



**A324 DAWNEY HILL, PIRBRIGHT:
PIRBRIGHT ARCH PEDESTRIAN FACILITY
FEASIBILITY STUDY**

**SURREY COUNTY COUNCIL
LOCAL COMMITTEE (GUILDFORD)**

22nd MARCH 2007

KEY ISSUE

This report recommends inclusion of a scheme to improve pedestrian safety through Pirbright Arch into Minor Improvements list.

SUMMARY

A feasibility study of possible safety and access improvements for pedestrians using Pirbright Arch has been carried out. Two possible improvement schemes have been put forward. The recommended option is Option 2, which involves alterations to footways on each side of the arch, together with improved carriageway markings and signs.

Report by

LOCAL TRANSPORTATION MANAGER

Surrey Atlas Ref.

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GUILDFORD B.C. WARD(S)

PIRBRIGHT

**COUNTY ELECTORAL
DIVISION(S)**

WORPLESDON

OFFICER RECOMMENDATIONS

The Committee is asked to agree:

- (i) that Option 2 as set out in the report and Annexes be included in the Minor Improvements list for future funding.
- (ii) that the Committee welcomes and accepts the offer of £30,000 part funding of the scheme costs by Local Committee (Woking) and £10,000 Planning Gain offered by Councillor Mike Nevins on behalf of Guildford Borough Council.

INTRODUCTION and BACKGROUND

- 1 Following a meeting on 30th September 2005 attended by County Councillors Mike Nevins, Elizabeth Compton, Woking Borough Council Councillor Mr Phillip Goldenberg and officers of both Guildford and Woking Local Transportation Services, it was agreed that a study into pedestrian safety through Pirbright Arch should be carried out. This was funded by contributions from the Member Revenue Allocations of Cllr. Mike Nevins and Cllr. Mrs. Elizabeth Compton.
- 2 Surrey County Council's Traffic Systems group was commissioned by the West Area Transportation Service (Guildford) to carry out a feasibility study into options for and impacts of proposed improvements at the existing traffic signal controlled junction of A324 Pirbright Arch to provide a safer environment for pedestrians.
- 3 Following completion of the study a meeting was held with Councillors Mike Nevins, Elizabeth Compton and Phillip Goldenberg to discuss the outcome of the report. As a result a report was submitted to the Local Committee (Woking) on 28 February 2007 to seek their support and contribution towards this scheme. The Local Committee (Woking) report is attached as **ANNEXE 2**.
- 4 Following consideration of the report, the Local Committee (Woking) resolved:
 - (i) that the final decision on any proposals lies with the Local Committee (Guildford)
 - (ii) that the Local Committee (Woking) support improvements at Pirbright Arch (Guildford) with the following additions:
 - That warning signs are erected for motorists warning that there may be pedestrians in the road
 - That improvements are made to the lighting in the arch and the walls are painted up to the lighting on the pedestrian side of the arch
 - That improvements are made to the approach footways.

- (iii) that the Local Committee (Woking) would provide a financial contribution towards the cost of Option 2 with the additions noted in (ii) above to the value of £30,000.

5 With regard to item (ii) of the resolution:

- In respect of the signing, the proposed scheme already includes the signing being sought.
- The tunnel was painted up to approximately half of its height in 2005/06.
- The lighting was also improved in 2005/2006 and improvements to the drainage were achieved at the same time.

FEASIBILITY STUDY

6 The Feasibility Study report is attached as **ANNEXE 1**. Pedestrian and traffic surveys were undertaken including all turning movements using the roads either side of the arch.

7 The assessment of the operation of the current and modified signal arrangements was assessed using Linsig as the study tool. The results are indicated in the appendix to the feasibility study report.

OPTION 1

8 The first option proposes the introduction of a signalled pedestrian phasing through the Arch. To permit pedestrians to go through the arch in safety, an 'all red' phase to vehicles on all arms is proposed. Option 1 is shown on drawing number 3625-01 in **ANNEXE 1**.

