

South Bucks Local Development Framework

Transport Paper

East of Beaconsfield Area

March 2010

Transport for Buckinghamshire

Buckinghamshire County Council

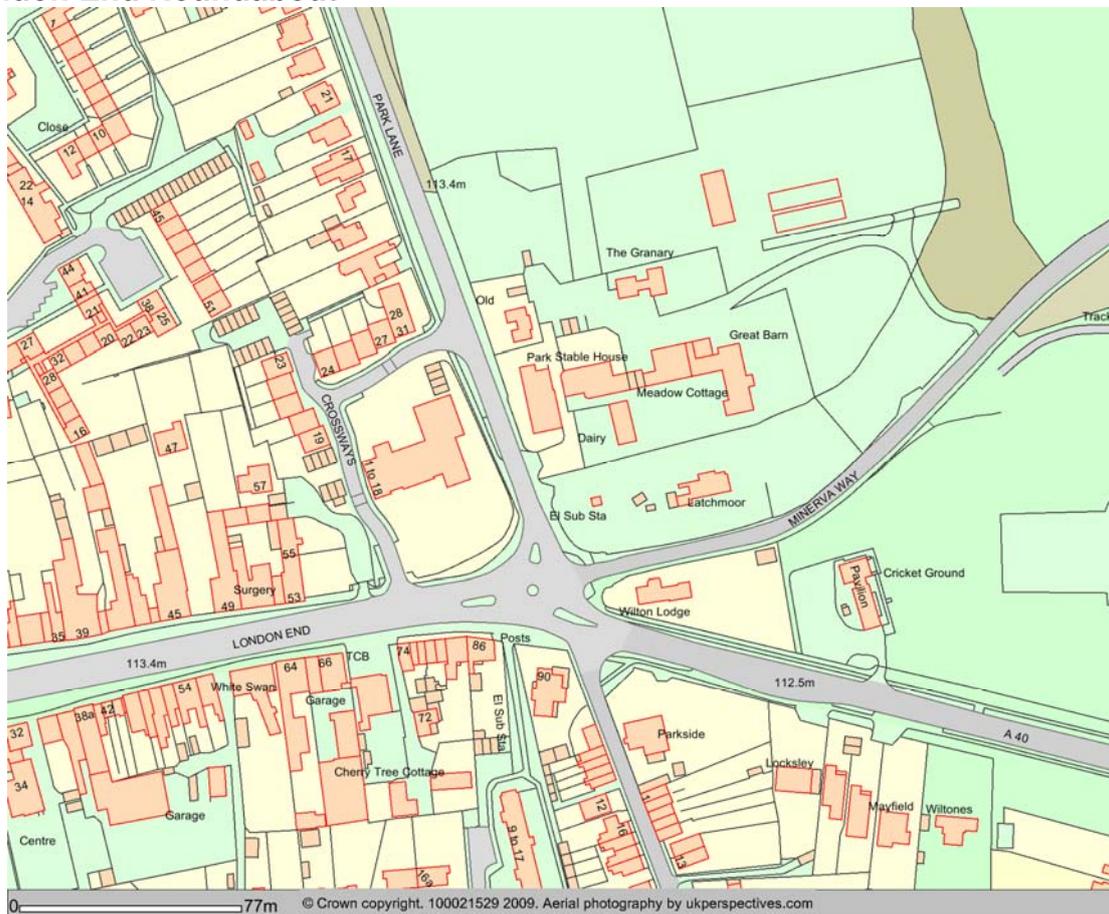


Transport Paper - East of Beaconsfield Area

1. Introduction to Beaconsfield

Beaconsfield is the largest settlement within South Bucks District. It is a prosperous, attractive market town. It consists of three main areas: the Old Town, which is along the A40; the New Town centred on the railway; and Holtspur, a post-war residential development on the town's western edge. Beaconsfield has attracted more development than other settlements in the District, with such developments spread throughout the town on a number of small and medium scale sites. Comparative to the other settlements in the District Beaconsfield has good infrastructure including a range of shops, healthcare services, secondary and primary schools. The town has good transport services with regular buses to neighbouring towns such as High Wycombe, Gerrards Cross and Amersham, and also to transport and employment centres outside of Buckinghamshire such as Slough, Uxbridge and Heathrow. These routes also connect different parts of Beaconsfield to the town's centre. The M40 provides a primary route to both London and High Wycombe. The A40 provides a link, parallel to the M40, towards High Wycombe to the north west, and Gerrards Cross to the south east. The A355 links Beaconsfield to Slough in the south, and Amersham and Aylesbury in the north. There are some congestion hotspots on these primary routes as well as on some of the intra-urban roads within the town. Beaconsfield is on the Chiltern line between High Wycombe and London, Marylebone. This service provides frequent and convenient rail links to key employment areas.

