Western Corridor Area Transport Plan

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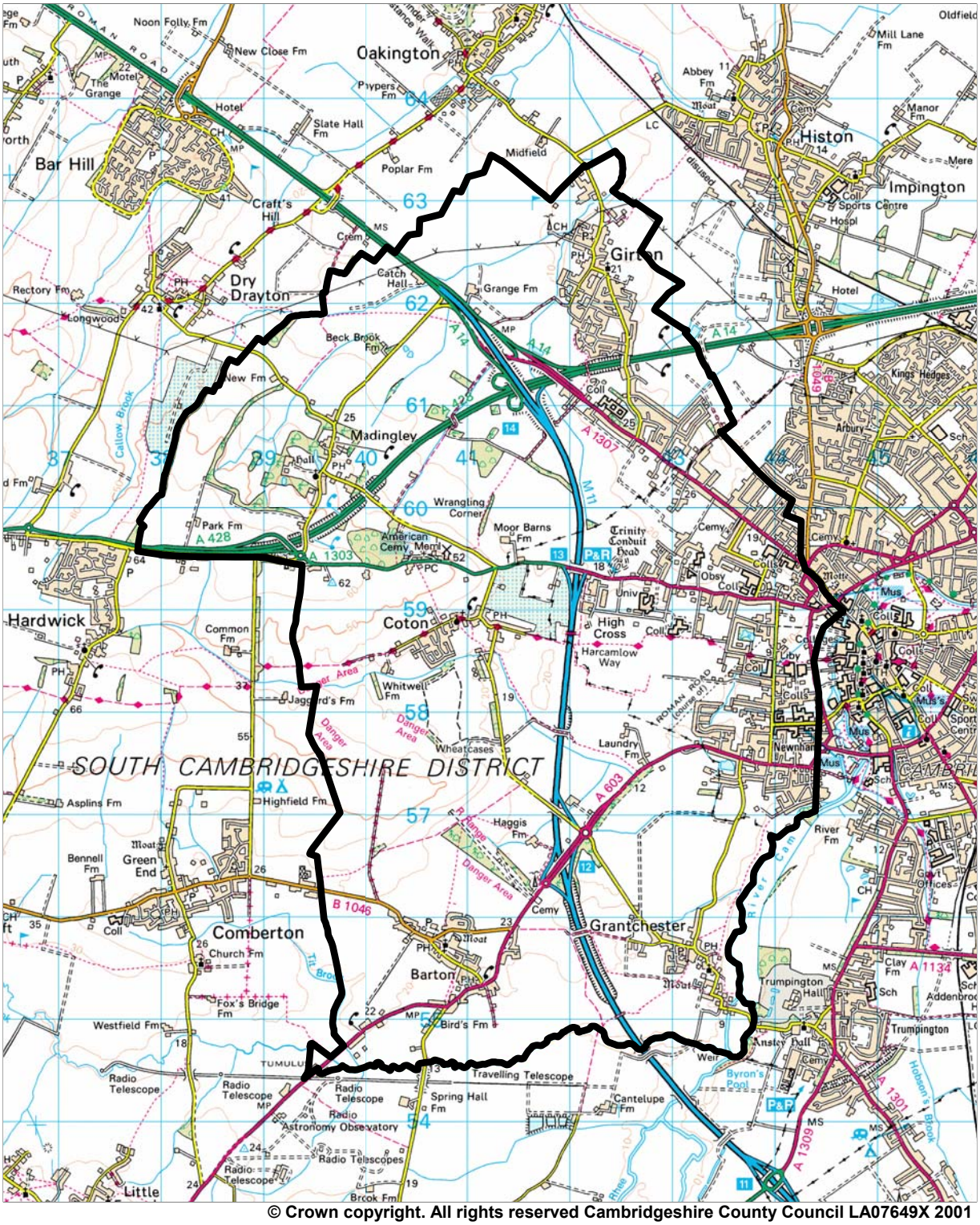

Figure 1: The Western Corridor

Western Corridor Area Transport Plan

1. Introduction

1.1 The Western Corridor Area Transport Plan (WCATP) will form Supplementary Planning Guidance to the Cambridge Local Plan (1996) and the South Cambridgeshire Local Plan (1993). It is a sister document to the Southern, Eastern and Northern Corridor Area Transport Plans (SCATP, ECATP and NCATP). Together, these four Area Transport Plans cover the City Council administrative area and a number of parishes in the South Cambridgeshire District Council administrative area that border Cambridge, and whose transport issues are intrinsically linked to those of the city.

