

AGENDA ITEM: 9

Page nos. 18 - 30

Meeting	Cabinet Resources Committee
Date	27 July 2006
Subject	Aerodrome Road Bridges Replacement - Procurement Issues and Risks
Report of	Cabinet Member for Environment and Transport Leader of the Council/Cabinet Member for Resources
Summary	This report sets out the current progress of the Aerodrome Road bridges replacement project. The report details the challenges and risks existing currently and that lie ahead in meeting funding timelines and securing the co-operation and agreement of Network Rail necessary for the delivery of the project. The report also seeks agreement to enter into an underbridge agreement with Network Rail.

Officer Contributors	Mike Freestone, Head of Environment and Transport
Status (public or exempt)	Public
Wards affected	Colindale
Enclosures	Appendix A – Risk Register Appendix B – Project Timetable
For decision by	Cabinet Resources Committee
Function of	Executive
Reason for urgency / exemption from call-in (if appropriate)	N/A

Contact for further information: Chris Chrysostomou Tel 020 8359 7200

1. RECOMMENDATIONS

- 1.1 That the Committee note the progress of the project to date and the project specific tasks that need to be addressed prior to completion.**
- 1.2 That Members note the serious challenges and risks that exist and lie ahead in meeting the timetable and the matters requiring the agreement of Network Rail, in particular the completion of an Underbridge Agreement.**
- 1.3 That the Council enters into an Underbridge Agreement with Network Rail and proceed with the project within known risk parameters.**
- 1.4 That the Head of Environment and Transport keep the Risk Register under close scrutiny and report back to this Committee should there be a significant increase in risk to the Council arising from the implementation of this project.**

2. RELEVANT PREVIOUS DECISIONS

- 2.1 Delegated Powers Report entitled 'Aerodrome Road Bridge Replacement- Network Rail Basic Asset Protection Agreement' (BAPA), dated 24 March 2006. The BAPA enabled Network Rail to deploy the necessary resources to move the project forward.
- 2.2 The replacement of the Aerodrome Road Bridges was identified within the approved 2006/07 Environment and Transport Services Key Priority Plan.

3. CORPORATE PRIORITIES AND POLICY CONSIDERATIONS

- 3.1 The replacement of the two masonry arch railway bridges on Aerodrome Road will remove a height and capacity restriction on this road which forms the most direct link between the Colindale Regeneration area and the Transport for London Road Network (TLRN). This would improve access to the regeneration area for pedestrians, cyclists, enable the provision of an east-west bus link and ease congestion at the Aerodrome Road/A41 junction. The new bridges will allow the widening of Aerodrome Road by providing a third eastbound lane and two footpaths of 2.5m each
- 3.2 Secure funding and implement the Aerodrome Road Bridge initiative is included in the Sustainable Community Strategy for Barnet 2006-2016 and is seen as keeping Barnet moving.
- 3.3 The Aerodrome Road Bridge initiative is also mentioned in the Corporate Plan 2006/07-2009/10, under a Successful Suburb.
- 3.4 The 'Cleaner Greener Barnet' key priority also includes the objective of reducing congestion and this project will reduce congestion on Aerodrome Road by removing the height and capacity restriction.

4. RISK MANAGEMENT ISSUES

- 4.1 The project is subject to ongoing and robust risk management processes that seek to identify, evaluate and mitigate all possible risks. A Risk Register has

been compiled, attached at Appendix A, and is subject to regular review by the Risk Management Group, comprising officers within the Highways Group and the Strategic Procurement Team.

- 4.2 Risks are examined in a number of ways looking at the probability of their occurrence and their potential impact if they should occur. Given the precise and challenging timeline for the central government funding for this project the timetable for the implementation of this project gives the greatest cause for concern. Further detail on these matters is set out in the main body of the report.