2. London End Roundabout



The London End roundabout is located to the east of the old town, where the A40 going from the east to the west meets the A355. Both roads have significant numbers of vehicles

travelling on them, and as such this roundabout is the most susceptible junction in Beaconsfield to traffic delays.

The London End roundabout is a 4 leg roundabout (it can be mistaken as a 5 point roundabout as Lakes Lane feeds into the A40 very close to the roundabout). The pattern of traffic movements change in the am and pm peak, however the predominant traffic flow is from the London Road arm of the roundabout. There are relatively high traffic volumes on the three principal arms of the junction: London Road, London End and Park Lane.

During the last 10 years there have been several transport studies that have involved the collection or analysis of data regarding the London End Roundabout¹. Much of that data is now quite old in transport modelling terms, however the evidence points to the London End roundabout being near or at capacity at peak times. There are significant queues at 3 of the arms sometimes stretching to over 800 metres long. This means that there is a considerable delay to vehicles wanting to use the roundabout.

The data presented in the transport studies support the conclusion that there will be an increase in traffic during the LDF's lifespan. As such it is likely that demand at the roundabout will increase and therefore the roundabout will be over-capacity and queues will lengthen. The origination and destination of the traffic using the roundabout is not known and more information on this and other aspects of the traffic movements would assist in further consideration of the issue. Buckinghamshire County Council would support a study to obtain this information and through the DaSTS study process is lobbying for a study to be done in this area.

The challenges regarding capacity at the London End Roundabout have already been recognised in the 2nd Local Transport Plan (LTP2). This roundabout was ranked number 13 out of 19 congestion 'hot spots' within the County and there are several 'non-infrastructure' sustainable transport interventions that could either reduce the numbers of vehicles using that roundabout or increase the capacity of the roundabout.

LTP2 laid out several measures for reducing congestion, these include:

- Prioritising the use of the road network
- Identifying priority corridors for congestion management
- Eliminating bottlenecks
- Minimising delays and disruption
- Achieving modal shift
- Reducing the need to travel

Where appropriate these measures are being worked on or will be considered in the future to reduce the congestion at the London End roundabout.