1.2 In the City Council area, the WCATP covers development in the area broadly defined by Windsor Road, North Street, Castle Street, Queens Road and the River Cam to the east, and the city boundary to the west. In South Cambridgeshire, the plan covers development in the parishes of Girton, Madingley, Coton, Barton and Grantchester. This area is shown in Figure 1. A number of schemes identified for funding in the WCATP extend outside of this area but are consistent with the achievement of the aims of the plan.

1.3 The City and District Councils and Cambridgeshire County Council have produced the WCATP jointly. Cambridge City Council adopted the WCATP as Supplementary Planning Guidance on 18 March 2003. South Cambridgeshire District Council adopted the plan on 24 April 2003. Information on the consultation carried out on this document can be found in the '*Statement on Consultation for Supplementary Planning Guidance on the NCATP and WCATP*' available from the City Council's Planning Reception and South Cambridgeshire Hall.

1.4 The purpose of the WCATP is to:

i. identify new transport infrastructure and service provision that is needed to facilitate the development of Local Plan allocations in the west of Cambridge and adjoining parishes in South Cambridgeshire; and

ii. identify a fair and robust means of calculating how individual development sites in the area should contribute towards the fulfilment of that transport infrastructure.

1.5 The Cambridgeshire Local Transport Plan identifies measures to provide for sustainable transport provision and cater for existing trips on the network. However, public funding for infrastructure schemes to accommodate additional travel demand generated by developments is limited. Alternative means of bringing forward additional transport capacity are therefore required. The 'Area Transport Plan' approach is the means by which the Councils will do this.

1.6 The WCATP details the measures that will be required to cater for new trips on the transport network that will be generated by the development of sites allocated in the Cambridge and South Cambridgeshire Local Plans. The plan quantifies the level of development trips that will need to be catered for and the cost of the schemes and measures required to cater for these new trips. This allows an assessment of the level of contributions required for transport measures from individual developments to be made, based on the level of trip generation (all modes).

1.7 The City, District and County Councils recognise that the necessary transport infrastructure required to cater for a development's travel demands is likely to be beyond the scope of individual developments in the western part of Cambridge. Therefore contributions are required towards the package of schemes detailed in Table 1.

1.8 A contribution of **£171** per generated trip is sought from developments in the WCATP area that generate more than 50 additional trips (all modes), discounting any trip generation of the sites previous recent use.

1.9 WCATP funding of schemes is supplementary to LTP and other identified transport funds, and will not reduce the County Council's commitment to provide transport infrastructure in the Western Corridor through the LTP.

Strategic Transport Schemes

1.10 Developer funding is also required towards larger transport schemes that provide for travel on a sub regional basis, but also provide for travel demand through the Western Corridor. Contributions of this nature are not included directly in the WCATP methodology at this time, but additional contributions will be sought towards them from large-scale development in the Western Corridor, where the developments travel demand can be met or militated against by the provision of such schemes.

2. Policy Background

2.1 The WCATP takes into account current and emerging Local and National policy. The Cambridge and South Cambridgeshire Local Plans, emerging Cambridgeshire Structure Plan and Cambridgeshire LTP set out the linkages between land use and transport that form the underlying basis of the WCATP. The WCATP supplements policies TR1, TR2, TR3, TR4 and TR51 of the Cambridge Local Plan 1996, policies TP7, TP9 and TP15 of the South Cambridgeshire Local Plan No.2 1999 (as proposed to be modified) and policies P8/3 and P9/9 of the emerging Cambridgeshire and Peterborough Structure Plan.