9 Option 1 includes the following additional improvements.

- Relocation of the existing posts and erection of additional push-button units and pedestrian indicators.
- Kerbside call/cancel pedestrian indicators (as per Puffin type operation).
- Pedestrian on-crossing microwave detectors.
- Optionally, the provision of a Variable Message Sign activated by the signal controller to advise drivers that the pedestrian stage is operating.
- Alteration to footways at each end of the arch to accommodate waiting pedestrians.
- Carriageway markings to improve delineation between pedestrians and vehicles and to encourage pedestrians to keep within their designated space.
- General upgrading and refurbishment of existing signs and carriageway markings.

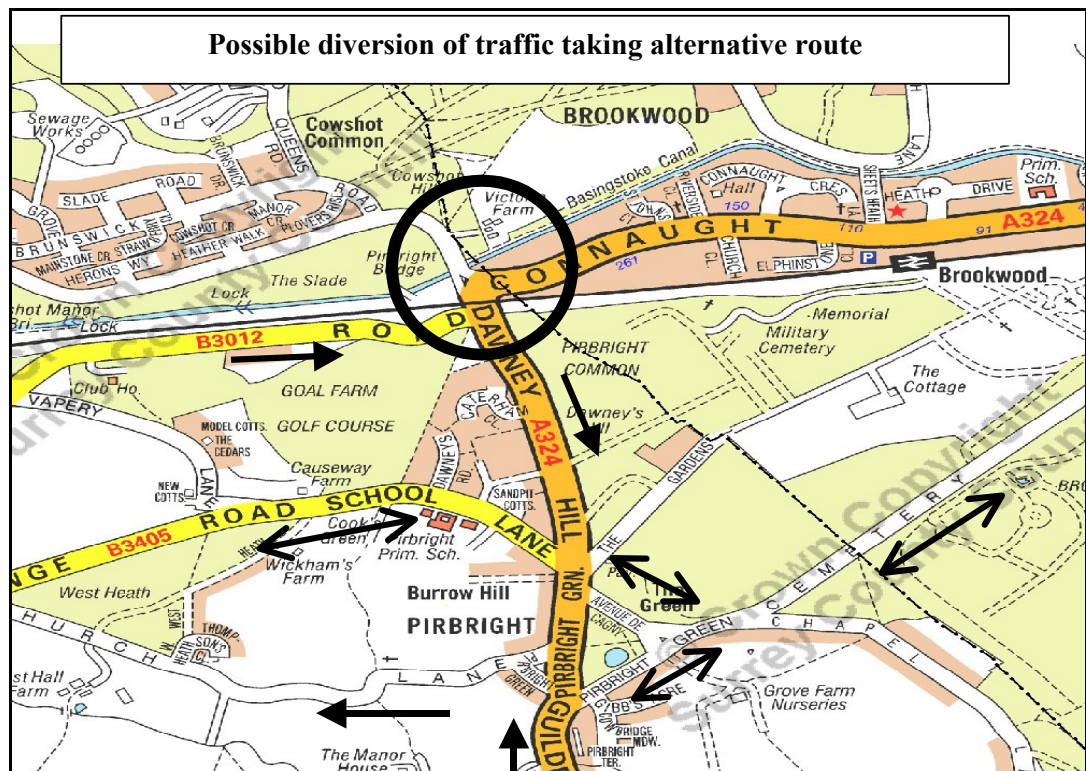
OPTION 2

- 10 Option 2 is the same as Option 1 in all respects except there is not the installation of a 'longitudinal Puffin Crossing'. Therefore, the existing 3-way traffic light control system would remain unchanged. Option 2 is shown on drawing number 3625-02 in **ANNEXE 1**.

IMPACT OF TRAFFIC ON PIRBRIGHT VILLAGE

- 11 There are advantages with both options, but also concerns. The potential impact of Option 1 on Pirbright Village is severe and the main beneficiary would be Brookwood Village. Option 2 has no real impact on either village, as set out below.