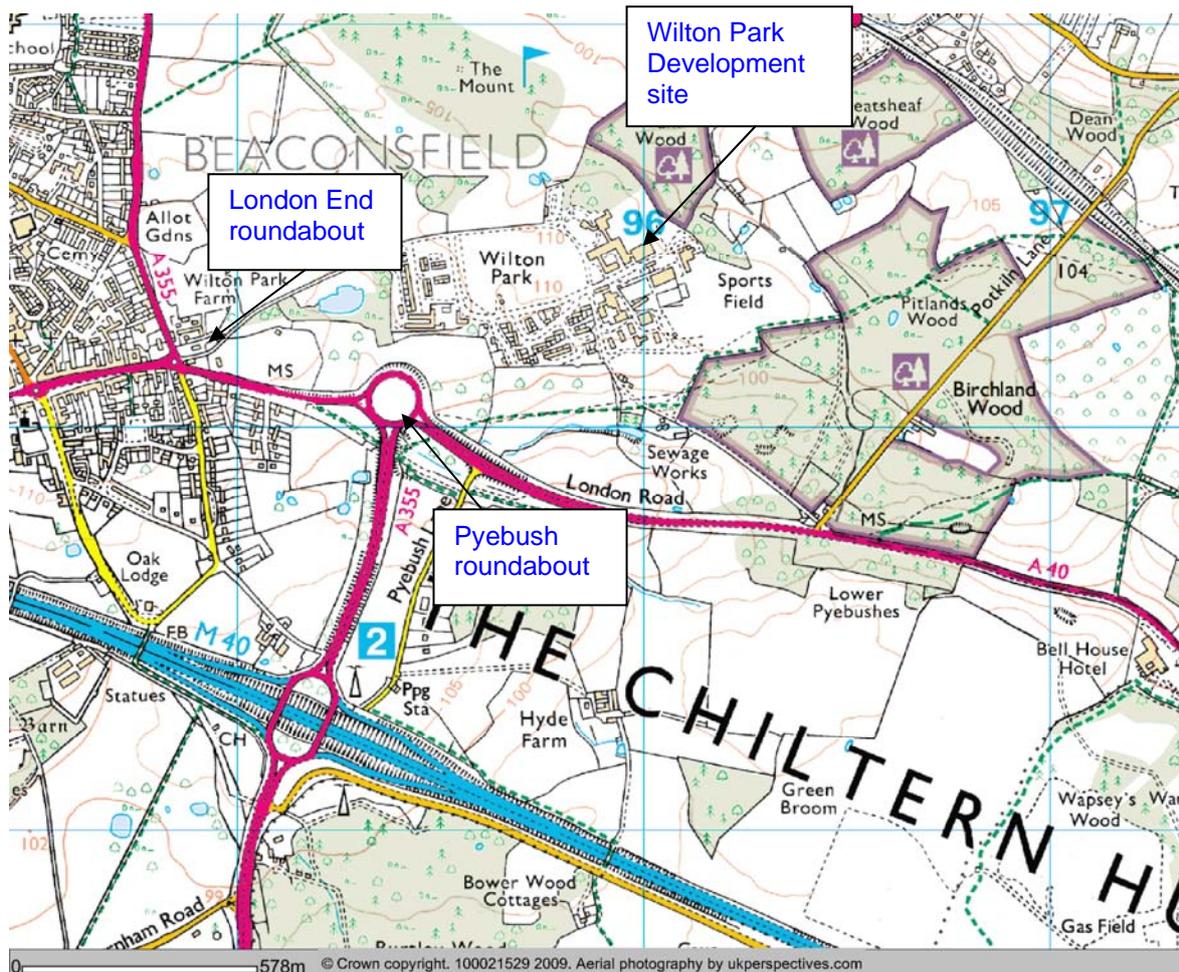
LTP2 stresses that the importance and potential of effective management of the existing network to keep traffic moving and maximise travel capacity, promoting genuine and credible alternatives to the car to achieve modal shift and managing demand and reducing the need to travel. There is an acceptance though that a balanced strategy effectively delivers against economic, social and environmental objectives will still require some new transport capacity.

¹ Beaconsfield Transport Strategy , Draft Appendices, Colin Buchanan, Sept 2002
A40/A355 Beaconsfield Junction Signalisation Report, Babbie, Feb 2004
Draft Evaluation of transport Impacts, Atkins, January 2010

In the 2008 Buckinghamshire County Council's Development Control Team did a transport assessment of all the possible development options for the South Bucks Core Strategy. In the transport assessment of a redeveloped Wilton Park concerns were raised over the safety of the London End roundabout: 'there are already safety concerns at this 5 leg roundabout and additional traffic is not desirable. Overall a relief road from Pyebush roundabout to join the A355 is considered more appropriate'.

The physical restraints of the area, such as the proximity of housing and privately owned land as well as the road layout, mean that the junction capacity cannot be radically improved at this point through increasing the size of the roundabout or widening the approach roads to the junction. Therefore, alternative routing and access solutions, including a relief road option need to be considered.

3. Wilton Park Development



Wilton Park covers about 40 hectares of land. It currently consists of the Defence School of Languages, associated Ministry of Defence residential accommodation and open space and indoor and outdoor recreational facilities. Wilton Park lies to the north of the A40 and to the east of the A355, both of which form part of Buckinghamshire's strategic highway network. Private land surrounds Wilton Park, with farmland and recreation facilities including Beaconsfield Cricket Club and allotments, cutting the site off from Beaconsfield. The current access to Wilton Park is via Minerva Way from the London End roundabout.

The Ministry of Defence has indicated that part or all of the site is likely to be declared surplus to requirements during the plan period. This site could potentially be developed for a mixed use scheme involving residential, employment and recreational uses; and community uses if viable. Depending on the amount of land released, the site could accommodate around 300 net new dwellings along with about 10,000 sq.m. of new B1 employment floorspace (within the constraints of the site remaining in the Green Belt). The precise scale and proportion of uses would be subject to more detailed assessment at the time that the site comes forward.