5. FINANCIAL, STAFFING, ICT AND PROPERTY IMPLICATIONS

- 5.1 The project is being funded by a mixture of Section 106 monies, arising from the Colindale Development Area - £3m and funding from the Department of Communities of Local Government (DCLG) - £7m. The government funding has a definite timeline and is only available until 31 March 2008 with the added requirement that the bridges are constructed by then. Given the high risk nature of the project, and in particular the financial implications of future widening, there is a serious possibility that extra funds might be needed to complete the project. Several potential funding sources have been identified and, as shown in the Risk Register, these are the Government, Transport for London and new S106 Agreements.
- 5.2 An initial Desktop Study carried out by Parsons Brinckerhoff established the viability of the project and helped to secure the Government funding. After taking appropriate procurement advice from the Strategic Procurement Team, Atkins Rail were then competitively commissioned, using the Consultancy Framework Agreement 13709, to provide a more detailed Feasibility Study and establish the preferred design of the bridges. The use of the Framework Agreement complies with our EU procurement requirements. Tenders have recently been invited from a select list of consultants, again using the Consultancy Framework Agreement 13709, to provide the detailed designs and to move the project forward to the tender stage for the appointment of the main civils contractor.
- 5.3 As part of the BAPA funds have also been made available to meet all Network Rail's costs or deploying resources to respond to Council requests for information and other matters. The Council has therefore been exposed to this cost which is estimated at £25k. In addition to the in house resources in terms of officer time required to move the project forward, there are also costs for the production of the feasibility study approximately £90k. The next stage in the project is the Detail Design (estimated cost of the order of £350K) and the Council, following a separate tender process as per the Framework Agreement, is considering awarding Atkins this commission on a time charge basis,. The Aerodrome Road Bridge Replacement project is referenced in the Key Priority Plan of Environment and Transport and this has provided the necessary authority to officers to commission the Feasibility Study and to invite tenders for the detail design stage. The Council's standing orders allow the Head of Environment and Transport to accept the tender from Atkins. The costs so far have been met by the S106 funding.
- 5.4 There are no Staffing, ICT or Property implications arising as a result of this report.

6. LEGAL ISSUES

6.1 Incorporated in the body of the report.

7. CONSTITUTIONAL POWERS

7.1 Constitution, Part 3 - Responsibility for Functions, Section 3 - Powers of the Executive, paragraph 3.6 - terms of reference of the Cabinet Resources Committee.

8 BACKGROUND INFORMATION

8.1 The Aerodrome Road bridge replacement project is a major construction project involving the replacement of two masonry arch railway bridges in the Colindale area with costs in the region of £10m. The project is locally important for the Authority as it assists in:-

- Further realisation of opportunities within the Colindale Development Area, and,
- The promotion of integrated transport links with particular benefits to bus links.

Progress to date

8.2 The scheduled date for the completion of the bridges project is March 2008 as can be seen in the programme attached at Appendix B, which sets out the main specific tasks and critical paths to deliver the project on time. However, there will be the need to divert utilities and lower and reconstruct Aerodrome Road after the bridges have been constructed. It is anticipated these two activities will not be completed until December 2008. This is not currently shown on the attached programme as these works may form part of a separate contract. Involvement in this project began in mid 2005 and over the course of the last year progress has been ongoing, in that time officers have:-

- Identified sources and obtained funding for the scheme through a mixture of extant funding support from the DCLG and locally negotiated S.106 construction monies
- Commissioned a Desktop Options Study – to look at a range of options and their feasibility in high level economic and non economic terms for the delivery of the project
- Put in place a Basic Asset Protection Agreement (BAPA) with Network Rail – which allows Network Rail to deploy resources in providing information to the Council
- Established channels of communication with Network Rail to identify relevant constraints
- Established an Overview Group to provide strategic guidance, established sub groups, including a risk management group to take forward the day to day management of the project
- Commissioned a Feasibility Study – to carry out in-situ ground investigations, topographical surveys, detailed bridge designs and drawings – ongoing liaison with Network Rail and Utility companies and set out bridge design proposals to deliver the project

- Negotiated Rail Possessions required for the installation of the two bridges, including the pilling which have now been inserted in Network Rail's possession booking system
- Established identity of utilities and other services affected by the proposed bridges
- Established channels of communication with the Highways Agency
- Carried out trial holes to confirm the location and level of the pile caps of the adjacent M1 bridge

Timetable

8.3 Members will note from the attached works programme, the timetable for the delivery of this project is extremely challenging. There are particular dates that need to be met as the reconstruction of the two bridges needs to be completed in accordance with prefixed Rail Possession times. (The main replacement works need to be achieved within 56 hour line possession times). These complexities create a very narrow window for the work to be carried out. The programming, synchronisation and delivery of tasks as per the timetable are absolutely essential to ensure these Rail Possession times are not overrun.

