto the GCW		This criteria relates more to new Housing than access to existing
Transport	Allows level access to the GCW, allows users of the GCW access to Upperton Road hence shops, LRI, other people	Bridge over GCW means GCW users not in conflict with Upperton Road traffic	Option C will have an at grade junction of GCW with Upperton Rd with appropriate facilities
Waste, Resources and Energy	Recycling, energy use will be addressed in design	Recycling, energy use will be addressed in design More energy used here than C as vehicles climb higher	Option C fares better on this criteria as less new infrastructure
Pollution	Road remains on same line but generally at lower level	Road remains on same line but generally at higher level than Option C	Option C and D same effects

Wildlife and Open Spaces	<p>SINC severed Allows level access to GCW/open space</p> <p>Gives feeling of openness when approaching City from Narborough Rd Less structures – better landscape?</p>	<p>SINC not severed</p> <p>Two bridges better than one?</p>	<p>Option C can have some features designed in to reduce the impact on the</p> <p>SINC Option D is preferred in terms of the impact on wild life</p>
Social Needs	<p>Removal of arches - hope it reduces fear and occurrence of crime Access to LRI for GCW users improved</p>	<p>Bridge over GCW means GCW as a facility is not affected but lack of access to it means use is restricted</p>	<p>Option C allows “integration/access” whereas Option D preserves the continuous/uninterrupted nature of the GCW</p>
Arts, Culture and Leisure	<p>As access to the GCW is improved access to and hence enjoyment by more people of the facility is improved Due to the proposed new GCW/Upperton Rd junction enjoyment for those on the GCW is reduced</p>	<p>The bridge over the GCW maintains the uninterrupted nature of the route for those able to access the GCW North and South of Upperton Rd</p>	
Participation and Democracy	<p>Stakeholders have been and will continue to be consulted during development and implementation of the project</p>	<p>Stakeholders have been and will continue to be consulted during development and implementation of the project</p>	

CONSULTATION LEAFLET