4. Options for Access to Wilton Park:

To provide access for even minimal development at Wilton Park, improvements will be required to overcome this segregation from Beaconsfield town by all modes. A number of different options have been identified that could also help ease road over-capacity as well as provide access to a redeveloped Wilton Park .

Further to the suggestions posed in the options below, improvements to both walking and cycling links would be required. This should include exploring options for a safe and attractive pedestrian and cycling link to the Seer Green and Jordans train station, possibly located at the northern most point of the site. There would also be a need to introduce safe crossing points across the A355 to improve access to Beaconsfield by walking and cycling. In view of this there is an expectation that where physically possible pedestrian and cycle crossings will be provided. The location of these facilities will be dependent on the access option realised.

There are several buses stops within 500m from the Wilton Park development site which are served by regular bus services. It may be possible to divert some of these services into the Wilton Park development, however, any extension or change to the bus services will have to be agreed with the bus operators and supported financially by the development. All the services mentioned are run by commercial operators and as such any changes are subject to negotiation with the operators.

Costings were prepared for Option 4 (as outlined below) in 2001, however these are no longer considered to be appropriate. Assumptions regarding current costs have been made on the basis of this original work, however no updates have been undertaken and therefore more refined costing information has not been included.

The following presents five high level, broad options to enable improved access to Wilton Park in order to facilitate its development as well as enhancing the capacity of the strategic highway network:

Option 1: Keeping the Status Quo

This option refers to keeping the access to Wilton Park as it currently is (i.e. continuing to utilise the single access onto London End roundabout - via Minerva Way).

The floorspace on the existing Ministry of Defence (MoD) site is currently under utilised therefore not attracting the same need for access that there would be if the site was being used to its full capacity. Even if the MoD site was better utilised, it is very unlikely that the number of trips generated will be equivalent to the trips generated by future proposed redevelopment and therefore access improvements or changes will almost certainly be necessary.

There is a long queuing time for vehicles on the Minerva Way arm of the roundabout in proportion to the numbers of vehicles waiting. Therefore if Wilton Park traffic were to increase this would further increase the pressure on London End roundabout and queues within the site.

There are safety concerns over keeping the London End roundabout as it is, particularly if it continues to provide the main access to a redeveloped Wilton Park. The Transport

Development Control Team from Transport for Buckinghamshire has assessed the access to Wilton Park and have concluded that '[f]urther intensification of [the] roundabout is not desirable [...] Any development on Site A [Wilton Park] will require access off Pyebush roundabout. Access for general traffic using the current access on Minerva Way would not be acceptable'. Therefore if the use of Minerva Way was intensified then there may be increased demand on the roundabout from a particular arm that currently does not provide much demand. This will intensify the use of an already busy roundabout which would have implications for road safety.

Feasibility/Deliverability

Whilst keeping the status quo does not have any capital costs, there are indirect costs connected to congestion; costs to quality of life for residents, increases in carbon emissions and costs to the economy. The safety concerns over the need for increased access to Wilton Park from the London End Roundabout highlight that it is not appropriate to keep the status quo as an option. The traffic data and traffic modelling suggest that London End Roundabout in its present form is unsuitable to be able to properly address future growth in traffic and to offer the access to a redeveloped Wilton Park, and as such this suggests that a new access to Wilton Park is required if the London End Roundabout was to stay as it is at present. As such this option is not appropriate for the additional traffic that a redeveloped Wilton Park may generate.

Option 2: Signalising the London End Roundabout

Taking into account the Wilton Park development, the Beaconsfield Transport Study suggests one option could be to signalise the London End roundabout. This was investigated further by Babbie in 2004.

Their findings predominately concurred with the results of the Beaconsfield Transport Study. They found that there is significant vehicular queuing at the end of the peak hour to access the roundabout on both Park Lane and London Road, although no queuing was observed on Minerva Way. During the off peak period the roundabout remained busy with queuing very short, with a maximum observed queue of approximately 6 vehicles on any of the approaches to the roundabout. The junction appeared to work well during the off peak period, but the speed of traffic appeared to be high and pedestrians were observed to have difficulty in crossing the road as a result of constant vehicular movements and the speed of vehicles.