2.2 The LTP endorses the 'Area Transport Plan' approach as is seen in the WCATP, and seeks to extend its use to other areas in order that a more consistent approach is achieved within the City and its surrounding areas, and that monies received are directed at schemes that are consistent with the City, District and County Council's aims.

2.3 The emerging sub-regional policy framework also informs the WCATP. The Roger Tym & Partners report, 'Implementing the Cambridge Sub-regional Strategy' identified a projected infrastructure deficit totalling £2 billion by 2016 if the forecasts of the current Regional Planning Guidance for housing and employment are to be met. A significant proportion of this deficit is related to transport.

2.4 The mechanism for calculating contributions was formulated with regard to the guidance of DETR Circular 1/97 (Planning Obligations) and Planning Policy Guidance Note 13 (Transport), with the emphasis on achieving necessary transport infrastructure to allow development in a fair, open and equitable manner.

2.5 In line with current national and local transport policy, the emphasis of any new transport capacity created in the corridor will be for pedestrians, cyclists and public

transport. By identifying how additional capacity of this nature can be provided, the plan aims to:

i. not increase car traffic in the area, particularly during the peak hours;

ii. increase the proportion of journeys made by bus, cycle and on foot;

iii. manage the transport network efficiently, and minimise delays to public transport users, pedestrians and cyclists;

iv. minimise the environmental and economic impact of transport.

3. The Western Corridor Area Transport Plan

The Problem

3.1 The transport systems in the western part of Cambridge and in the surrounding villages are under pressure. This results from the intense level of development in the area and physical factors such as the limited capacity for all modes of travel. The City, District and County Councils are seeking to address these problems through the Local Plans and LTP.

3.2 Undertaking further development within this constrained transport network has the potential to exacerbate capacity problems if measures are not taken to provide additional capacity. The attendant congestion, delay, air quality and quality of life issues that come with these capacity problems must be avoided if new development is to be considered acceptable on transport and planning grounds**.** The WCATP is the mechanism by which development contributions will be sought through the appropriate Local Plans to address these issues.

3.3 Work undertaken by the Councils indicates that if all of the major sites allocated for development through the Local Plans in the identified corridor come forward, there could be a daily demand for a further 25,000 trips in the area. Some of these trips may be made by car, others by bus, cycle and on foot. With no infrastructure or service improvements, congestion, the reliability of other travel modes and safety will undoubtedly get worse.

3.4 Given these points, the Councils view is that unless additional transport capacity can be provided alongside development in the area, there is little scope for that new development to take place and be accommodated in an acceptable way on transport grounds.

The Schemes

3.5 As part of the WCATP, schemes have been identified for the western part of Cambridge that could provide this additional capacity. These schemes are either contained within the LTP or are consistent with LTP core objectives, and they all have the ability to significantly improve the people moving capacity of the area or the safety of users. The schemes are summarised in Table 1 overleaf. Further detail relating to these schemes can be found in Appendix A.

3.6 The Councils are satisfied that in total, these local schemes will have the ability to provide for much of the additional travel demand that will result from new developments in the area. This is necessary if the prime objective of the WCATP (i.e. not increasing car traffic) is to be achieved. This is not to say that new developments in the western part of Cambridge will be unable to generate traffic movements. The

rationale behind the WCATP is that as long as additional non-car capacity is provided, then it does not matter whether that is used to accommodate new or existing travel demand as long as overall car trip making within the corridor does not increase.

3.7 Listing the schemes in Table 1 does not preclude the substitution or introduction of others if they are proven to be more beneficial. Full local consultation will be undertaken prior to the implementation of engineering schemes.

3.8 In line with PPG13 (March 2001) the Councils will also seek to influence modal split by restricting car-parking provision at new development sites. This will control car use and encourage people to use non-car travel modes.