Option	Advantage	Concern
1	Improvement for pedestrians, at either end of Arch, improved 'walkway' with the protection of a pedestrian phase drainage and delineation line. Approach signing and lining improved.	<ul style="list-style-type: none"> ➤ Additional delays on all three traffic signalled arms predicted as up to 22 minutes in the am peak period. ➤ Delays will cause traffic to use other routes within the village. Traffic travelling to/from Farnborough and Frimley presently use Gole Road, However It is feared that following extensive delays of up to 22 minutes they would use less suitable road such as Church Lane and School Lane (the latter having been recently traffic calmed). ➤ Furthermore, traffic wishing to travel north along Dawney Hill to/from M3 and Bagshott, most likely would use Cemetery Pales to bypass the delay. Members will recall the recent controversy regarding the traffic calming of Cemetery Pales. ➤ In addition to the above due to possible delays and traffic queues there is likelihood of increase pollution and noise from stationary vehicles along Dawney Hill and Gole Road. There is also a possibility of red light violations at the signal due to lengthy delays. ➤ Does not contribute to the reduction Personal Injury Accidents, as there have been no such incidents reported since 2001. However, considering the concerns highlighted in relation to red light violations, it may result in such incidents occurring.
2	Advantages as 1 but without the pedestrian phase.	<ul style="list-style-type: none"> ➤ 'Walkway' to remains at 0.8m wide and Improvements to footway as shown on plan while improving the areas at entry to the Arch and providing dedicated area for pedestrian under Arch.



CONSULTATIONS

- 12 At this stage there has been no consultation with users of highway, businesses or local residents. Only County and Borough members of Guildford and Woking Borough Councils have been consulted. A full consultation will be required once an option has been agreed and funding made available.

FINANCIAL IMPLICATIONS

- 13 The estimated cost of Option 1 is some £116,000 and of Option 2 is some £80,000. £10,000 is available through the Section 106 process, and £30,000 through Local Committee (Woking) as noted above. These estimates do not include the cost of design, officer time or utilities' diversions, nor does it allow for inflation. Past experience indicates that as design progresses the estimated cost is likely to rise.

SUSTAINABLE DEVELOPMENT IMPLICATIONS

- 14 Option 1 would provide modest improvements for pedestrian safety while negative impacts on economic implications due to delays created. Option 2 would have no significant sustainability implications.

CONCLUSION AND REASONS FOR RECOMMENDATIONS

- 15 The pedestrian flow in the area and particularly through the Pirbright Arch is light even at peak periods, with maximum numbers recorded of just 20 and 29 morning and evening respectively. It should, however, be noted that the afternoon figure occurs at school time, about an hour before the evening traffic peak period. There is no history of personal Injury accidents

for the last 10 years.

- 16 The existing traffic signals are operating just over capacity during peak periods, due mainly to the considerable “Lost Time” required to provide the necessary clearance periods through the arch. However, peak hour traffic flows are relatively light and congestion and delay is manageable.
- 17 The pedestrian crossing signals associated with a controlled crossing are not mandatory and pedestrians would therefore not be required to wait for the “Green Man” pedestrian stage when all vehicular movements would be stopped. Anyone walking through the arch during a vehicular stage is likely to be at greater risk as motorists would be less likely to expect to encounter a pedestrian in the arch during a vehicle stage.
- 18 If the proposed signal and pedestrian arrangements were put in place as shown in Option 1 it is predicted that there would be an anticipated high incidence of non-compliance by pedestrians and this must be taken into consideration when considering the benefits of the additional pedestrian stage against the disbenefits in terms of additional traffic delay which is predicted by the Linsig model.
- 19 There is little doubt that pedestrian safety would be improved by the provision of a controlled pedestrian stage through the arch for those prepared to wait for the pedestrian stage to appear as Option 1, but there are also advantages in the improvements made using Option 2.
- 20 Regrettably, experience suggests that with such high signal cycle times the delay to pedestrians would be so great that many would be likely to walk through the arch during a vehicle stage rather than wait for the pedestrian stage to appear.
- 21 However, there are improvements to be made with Option 2 without the disbenefit of the predicted traffic problems.
- 22 With the above information in mind, together with the concerns set out in the table below paragraph 11 and the relative costs of the two options, it is recommended that Option 2 is adopted as an appropriate balance of improving the safety of pedestrians without producing severe delays to traffic and resulting displacement effects.

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BACKGROUND PAPERS	None

ITEM 11 : ANNEXE 2 - TEXT OF LOCAL COMMITTEE (WOKING) REPORT

PIRBRIGHT ARCH – FEASIBILITY STUDY

LOCAL COMMITTEE (WOKING)

28 FEBRUARY 2007

KEY ISSUE:

To consider two proposals for improved pedestrian access and safety within Pirbright Arch, Brookwood.