The London End roundabout was originally designed as a mini-roundabout. Since then design standards have altered and the existing roundabout does not comply with current conventional mini roundabout designs. Accordingly, in comparing a normal roundabout, a mini roundabout and signalisation, the Babbie report found that whilst actual traffic demand will exacerbate the queuing for both junction types, the signalisation would actually provide the worst case scenario as the analysis shows that the signal junction layout tested as part of the study would have less capacity than the existing roundabout.

The Babbie report concludes that at the London End junction the roundabout method of control should be maintained. It recommends several improvements such as the realignment of the splitter islands, improved signing and white lining to improve safety at the junction as '[i]mprovements to the capacity of this junction are likely to reduce the vehicular queuing that currently exists at this location during the peak hour periods'. The signing and road markings have been improved in recent years, although there have been no changes to the alignment of the splitter islands. Although these changes may increase

the capacity of the roundabout incrementally, it would not be enough to have a significant impact on the length of queues as the demand for the roundabout in the future is still forecast to exceed its capacity.

Feasibility/Deliverability:

As mentioned in option 1, above, the roundabout is deemed unsuitable in its present form to be the access to Wilton Park. The Babtie report has shown that signalisation of the junction would not improve capacity and the best that can be done to the roundabout is to improve its safety by suggested improvements. As such signalisation of the London End junction is not enough to enable the main access to a redeveloped Wilton Park to be off the London End roundabout as well as to address the increase in the volume of traffic at the junction as it would reduce capacity. It would also exacerbate the queuing at the junction during peak times. A signalised London End junction can therefore be discounted as an option, particularly if Minerva Way remains as the primary access to the Wilton Park site.

Option 3: Access to Wilton Park from the Pyebush Roundabout

This option involves providing vehicular access to Wilton Park via a new road from the Pyebush Roundabout. This would then result in Minerva Way becoming a cycle, pedestrian, emergency and possibly bus access instead. Whilst two of the other options (4 & 5) require access onto the Pyebush roundabout, this option is looking at a road from the Pyebush roundabout solely for accessing Wilton Park rather than providing a through route for other vehicles.

Access from Pyebush roundabout (or possibly another access point to the south of the site) is the minimum requirement to access Wilton Park, as Minerva Way is not deemed adequate to support the increased traffic movement brought about by a redeveloped Wilton Park. It would provide adequate means of accessing Wilton Park and would mean that there would be quick access to the M40 to and from the development. It should be noted that if only access is provided to the Wilton Park development, then north and westbound traffic will still have to go round the London End roundabout and as such there will be an increase in traffic due to the generated trips to and from Wilton Park. Wilton Park will still therefore impact on the London End roundabout, although the precise level of impacts would depend on a number of factors such as the scale and balance of development. Further work would be needed to determine this once these are clearer.

Access from Pyebush roundabout does not address the concern of social inclusion for the residents of the Wilton Park development although the use of Minerva Way for non car modes would improve this. Accessibility would still be a concern within the site and there would be a need for local community facilities, if viable, to be on site.

As with the later options presented in this paper there is an issue surrounding the private ownership of the land which separates Wilton Park and the Pyebush roundabout. To enable access from Pyebush roundabout this would need to be resolved.

If the development were to be much greater than 300 units and 10,000 sq.m. of B1 employment, then the Transport for Buckinghamshire's Transport Development Control (TDC) team considers two accesses would be required into the site.

Feasibility/ Deliverability:

Currently costs for this option are unknown but it is important to note that land acquisition may form a large part of this option’s costs. A new access, preferably from the Pyebush roundabout, is a pre-requisite for the redevelopment of Wilton Park and accordingly it will be essential that the owners enter into fruitful discussions with adjacent landowners.

Although an access off the Pyebush roundabout is the most realistic option there may be other access options to the south of the Wilton Park site, further work would need to be done by a developer to see if there would be other feasible access opportunities from the south.

Although the access to Wilton Park is from Pyebush rather than London End roundabout a proportion of the trips created by the Wilton Park development will still be via the London End roundabout (such as into the centre of Beaconsfield). As already mentioned, all the studies agree that the roundabout is already close to capacity, especially at peak times. With an increase in traffic over the Core Strategy Plan period the roundabout will go above capacity. There will almost certainly be a slight increase in the flow of vehicles through London End roundabout resulting from development at Wilton Park. Although this flow may not be considerable at a strategic level at peak hours any extra pressure resulting from the Wilton Park redevelopment may be significant.