Table 1: Schemes to be secured by WCATP contributions

Proposed WCATP schemes	**Estimated Cost**
Cambridge – Cambourne – St Neots Bus Service Improvements and Infrastructure	£500,000
Increased frequency of Service Citi 6 (Oakington – Fulbourn via Girton, City Centre and Teversham)	£475,000
Bus Priority measures, A1303 St Neots Road / Madingley Road	£1,000,000
Upgrade existing cycle / pedestrian links into city centre	£400,000
Huntingdon Road - Barton Road cycle route	£755,000
Madingley Road cycle Route improvements	£200,000
Widening / Lighting – Coton Footpath	£280,000
Radial Route Signing	£150,000
Contribution towards Real Time Passenger Information	£500,000
Total	**£4,260,000**

Funding mechanisms

3.9 The need for additional transport capacity in the area is being generated by development pressures. The Councils believe that developers within the area should contribute significantly towards the provision of this additional capacity.

3.10 Planning guidance (particularly Circular 1/97 (Planning Obligations) and PPG13 (Transport)) requires that these contributions are reasonable in terms of the scale and nature of developments being proposed for the area. In particular, contributions should only be sought where a development will result in an increase in trip making over levels currently being made and where the scheme to be funded would not otherwise have been provided from public funds.

Means of calculating contributions

3.11 By dividing the total cost of the development related transport schemes proposed in the north of the City by the total number of new trips that are estimated to be generated by the developments in that area, the Councils have identified a contribution that will be required per generated trip.

3.12 The Councils estimate that new development in the Western Corridor area is likely to generate around 25,000 trips on a daily basis. £4,260M is required to fund the WCATP schemes. This means that to bring about the required additional transport

capacity in the area a contribution from developers of **£171** per generated trip will be sought. This figure will be reviewed annually in accordance with a suitable construction price index or if the schemes being promoted change. The derivation of cost per trip is detailed in Appendix B.

3.13 Contributions based on this formula will be calculated from the net increase in all modes trip making that development of a site is predicted to generate. At the current time, the Councils propose that a significant development in terms of the WCATP should be defined as one that generates in excess of 50 new trips (all modes) on a daily basis. Developments generating net increases in trip generation at or above this level will be liable to pay WCATP contributions. This 50 trip threshold applies to all sites, including those where intensification of use within the same use class is proposed (for example an existing office site redeveloped with new office space).

3.14 Where contributions are made, the relevant Planning Authority will pool these. The City and District Councils in conjunction with the County Council will seek to use them to implement a package of measures that will increase the capacity for movement in the western corridor as other funds become available.

Development Trip Rates

3.15 Table 2 contains trip rates that should be used to calculate the total transport impact of individual developments and thus contributions under the WCATP.

3.16 Where a development does not fall directly into a specific use class, levels of trip generation will need to be agreed between the applicant and the City / District / County Council as appropriate.

3.17 For the land uses in Table 2, where a proposed development can be demonstrated to display different trip making characteristics it may be appropriate, in agreement with the relevant Council, to use a different rate.

Table 2: WCATP Trip Rates

Land Use	**First Principles Trip Rate**		
	Daily In	**Daily Out**	**Daily 2 way (24hr)**
Residential (per unit)	4.25	4.25	8.5
Student Residential (per student)	2	2	4
Hotel (per bedroom)	3.75	3.75	7.5
B1 Office (per 100m^2 GFA)	12	12	24
Multiplex (per seat)	1	1	2
Bowling (per lane)	36	36	72

3.18 Further details relating to the trip rates used in WCATP can be found in Appendix C.

4. Application of the WCATP

4.1 A summary of how the City and District Councils will apply the provisions of the WCATP is as follows:

i. Developers of sites within the WCATP area should calculate the total number of trips (in and out, all modes) that will be generated by their developments;

ii. The existing trip generation of a site should be subtracted from this figure to give a net increase in trip making;

iii. Sites generating less than 50 trips net increase will not be liable for WCATP contributions. For sites that generate a net increase of 50 or more trips, the all modes net trip generation should be multiplied by the contribution per trip to give gross WCATP transport contribution;

iv. From this figure should be subtracted any transport provision from the list of WCATP schemes (or others which are agreed with the Councils) which is being directly made by the developer. This leaves the net contribution payable to the relevant planning authority.

4.2 Payments towards the WCATP will be secured by means of Section 106 agreements under the Town and Country Planning Act (1990) with the relevant Council; the monies gained will be held for ten years and refunded if unspent after that time. Appendix D contains worked examples showing how the methodology should be applied.