SUMMARY:

A feasibility study of possible safety and access improvements for pedestrians using Pirbright Arch has been carried out. Two possible improvement schemes have been put forward. The recommended option is Option 2, which involves alterations to footways on each side of the arch, together with improved carriageway markings and signs

CONSULTATIONS:

County Councillors Elizabeth Compton (Brookwood & St Johns), Mike Nevins (Pirbright) and Woking Borough Councillor Philip Goldenberg (Brookwood) have been briefed on the Feasibility Study.

OFFICER RECOMMENDATIONS:

The Committee is asked to agree

- (i) That the final decision on any proposals lies with the Local Committee (Guildford)
- (ii) That the Local Committee (Woking) support improvements at Pirbright Arch (Guildford)
- (iii) That the Local Committee (Woking) would provide a financial contribution towards the cost of Option 2 to the value of 50% of the final scheme costs.

INTRODUCTION and BACKGROUND

1. Surrey County Council's Traffic Systems group were commissioned by the West Area Transportation Service (Guildford) to carry out a Feasibility Study into considering options for and impacts of proposed improvements at the existing traffic signal controlled junction of A324 Pirbright Arch to provide a safer environment for pedestrians.
2. The existing pedestrian and traffic flows are indicated within the Feasibility Report as Annex A.

ITEM 11 : ANNEXE 2 - TEXT OF LOCAL COMMITTEE (WOKING) REPORT

ANALYSIS AND COMMENTARY

Feasibility Study

- 3 The Feasibility Study is attached as Annex A but a brief resume' of the report has been highlighted below.

Surveys

- 4 Pedestrian and traffic surveys were undertaken at the location including all turning movements using the roads either side of the arch.
- 5 The assessment of the operation of the current and modified signal arrangements was assessed using Linsig as the study tool. The results are indicated in Annex A Appendix 1.

Proposed Options

6. The Feasibility Study has evaluated two possible improvement options for pedestrians at the Pirbright Arch. However there are benefits and concerns with both options.
- 7 **Option 1** is to reconfigure the existing controller to provide a separate pedestrian phase as well as some additional improvements.
- Relocation of the existing posts and erection of additional push-button units and pedestrian indicators.
 - Kerbside call/cancel pedestrian indicators (as per Puffin type operation).
 - Pedestrian on-crossing microwave detectors.
 - Optionally, the provision of a Vehicle Message Sign activated by the signal controller to advise pedestrian stage operating.
 - Alteration to footways at each end of the arch to accommodate waiting pedestrians.
 - Carriageway markings to improve delineation between pedestrians and vehicles and to encourage pedestrians to keep within their designated space.
 - General upgrading and refurbishment of existing signs and carriageway markings.
- 6 **Option 2** has the same improvements as Option 1 except there is not the installation of a 'longitudinal Puffin Crossing'. Therefore, the existing 3-way traffic light control system would remain unchanged.
- 7 Both options are indicated within the Feasibility Study Report in Annex A as Drawing Numbers 536001 01 and 536001 02 located in Appendix 3. There are advantages with both options, but also concerns.

Option	Advantage	Concern
1	Improvement for pedestrians, at either end of Arch, improved 'walkway' with the protection of a pedestrian phase drainage and delineation line. Approach signing and lining improved.	Additional delays on all three traffic signalled arms predicted as up to 22 minutes in the am peak period. Delays will cause traffic to use other routes, most likely Cemetery Pales
2	Advantages as 1 but without the pedestrian phase.	'Walkway' still remains at 0.8m wide and traffic can be intimidating when stuck between brick wall and vehicle

ITEM 11 : ANNEXE 2 - TEXT OF LOCAL COMMITTEE (WOKING) REPORT

- 8 With the above table in mind, it is recommended that Option 2 is adopted as a 'balance' of improving the environment for pedestrians without compromising severe delays to traffic and therefore creating additional problems within the vicinity as well as on other local roads such as Cemetery Pales.