8.4 The timetable has undergone revisions to ease pressure on a number of the critical paths, these include;-

- to go to tender without full completion of the design works (this relates to the substructure works only – not the design work for the whole of the bridge)
- consideration has also been given to combining the steelwork and the rest of civils work in one contract but leave the design of the substructure under Design and Build
- to order the steelwork as part of a separate contract, prior to the main Civils Contract, as currently steelwork orders need to be placed 12 months in advance due to material shortages
- to carry out the road realignment works – post the construction of the bridge - as part of a separate contract.

Network Rail Issues

8.5 As Network Rail are the owners of the bridges their co-operation and agreement is essential for the delivery of this project. At the time of writing this report there are a number of areas where this agreement has yet to be obtained:-

- The information necessary to allow the consultants commissioned by the Council, W S Atkins, to complete the feasibility study. Information is still outstanding relating to the status of the bridge, Network Rail services and location of third party cables. Detailed information is also required for overhead line equipment layout drawings, as built drawings for the existing bridges and details of the leases granted by Network Rail for the business units near to the bridges.

The provision of this information is essential for the integrity of the feasibility study. Continuing failure to provide this information means that Atkins will qualify their report which will therefore reduce its status. A verbal update will be given to Committee on this issue.

- Network Rail's acceptance of the proposed bridge design, the programme to completion including sequences and other construction related issues, such as headroom clearance. It is anticipated that this will now be discussed with Network Rail in early July.

Without the timely input from Network Rail, the progress of the project will be impeded as their consent on design and other related issues is necessary to move the project forward.

- Progression of underbridge agreement negotiations. Several issues have been identified, including future widening provisions, future maintenance, insurance, indemnities and development land values that will result in the project being halted if they remain unresolved.

The underbridge agreement is an agreement between the Council and Network Rail. It sets out in detail the requirements of Network Rail in relation to risk transfer issues, quality assurance and best practice regarding the implementation of the project and the future maintenance of the infrastructure. This agreement needs to be in place by September 2006 as per the attached programme. Failure to achieve this shall result in delays to the project and therefore has risks for the viability of the overall project.

To date Network Rail have sent a template agreement which has identified the areas that need to be addressed, these include:-

Insurance provisions – the Council will need to provide public liability insurance for the sum of £155 million.

Indemnity. – the Council will need to indemnify Network Rail for the sum of £25 million for any incident arising from or in connection with the works.

Future maintenance – the template agreement sent to the Council by Network Rail has been agreed with the Highways Agency and the County Surveyors Society - this enables Network Rail to require proposing authorities / organisations to pay for the future maintenance of any infrastructure affected by improvement works. Officers are looking at a number of ways to mitigate their future liability including seeking to negotiate the removal of this clause altogether.

- Bridge Strikes – Network Rail requires the Council to be liable for any future bridge strikes by third party vehicles in contract with the Council. This is an issue requiring further explanation and officers will seek to negotiate an outcome satisfactory to the Council. The existing bridges are the sixth most struck rail bridges in the country, although the new design should reduce this significantly.

The new structures will be constructed to withstand any expected impacts. After the bridges have been rebuilt, the carriageway and footways of this section of Aerodrome Road between the A41 and Rowan Drive will be widened out in the vicinity of the bridges lowered to achieve the national clearance height under its new structures of 5.3 metres. Network Rail have advised that they would prefer 5.7 metres clearance and investigations into

the possibility of providing this clearance together with any effects on local access are currently being undertaken.

- Future Widening provisions - Network Rail's position on the widening issue affects the detailed design of the bridges and will have substantial cost implications. Network Rail have indicated that the Council must take the liability of any future widening to the network or the design of the new slow line (east) bridge must be capable of carrying an extra railway line. This line is not required for use presently and they are unable to indicate when it will be used. There are no requirements by Network Rail to widen the fast (west) line bridge.