4.3 For development that provide essential public infrastructure (see Appendix E) that serves the needs of the local community, a payment towards the WCATP may not be appropriate. However, all development is still required to mitigate its own local impact on the transport network, including provision of any necessary infrastructure to facilitate access and maintain transport capacity.

4.4 The WCATP is not intended to be a prescriptive plan, limiting the transport improvements only to those schemes noted in Table 1. It will also be acceptable for developers to make direct transport improvements providing it can be demonstrated that such provision mitigates the effect of their development and provides sufficient transport capacity to accommodate movement generated by that development. In such a case, payment of contributions under the WCATP may be reduced or not required.

4.5 To ensure that the levels of contribution being required of developers remains relevant, the WCATP will remain subject to an annual review. Any change in the planning status of particular parcels of land will be reflected in the review, as will any changes to schemes promoted.

4.6 The M11 Motorway and A14 and A428 Trunk Roads, and their junctions with Huntingdon Road, Madingley Road and Barton Road form a key part of the transport network of the Western Corridor. The schemes in the WCATP are not designed to provide additional capacity on the Motorway or Trunk Roads, but it is hoped that they will go some way to minimising the impact of development on these routes. The Highways Agency remains the relevant authority for discussing the impact of proposed development on the Motorway and Trunk Road, and any necessary improvements that may result. It should not be assumed that the Highways Agency would accept the trip rates contained within this document as the basis of assessment of a development's impact on the capacity of the Motorway and Trunk Road.

Appendix A: WCATP Schemes

Table A1 below lists the schemes included in WCATP with a brief description and assessment of the benefits the scheme will bring

Table A1: WCATP Schemes

Scheme Type	Proposed WCATP schemes	Total Scheme Cost (£)	WCATP Contribution (£)	Additional Funding From	Anticipated Benefits
Bus Services	Cambridge – Cambourne – St Neots Bus Service Improvements and Infrastructure	1,500,000	500,000	Direct developer funding from sites on route where appropriate.	Extension of existing bus services and provision of new services providing links to development sites and existing travel generators in the western part of the city. Bus becomes more reliable modal choice for Cambridge and South Cambridgeshire residents living and working to the north of the city, with an increasing modal share of trips.
	Increased frequency of Service Citi 6 (Oakington – Fulbourn via Girton, City Centre and Teversham)	475,000	475,000		
Bus Priority	Bus Priority measures, A1303 St Neots Road / Madingley Road	2,000,000	1,000,000	Direct developer funding where appropriate.	Improved reliability of bus services on the A428 Corridor and into Cambridge. Patronage increases on bus services.
Pedestrian / Cycle Routes	Upgrade existing cycle / pedestrian links into city centre	400,000	400,000	Direct developer funding where appropriate.	These routes form links in the comprehensive network of cycle routes for Cambridge and links with the surrounding villages envisaged in the LTP. They will help maintain and build upon the high cycle modal share that is seen in Cambridge and provide for the new trips associated with development proposals.
	Huntingdon Road - Barton Road cycle route	755,000	755,000		
	Madingley Road cycle route improvements	200,000	200,000		
	Widening / Lighting – Coton Footpath	280,000	280,000		
Core Scheme	Radial Route Signing	1,500,000	150,000	LTP, SCATP, ECATP, NCATP	An integral part of the core scheme, this scheme will aid the flow of traffic coming into the city by reflecting the changes the core scheme has introduced.
	Real Time Passenger Information in Western Corridor	2,000,000	500,000		Provides reliable bus service information at the roadside. With bus service improvements and other bus priority measures, increase patronage on bus services.
Total			**£4,260,000**		

Appendix B: Derivation of contribution / trip

Based on all of the above, the level of contribution sought per trip has been calculated as follows.

Estimated cost of WCATP schemes	£4,260,000
WCATP all mode trip generation	25,000

Contribution / trip = Cost of schemes / Total trip generation
= £4,260,000 / 25,000
= **£171**

Appendix C: WCATP trip rates and derivation of contribution / trip

Trip Rates

The trip rates used in the WCATP are detailed in table B1 below, together with discussion as to the basis of their use.