Option 4: Full Relief Road



The red and yellow lines on this map show the current improvement lines are for Wilton Park.

There are currently two separate improvement lines retained within Buckinghamshire County Council's Improvement Line Review 2007, subject to the development of Wilton Park:

- North-west from Pyebush roundabout passing to the west of the lake meeting the A355 Amersham road at its junction with Maxwell Road (SB-NR-01 New Road) the yellow line on the map above.
- North from Pyebush roundabout passing to the east of the lake meeting the A355 Amersham Road at its junction with Maxwell Road (SB-DCL-01 Development Control Line) The red line on the map above (please note the thickness of the lines on the map is to demonstrate that they are different improvement lines rather than meaning that one road would be wider than the other).

The Beaconsfield Transport Study (2003) forecast that a full relief road as demonstrated by the two improvement lines above would relieve the London End roundabout to a great degree.

The relief road would provide ample opportunity to ensure that there are access points for the emergency services.

During consultation for the Beaconsfield Transport Study there was a mixed reaction to a full relief road from residents as there were significant concerns about the inevitability of infill development on the land between the land between the A355 Park lane and a relief road.

A relief road would alleviate the traffic from the residential area on both the west and east sides of Park Lane as it would take traffic off Park Lane. It would also give relief to the London End roundabout by redistributing north-south traffic.

When the site was being considered originally Transport for Buckinghamshire's DC team queried the form and function of the road, highlighting that thought would have to be given to whether it would be primarily a relief road for Beaconsfield or an integrated road for the Wilton Park redevelopment. There was also concern that a relief road would sever the development from the main settlement, accentuating the accessibility difficulties already partly caused by the A355 and the A40. Severance, however, is not an insurmountable barrier as severance could be designed out of the road through approaches such as 'shared space'.

Such approaches to reduce severance would have an impact on the nature of the road, for instance if a 'shared space' concept was used this would mean that vehicle speeds would have to be restricted and the use of the road as a 'relief' road would then possibly be impaired.

A full relief road does not address the concern of isolation for the residents of a developed Wilton Park. Although Minerva Way could still provide cycling and pedestrian as well as emergency and possibly bus access to Wilton Park, accessibility would still be a concern. This could be overcome by the provision of services and facilities within the site and mitigation of the effects of possible severance. A full relief road would provide an opportunity to introduce better pedestrian facilities at the London End roundabout, since the junction will probably accommodate significantly lower traffic volumes.

Deliverability:

Based on the 2001 costings work this option would be the most expensive option, and a development of 300 homes at Wilton Park is very unlikely to be able to support the full costs of a full relief road. Such a scheme would be very unlikely to attract funding from Central Government as discussed below. As there are concerns about how deliverable it is for a small development to support such a scheme, other funding sources would need to be found, for example a Community Infrastructure Levy (CIL).

Option 5: Short Relief Road

A short relief road would relieve the pressure from the London End roundabout with traffic that is travelling north/south along the A355, however it would not be as long as the full relief road and would instead take the form of an 'off-line roundabout'. There is not currently an improvement line for a short relief road, but if suitable the southern part of such a route could broadly follow the line of one of the existing improvement lines. This option may be cheaper than a full relief road, and yet will still redistribute traffic from the London End roundabout as well as provide access to Wilton Park. However it is questionable that a small development of 300 houses would be able to support the costs of the full scheme.

A short relief road raises some of the same concerns as option 4's full relief road, for instance it may aggravate the sense of severance between the main settlement and the Wilton Park development. Buckinghamshire County Council thinks that the design of the road is particularly important and thought would therefore have to be given to the form and purpose of the road. If the main purpose of the road is to relieve the London End roundabout then a 'shared space' may not be appropriate as traffic speeds would be too high to make this practical. If however the main purpose of the road is to provide access to Wilton Park then concepts around shared space may be more easily applied and Wilton Park can be integrated in Beaconsfield to a greater degree, therefore causing less severance with the rest of community. With either option 4 or 5 Minerva Way could still be used as a pedestrian and cycle access to Wilton Park, however accessibility would still be a concern, and consideration would have to be given to the provision of facilities and services within the development.