The physical implications of widening the slow lane bridge (nearest to the motorway) will have considerable cost implications. This is because the bridge is critical in terms of headroom and in order to keep a shallow bridge deck it will be necessary to install additional steel girders and substantially increase the size of the piles. However, because of geology and other restrictions on the plant that can be used to install these piles during the available rail possessions, this is not possible and it may well be necessary to install a separate bridge at an estimated cost of £1.8m. This will increase the cost above the available budget and stop the project if no additional funding is found from other funding sources such as DCLG, TfL or S106 Agreements.

Notwithstanding, the Council are not averse to designing and building the structure to facilitate Network Rail's future requirements. However, given that this requires expenditure over and beyond the sums already secured for the replacement of the two bridges, there will need to be a future approach to DCLG to seek their approval to underwrite any additional costs.

8.6 Appropriate risk management is being applied to the key risks identified in Appendix A to this report. It must be noted that the success of the mitigation measures is ultimately dependant upon the timely response and the full co-operation of Network Rail as there is a knock on effect on every other risk on the risk register. Members therefore need to be aware that Network Rail need to:-

- Demonstrate real commitment to the project and the project timetable;
- Respond in a timely manner to all requests for information; and looking forward,
- Be pragmatic and demonstrate flexibility in the negotiations on the Underbridge Agreement.

8.7 It is the nature of a complex construction project that there will always be risk associated with timely and affordable delivery. Recent dialogue has been problematic due to ongoing difficulties with Network Rail and their inflexibility in understanding or willingness to assist in meeting Council constraints, timetabling, funding or otherwise. Officers will continue to make every effort to work in partnership with Network Rail; however, without their full commitment to the project, the ultimate success in delivering two new bridges by the end of March 2008 is at serious risk.

9 LIST OF BACKGROUND PAPERS

9.1 Network Rail correspondence, dated 13 April and 31 May 2006.

9.2 Project Management – Bridge File and Papers

9.3 Any person wishing to inspect the background papers listed above should contact Chris Chrysostomou telephone 020 8359 7200.

Legal: SWS

CFO:PA

Risk Register for:			Aerodrome Road Bridge								
RISK IDENTIFICATION			RISK ASSESSMENT			RISK ACTION					
			GROSS Risk Assessment (Prior to the influence of treatment)			RESIDUAL Risk Assessment (After the influence of treatment)					
No.	Type of Risk	Risk Description	Likelihood	Impact	Existing Risk Treatment	Likelihood	Impact	Action for Further Risk Treatment	Action Owner	Target Date	
	Eight risk types: Strategic; People; Operational; Financial; Reputation; Information; Regulatory; Other.	What might occur and the impact if it does?	Low Medium High	Low Medium High	What existing processes / controls are in place to manage the risk?	Low Medium High	Low Medium High	What further action (if deemed necessary) is planned to treat the risk? Consider whether the residual risk is Intolerable, Unacceptable, Tolerable, Acceptable, Insignificant.	Who is responsible for the action?	What is the target completion date for this action?	
1	Strategic / Reputation	Serious timetable delays - loss of Gov't money - Bridge work not progressed	Med	High	WS Atkins appointed to produce feasibility study & timetable options. Project steering groups, Risk & Procurement managers in place. Risk Register & Management Group in place	Med	Med	To aggressively monitor the timetable, risk register and the work of Atkins. Appoint consultants next stage. Obtain Position Statement from NR - progress negotiations as fast as practicable. Put in place Communication Strategy.	Overview Group (OG)	28/03/2008	
2	Strategic / Reputation	Unable to reach agreement on the Under Bridge Agreement. Gov't money lost - future regeneration of area affected.	Med	High	To obtain under bridge agreement for Barnet - to check other similar agreements - eg LB Bexley. To obtain NR Position Statement on key issues. Open negotiations - keep all parties informed.	Med	High	Continuation of existing measures - attempt to bring political pressure brought to bear on NR - if acting unreasonably.	OG	30/09/2006	
3	Strategic / Operational	Failure to agree on specific underbridge agreement issues including - Future Widening Provisions	High	High	To obtain clarity on NR position - to check other similar agreements - eg LB Bexley. To obtain NR Position Statement on key issues. Open negotiations - keep all parties informed. Involvement of Senior Officers and Gov't officials. Obtain costings on all options - to look at costs of future maintenance and commuted sums	Med	High	Continuation of existing measures - attempt to bring political pressure brought to bear on NR - if not delivering.	OG	30/09/2006	
4	Strategic / Operational	Failure to agree on specific underbridge agreement issues - Future maintenance and commuted sums	High	High	To obtain clarity on NR position - to check other similar agreements - eg LB Bexley. To obtain NR Position Statement on key issues. Open negotiations - keep all parties informed. Involvement of Senior Officers and Gov't officials	Med	High	Continuation of existing measures - attempt to bring political pressure brought to bear on NR - if it is felt they are being unreasonable.	OG	30/09/2006	
5	Strategic / Operational	Failure to agree on specific underbridge agreement issues - Insurance / Indemnity Clause	High	High	To obtain clarity on NR position - to check other similar agreements - eg LB Bexley. To obtain NR Position Statement on key issues. Open negotiations - keep all parties informed. Involvement of Insurance officers.	Med	High	Continuation of existing measures - attempt to bring political pressure brought to bear on NR - if it is felt they are being unreasonable.	OG	30/09/2006	