The WCATP trip rates the same as those used in the SCATP, ECATP and NCATP documents. These were revised in the 10 July 2002 editions of SCATP and ECATP as a result of new survey information, and improved knowledge through sources such as the TRICS (Trip Rate Information Computer System) database.

Table B1: WCATP trip rates

Land Use	First Principles Trip Rate		
	Daily In	Daily Out	Daily 2 way (24hr)
Residential (per unit)	4.25	4.25	8.5
Student Residential (per student)	2	2	4
Hotel (per bedroom)	3.75	3.75	7.5
B1 Office (per 100m^2 GFA)	12	12	24
Multiplex (per seat)	1	1	2
Bowling (per lane)	36	36	72

Residential ***8.5 Trips / dwelling***

All modes 12hr trip rate (07:00 – 19:00) derived from average of WS Atkins surveys in Trumpington and Cherry Hinton wards of Cambridge, and factored to 24hr using information from the TRICS database.

Cherry Hinton	6.24 trips per dwelling in 12 hours (all modes)
Trumpington	6.95 trips per dwelling in 12 hours (all modes)
Average	**6.595 trips per dwelling in 12 hours (all modes)**

The TRICS database indicates that for residential units, the ratio of 24hr / 12hr vehicle trips is typically 1.25 – 1.33 / 1. The average Trumpington / Cherry Hinton 12hr trip rates have therefore been factored up by 1.29 to give a 24hr all modes trip generation for residential units. This gives a figure of 8.51 trips (all modes) in 24 hours, rounded to **8.5** for ease of use.

Student Residential ***4 Trips / student***

All modes trip generation derived from the TRICS database and from trip rates used when assessing previous developments including student residential elements in Cambridge.

Hotel ***7.5 trips / bedroom***

All modes trip rates taken from the TRICS database. Counts of 29 separate sites indicate a vehicular trip rate of 7.5 trips per bedroom might be expected. Information on all modes trip

rates is not available; however, given the scale of increase from the original figure of 4 trips per bedroom used in the original SCATP and ECATP documents, a rate of **7.5** trips per bedroom is considered appropriate at this time.

B1 Office ***24 trips / 100m^2 GFA***

The revised B1 (office) trip rates in the WCATP have been derived from the TRICS database. The TRICS database indicates that vehicular trip generation for offices will be in the region of 13.17 trips / 100m^2. The all modes trip data for offices in the database shows a vehicular trip rate of 12.00 trips / 100m^2, with an all modes trip rate of 23.92 trips / 100m^2 (of which car trips account for 50.2%). Applying this ratio to the figure of 13.17, a trip rate of 26.25 / 100m^2 (all modes) might be considered appropriate. However, mindful of the accessibility of the sites counted in the TRICS multi-modal data, it is considered that a figure of **24** trips (all modes) would be appropriate when considering office developments in Cambridge.

B1 Other ***Demonstrate on a site-by-site basis***

For other sites that fall into the B1 land use class, there will be a need to demonstrate the level of trip generation on a **site-by-site** basis.

Retail Warehouse ***Demonstrate on a site-by-site basis***

The January 2000 issue of the SCATP gave a trip rate of 42 trips / 100m^2 for retail warehouses. Examination of the TRICS database indicates that this may be appropriate for some retail uses that fall into this category, but the trip generation of different types of store vary greatly, from slightly less than 42, to levels many times higher. For this reason, the trip rate to be used for retail warehouses is not included in the WCATP. Trip rates will need to be demonstrated on a **site-by-site** basis.

Multiplex Cinemas ***2 trips / seat***

The TRICS database indicates that vehicular trip generation to a multiplex would be in the region of 1.82 trips per day. No information on the level of all modes trip making is available from TRICS, but it is considered that a figure of **2** trips per seat (all modes) would be a conservative (low) estimate of all modes trip generation for a multiplex cinema in Cambridge.