FINANCIAL IMPLICATIONS

- 9 The estimated cost of the Options are A £116,000 and B £80,000. Details of the breakdown of these costs are indicated in Annex A section 7.1 and 7.2. £10,000 is available through the Section 106 process which will enable the Local Transport Plan costs to be reduced by this amount.
10. However, as the location for the scheme is within Guildford, it is for the Local Committee for Guildford to dictate the final outcome for this scheme. The Local Committee for Woking may wish to support the scheme options with or without funding from its Local Transport Committee budget, but it is recommended that any commitment in funding by Woking should not be in excess of 50% of the total costs as indicated in section 7.1 and 7.2.

SUSTAINABLE DEVELOPMENT IMPLICATIONS

11. The improved accessibility through the Arch using Option 1 or 2 should make it feel safer for pedestrians to use, especially in the case of Option 1. This may encourage additional pedestrians to use the Arch instead of driving, which is in keeping with the County Council's Local Transport Plan (LTP) targets and indirectly the developing Climate Change Agenda.
12. However, the additional delays to traffic waiting at the traffic signal junction go against the LTP targets in the form of added congestion.

CRIME & DISORDER IMPLICATIONS.

13. Both Options improve the safety of pedestrians using the Arch. However the existing lighting is good and no personal injury accidents have occurred within the Arch over the past three years.

EQUALITIES IMPLICATIONS

14. The improvements will assist with all pedestrians especially the school children the elderly and disabled users, as it will be easier to access the Arch providing freedom of movement to facilities either side of the railway line.

CONCLUSIONS AND REASONS FOR RECOMMENDATIONS

15. The pedestrian flow in the area and particularly through the Pirbright Arch is light even at peak periods, with maximum values recorded of just 20 and 29 morning and evening respectively. It should, however, be noted that the afternoon figure occurs at school time, about an hour before the evening traffic peak period.
16. Pedestrians walking through the arch are encouraged to use the 0.8m edge margin provided on the west side of Connaught Road, but there is insufficient width for construction of a formal footway, particularly as it could not accommodate two pedestrians passing. As it is, when this occurs there is no alternative to one party stepping out into the designated carriageway as gaps in traffic permit in order to pass by. A kerbed footway would present a significant trip hazard.

ITEM 11 : ANNEXE 2 - TEXT OF LOCAL COMMITTEE (WOKING) REPORT

17. The environment is clearly unsuited to sharing pedestrian and vehicular use and is only sustainable due to the very low pedestrian usage.
18. There is little doubt that pedestrian safety would be improved by the provision of a controlled pedestrian stage through the arch for those prepared to wait for the pedestrian stage to appear as Option 1, but there are also advantages in the improvements made using Option 2.
19. The pedestrian crossing signals associated with a controlled crossing are not mandatory and pedestrians would therefore not be required to wait for the "Green Man" pedestrian stage when all vehicular movements would be stopped. Anyone walking through the arch during a vehicular stage is likely to be at greater risk as motorists would be less likely to expect to encounter a pedestrian in the arch during a vehicle stage.
20. Regrettably, experience suggests that with such high signal cycle times the delay to pedestrians would be so great that many would be likely to walk through the arch during a vehicle stage rather than wait for the pedestrian stage to appear.
21. The existing traffic signals are operating just over capacity during peak periods, due mainly to the considerable "Lost Time" required to provide the necessary clearance periods through the arch or competing traffic demands. However, peak hour traffic flows are relatively light and congestion and delay is just about manageable.
22. If the proposed signal and pedestrian arrangements were put in place as Option 1 it is predicted that there would be an anticipated high incidence of non-compliance by pedestrians and this must be taken into consideration when considering the benefits of the additional pedestrian stage against the disbenefits in terms of additional traffic delay which is predicted by the Linsig model.
23. However, there are improvements to be made with Option 2 without the disbenefit of the predicted traffic problems.
24. It should also be noted that a full consultation with the public and local businesses etc has not taken place and if this scheme were to proceed under either option, the views/comments of the local highway users would also need to be taken into account at a later stage.
25. Options 1 and 2 have been assessed using the rating system adopted by the County Council during the 2005/06 financial year. Neither scheme is currently within the Guildford LTS work programme, and the earliest date for construction is likely to be during or beyond the 2009/10 financial year.