6	Strategic / Operational	Failure to agree on specific underbridge agreement issues - Development Land 3%	High	High	To obtain clarity on NR position - to check other similar agreements - eg LB Bexley. To obtain NR Position Statement on key issues. Open negotiations - keep all parties informed. Obtain view on additional costs - look at possibility of contingency sums. Involvement of Senior officers and Gov't Officials	Med	High	Continuation of existing measures - attempt to bring political pressure brought to bear on NR - if it is felt they are being unreasonable.	OG	30/09/2006
7	Strategic / Operational	Failure to agree on specific underbridge agreement issues - Timetable for agreeing & signing underbridge agreement	High	High	To keep up the pressure on NR - to obtain clarity on NR position on all issues -to obtain NR Position Statement on key issues. Progress negotiations as fast as practicable - identify difficulties early - put in place strategy to deal with them as above	High	High	Continuation of existing measures - attempt to bring political pressure brought to bear on NR - if it is felt they are being unreasonable.	OG	30/09/2006
8	Strategic / Operational	NR delay in providing Feasibility Study information -- Status & design of the two bridges · Programme to completion of Project · Forms A and B · Proposed headroom of bridges 5.3m · Consequences of diverting utilities and reconstructing Aerodrome Road after the installation of the bridges.	High	Med	To keep up pressure on NR to deliver the outstanding information, telephone calls, letters. To try and establish good relations with NR. To ensure their buy in to the Project. To ensure everyone knows they will be held responsible if they fail to deliver.	Med	Med	Continuation of existing measures - attempt to bring political pressure brought to bear on NR - if not delivering.	Sub Group (SG)	31/07/2006
9	Strategic / Operational	Flawed timetable construction. Tenders invited prior to design issues completed - giving rise to serious procurement issues - shortage of steel - need to place order one year in advance.	High	High	To ensure there is clear buy in from all parties to all timetabling decisions taken. Ensure tenderers are aware on the basis on which they are bidding. To delay the tender process until after Xmas - when design process near completion. Examine other options- only go out to tender with one contractor supplying steel work & installing it- complete substructure design during tender& negotiate with contractor any changes to substructure. Benefits - one contractor for both steel work & civils (no arguments with steel work not filling during rail possession. Appointment of separate contracts - one for steel works and one for civils works - possible problems with rail possessions.	Med	Med	Continuation of existing measures, obtain buy in from all key parties. Use post tender negotiation to deal with variations. Use NEC contract conditions to further reduce this risk.	OG	28/03/2008