Bowling Alleys ***Demonstrate on a site-by-site basis***

Limited information is available on the all modes trip generation of bowling alleys; while an number of sites are included on the TRICS database, only one of these has multi modal trip rate information. For this site, the all modes trips is around 3 times greater than the vehicular trips, with high levels of car occupancy accounting for most of these additional trips. The trip rate for bowling alleys has therefore been raised to **72** trips per lane.

Other Land Use Classes ***Demonstrate on a site-by-site basis***

The trip rates above are for land use classes of sites in the Southern, Eastern, Western and Northern Corridors that are allocated in the Cambridge and South Cambridgeshire Local Plans. For development proposals that do not fall in to these land uses, the trip generation should be demonstrated on a **site-by-site** basis.

Notes

All references to the TRICS database refer to version 4.7.

The trip rates above relate to general land use classes, and represent a pragmatic assessment of likely trip generation. If a planning consent would limit a sites use such that the trip generation would be demonstrably less than the WCATP rate, and further planning applications would be required if more general use within the land use class were to be permitted, then use of reduced trip rates might be appropriate. Likewise, any further data that would inform the discussion of an appropriate level of trip rates for land use classes where limited information is available will be considered.

Appendix D: Worked Examples

For notes on methodology, see paragraph 3.17 of WCATP.

1) 600m^2 Gross Floor Area (GFA) office development on previously vacant site.

Trip Rates (see Table 2, Page 7 and Appendix C)
B1 Office trip rate: 24 trips per 100m^2 GFA (all modes)

Trip Generation
Total number of trips = 24 trips x 600m^2 / 100m^2 = 144 trips (all modes)

Existing trips
Site was previously vacant = 0 trips

WCATP Contribution (£171 / trip) = £171 x 144 = £24,624

2) 53 residential units (houses or flats) on land previously occupied by small scale commercial premises.

Trip Rates (see Table 2, Page 7 and Appendix C)
Residential trip rate: 8.5 trips per unit per day (all modes)

Trip Generation
Residential trips = 8.5 trips x 53 units = 451 trips (all modes)

Existing Trips
All modes survey carried out at site entrance shows that around 423 trips were made to the site daily.

Net Trip Generation = 451 – 423 = 28 trips (all modes)
(net trip generation of proposals falls below the 50 trip threshold over which contributions are sought)

WCATP Contribution = £0

3) 2,500m^2 Gross Floor Area (GFA) office development, 30 residential units and 1,300 m^2 GFA food retail store on site currently used for industrial purposes (B2 / B8 land use classes).

Trip Rates (see Table 2, Page 7 and Appendix C)
B1 Office trip rate: 24 trips per 100m^2 GFA (all modes)
Residential trip rate: 8.5 trips per unit per day (all modes)
Food retail trip rate: 260 trips / 100m^2 GFA (all modes)
Agreed with applicant in pre-application discussions as trip rate for food retail land use class not included in WCATP.

Trip Generation
B1 Office trips = 24 trips x 2,500m^2 / 100m^2 = 600 trips (all modes)
Residential trips = 8.5 trips x 30 units = 255 trips (all modes)
Retail trips = 260 trips x 1,300m^2 / 100m^2 = 3380 trips (all modes)
Total Trips = 4235 trips (all modes)

Existing Trips
All modes surveys carried out at site entrances shows that around 962 trips were made to the site daily.

Net Trip Generation = 4235 – 962 = 3273 trips (all modes)

WCATP Contribution (£171 / trip) = £171 x 3,273 = £559,683

Appendix E: Land Uses defined as 'Essential Public Infrastructure that serves the needs of the Local Community' in WCATP

The following land uses are defined as 'Essential Public Infrastructure that serves the needs of the Local Community' under the WCATP, and contributions will not be sought from development that falls within in them. As discussed in paragraph 5.3, development that falls within these land use classes will still be required to mitigate its own local transport impact, including direct provision of any appropriate transport infrastructure.

Doctors Surgery
Dentist Surgery
Clinical development at a hospital
Primary Education
Secondary Education up to 16 years

This list is not exhaustive, and the merits of other land uses will be considered on a case-by-case basis.