There would also be a risk that residents would be concerned over 'in-fill' development between the old road and the new road, reassurance would have to be provided that this would not be the case. This reassurance is provided by the 'in-fill' land not being allocated in the Core Strategy as a contingency site for future housing development.

Feasibility/Deliverability

Although costings for this option are unknown at this time it is assumed this option would be less than a full relief road but greater than the other options. It is important to note land acquisition may increase the costs of this option substantially. The nature of this option means that there is a possibility that it can be done in stages and still provide an effective access road to Wilton Park.

5. Funding and Transport

In considering the options for how to resolve the issues of improving access to Wilton Park in the event of its redevelopment, local, regional and national transport policy needs to be acknowledged.

As already mentioned, LTP2 emphasises the importance of effective management of the existing network. This includes keeping traffic moving and maximising traffic capacity, promoting alternatives to the car to achieve modal shift, managing demand and reducing the need to travel. However there is an acceptance that a truly balanced strategy that effectively delivers against economic, social and environmental objectives will still require some new transport capacity.

This acceptance aside, because of the scale of any future solution, funding will need to be found from external sources. This is because it is highly unlikely that new development at Wilton Park (of the type and scale outlined in section 3, would have sufficient development value to deliver a full or shorter relief road on its own. Much would depend on whether the whole of Wilton Park is released or just part of the site, and indeed the timing of the release. There is a possibility that the Ministry of Defence will decide not to release the site at all.

One option would be to consider the submission of a major scheme business case to Central Government. For any such bid to stand a chance of receiving funding it would need to be prioritised by the South East England Partnership Board; accord with its policies as laid out in the South East Plan, 2009, and be of regional significance.

Section B8 of the South East Plan covers transport policy for the region. Policy T1 is of most salience to a potential Beaconsfield relief road and maintains that the transport system is a resource that has a finite capacity. Only when all efforts and options have been explored to manage the network we already have, can any upgrading of the transport system be considered. Any upgrading will be prioritised to support delivery of the spatial strategy by:

- Supporting the function of the region's international gateways and inter regional movement corridors.
- Developing the network of regional hubs and spokes.
- Facilitating urban renewal and urban renaissance.
- Improving overall levels of accessibility.

The A355 and the A40 at Beaconsfield are not deemed to be interregional corridors or regional spoke by the South East Plan. Furthermore it is difficult to envisage an option to access the developed Wilton Park that may facilitate urban renewal and renaissance. It is therefore highly unlikely that a major scheme bid for a Beaconsfield relief road would be successful in the current policy climate, although it is possible that this could change in the longer term, for example if national priorities change.

A Community Infrastructure Levy (CIL) may be another way for development within South Bucks to contribute to a relief road in Beaconsfield. CIL is a new charge by which local authorities are empowered to charge on most types of new development in their area. CIL charges will be based on simple formulae which relate the size of the charge to the size and character of the development paying it. The proceeds of the levy will be spent on local and sub-regional infrastructure to support the development of the area. South Bucks has

indicated that providing increased capacity for the A355 would be a priority for money collected through CIL.

6. Conclusion

The London End roundabout currently has delays at peak times and these are predicted to get worse as traffic levels increase over the Core Strategy plan period. For example, initial results from the DaSTS study indicate that the housing growth planned in the Aylesbury and Milton Keynes areas will lead to more traffic travelling towards the Thames Valley and London. Any additional traffic will only add to congestion at this junction. The physical restraints of the area mean that capacity at the London End roundabout cannot be radically improved. The first two options as described by this paper, keeping the status quo and signalling the roundabout, will not provide additional capacity at the London End roundabout and should therefore be discounted.

At present, it is not clear whether the whole Wilton Park site will be released for redevelopment or just part of it, with the married quarters retained on site. There is also uncertainty at present about the mix of housing and employment that would exist on the site. This mix will be important as it will have a strong bearing on the traffic flows in and out of the site at different times of the day. These multiple uncertainties mean that it is impossible to be sure at this time which of the remaining options provides the best long term solution.

In the current financial climate it is extremely unlikely that options 4 or 5 could be provided in the foreseeable future from either Central Government or County Council funds. However, should funding become available at a later date, for example through a Community Infrastructure Levy or from another source (for example if national funding priorities change), then a relief road could perhaps be delivered later in the plan period, after traffic flows on the A40/A355 have increased to the point where this is clearly needed.