10	Strategic / Operational	Timetable overrun, fail to appoint contractor to carry out the works in time as a result of waiting until design process completely signed off.	High	High	To ensure there is clear buy in from all parties to all timetabling decisions taken. To bring forward the tender process to January 2006 - when design process near completion. Examine other options. Transfer risk to D & B Contractor to submit & negotiate with NR.	Med	Med	Continuation of existing measures, obtain buy in from all key parties	OG	28/03/2008
11	Strategic / Financial / Operational	Insufficient money to cover Procurement and Construction costs	High	High	Cost analysis clearly set out - all risks identified, contingencies in place if overruns occur.	Med	Med	Close monitoring of all costs - regular updates to OG. All parties kept informed - strategy in place to seek further funding from Council / govt or other new S106 monies eg hospital site.	OG	28/03/2008
12	Strategic / Operational	Consultants fail to deliver appropriate design / tender documentation etc	Med	Med	Evaluation process to identify suitable experienced companies and individuals. Regular monitoring of consultants work, quality reviews	Low	Med	Continuation of existing measures	OG	28/03/2008
13	Strategic / Financial / Operational	Impact of failure on Regeneration / transport issues	Med	High	Close liaison with relevant departments to identify effects of failure and to put in place contingency plans to deal with them.	Low	Med	Continuation of existing measures	OG	28/03/2008
14	Strategic / Operational	CABE - unwilling to approve design - puts question mark over funding by GoL	Low	Med	To begin early consultation with CABE and get them on board - seek in principle approval to designs at early stages	Low	Med	Continuation of existing policy.	OG	28/03/2008
15	Strategic / Operational	Design Process - delays arising from Form A issues	Med	Med	To proactively identify potential difficulties. Take remedial steps to address them in consultation with relevant parties, esp NR.	Low	Med	Continuation of existing policy.	OG	28/03/2008
16	Strategic / Operational	Design Process - delays arising from Form B issues	Med	Med	To proactively identify potential difficulties. Take remedial steps to address them in consultation with relevant parties, esp NR.	Low	Med	Continuation of existing policy.	OG	28/03/2008
17	Strategic / Reputation/ Operational	Enabling Works delays	Med	Med	Production of good tender documentation. Conduct good tender process. Appoint suitably qualified Contractor.	Low	Med	To proactively monitor the Contractors work. To put in place early warning signals for problems	OG	28/03/2008
18	Strategic / Reputation/ Operational	Failures in procurement of appropriate steel superstructure contractor & mains civils contractor	Med	High	Production of good tender documentation. Conduct good tender process. Appoint suitably qualified Contractor.	Low	Med	To proactively monitor the Contractors work. To put in place early warning signals for problems	OG	28/03/2008
19	Operational / Reputation	Failures to carry out the work within Rail Possession times	Med	High	Ongoing liaison with NR - proactive monitoring of timetable. Keep all parties informed of issues	Low	Med	Continuation of existing measures	OG	28/03/2008
20	Operational / Reputation	Over runs in possession times	Low	High	Thorough preparation and identification of potential difficulties - measures in place to deal with them, ongoing liaison between contractor, Client NR	Low	Med	Continuation of existing measures	OG	28/03/2008

21	Strategic / Operational	Separate contract for Aerodrome Road - lowering and widening - vfm issues - risks include bridge with substandard headroom. NR may not take ownership until c/w is lowered or impose additional restrictions. Benefits - allows utilities to be diverted after bridges constructed - reducing the closure time of Aerodrome Road.	Med	Med	Careful examination of timetabling and cost issues	Low	Med	Continuation of existing measures	OG	28/03/2008
22	Strategic / Regulatory	Combine Aerodrome Road contract with Main Contracts - timing issues	Med	High	Careful examination of timetabling and cost issues	Low	Med	Continuation of existing measures	SG	28/03/2008
23	Strategic / Operational	Delays - due to difficulties arising with utilities works	Med	Med	Timely dialogue with 3rd Parties / HA / Police / MI5 / Developers / Emergency Services / Land Owners - look at areas of difficulties / agree costs and programme of works, agree overall timetable with them	Low	Med	Continuation of existing measures	SG	28/03/2008
24	Operational	Construction of Embankments - current bridge design poses H/S issues due to ease of access to railway lines	Med	Med	Liaison with all relevant parties. Keep bridge abutment N/side and recreate bridge abutment S/side.	Low	Low	Continuation of existing measures	SG	28/03/2008
25	Strategic / Operational	Steel Works - delays - unable to deliver within 12 month timeline	Med	High	Ongoing dialogue - weekly basis with Steel suppliers - to know latest position	Med	Med	Continuation of existing measures	SG	28/03/2008