

Appendix E

Transport Statement of Specific Proposals in the Allocations Development Plan Document

1. Introduction

- 1.1. The purpose of this assessment is to establish the likely traffic impact of the individual proposals in the Spelthorne Development Plan – Allocations Development Plan Document.
- 1.2. The findings are used in the Transport Statement which assesses the impact of both the Strategy and Policies DPD as a whole and Allocations DPD.
- 1.3. The assessment of these individual sites are not at the level of detail required for a planning application where a specific scheme is available for consideration and other issues relating to access, design and safety in the vicinity of the site will also need to be considered. Therefore more detailed consideration, in line with the County Council's requirements, will be required for planning applications.

2. Survey Method

- 2.1. The general method of survey follows the brief for the Transport Statement agreed by the Highways Agency and Surrey County Council and set out at Appendix A of the Statement. The detailed survey method to assess individual sites has been agreed with Surrey County Council.
- 2.2. The following 10 sites have been assessed and details of existing and proposed use are given:

Table 1 Schedule of Assessed sites

Proposal Number	Address	Proposed Use	Existing use, site area, built area
P1	28-44 Feltham Road, Ashford	Approximately 23 dwellings	Construction equipment hire base/other commercial uses. Site area 0.47ha. 609m ² of buildings (excluding 3 existing residential units) and some open storage.
P2	158-166 Feltham Road, Ashford	Approximately 60 dwellings	Industrial estate. Site area 1.3ha. 7,214m ² of buildings.
P3	Land adjoining Feltham Hill Road and Poplar Road, Ashford	Approximately 70 dwellings	Industrial site (currently vacant). 1.47ha. 7,584m ² of buildings.
P4	Works adjoining Harrow Road, Ashford	Approximately 36 dwellings	Industrial commercial site. Site area 0.58ha. 2,550m ² of buildings. Limited car sales use on the A30 frontage.
P5	Steel Works and Builders Merchant, Gresham Road, Staines	Approximately 100 dwellings	Steel stockist/fabricators and builders merchant. Site area 1.37ha. Buildings 1,500m ² and open storage.
P7	Builders	Approximately 30	Builders Merchant. Site area

	Merchant, Moor Lane, Staines	dwellings	0.57ha. Buildings 1,532m ² and open storage.
P8	Riverside Works, Fordbridge Road, Sunbury	Approximately 50 dwellings	Offices, individual buildings and some open storage/parking. Site area 1.57ha. Buildings 2,785m ² .
P9	Bridge Street Car Park, Bridge Street, Staines	Approximately 75 dwellings	Car park with 280 spaces and Sea Cadet building. Site area 0.71ha. Buildings 135m ² .
P10	Land west and south of the Elmsleigh Centre, Staines	Mixed use in two parts comprising retail use (total 20,500m ²) residential (total 95) other non-retail uses.	Site occupied by Tothill multi-storey car park and 7,852m ² of other buildings.
	Rodd Engineering site, Govett Avenue, Shepperton	Approximately 85 dwellings.	Industrial site. Site area 1.66ha buildings of 7,800m ² .

2.3. The traffic impact of the following 'proposed' sites have not been assessed for the reasons given below:

- a) **P6 – Council Offices Knowle Green.** Whilst included as a housing proposal at the Preferred Options stage, it has been deleted and not considered in this assessment (except for trip rate data used to assess the office element in Proposal P10).
- b) **P11 – Land to the west of Edward Way, Ashford.** The site is proposed for public open space to meet the needs of a nearby housing area. No public vehicular access is proposed. It is concluded there is no material traffic impact to assess.
- c) **P12 – Safeguarding for the Airtrack Corridor.** The plan is not making a specific proposal for Airtrack only safeguarding land in the eventuality a scheme emerges. The schemes promoters have not provided sufficient detail to enable the traffic impact on Spelthorne to be assessed. The objective of the scheme is nevertheless to reduce vehicular traffic seeking to get to Heathrow. Whilst its intention is to enable a modal shift from car use and up to 5000 vehicle movements per day could be removed from the M25, the transport benefits for Spelthorne are considered at this stage to be uncertain.

2.4. The method of assessment involves surveys of the existing sites, where they are in use, to establish current traffic levels. Two sites were vacant/part occupied (P3 – land adjoining Feltham Hill Road/Poplar Road and P8 – Riverside Works, Fordbridge Road, Sunbury). Existing traffic levels for these sites were established from survey data from:

- a) Similar sites in the survey – 158-166 Feltham Road, Ashford (P2) and Works adjoining Harrow Road, Ashford (P4).
- b) Findings of an existing survey of the Rodd Engineering Site at Shepperton.

- 2.5. Two existing residential sites were surveyed to assist in establishing likely traffic generated by residential development and of existing development. Regard has also been had to a survey at Harrison Way, Shepperton undertaken as part of a transport assessment of the Rodd Engineering site for a recent planning application. The two additional surveyed sites were:

a) International Way, Windmill Road, Sunbury.

The main part of the site was surveyed which included 238 dwellings with a dwelling mix of 43 (18%) 1 bed, 184 (77%) 2 bed, 7 3 bed and 4 4 bed. The scheme was chosen as being typical of current development and proposed future development in terms of dwelling mix. It involved some alternative transport measures including cycle parking provision for all dwellings, £200 travel vouchers/cycle vouchers for new occupants, £75,000 for selective vehicle detection equipment for buses at the signalled site entrance junction. It nevertheless, has no public transport within 400 metres of the site and has vehicle parking at an average of 1.43 spaces per dwelling. The site is considered good for establishing a cautious base line trip rate for the study.

b) Wraysbury Gardens, Moor Lane, Staines.

A scheme of 65 dwellings comprising 31 2 bed and 34 3 bed. This site is useful as it reflects the mix of the existing housing stock in Spelthorne. It is very close to Staines town centre.

- 2.6. Surveys were conducted on Tuesdays and Thursdays which are normal survey days in Spelthorne. Counts were undertaken for the am period from 7.30 – 9.00. From the first few surveys it was established that the peak hour was 7.45 – 8.45. This finding is similar to other studies (e.g. planning applications for the Rodd Engineering site).
- 2.7. Vehicles were counted according to type so their PCU value (passenger carrying unit) could be assessed. This broadly attributes a higher value to vehicles taking greater amounts of road space. The values are as follows:

a) car	1
b) van	1.5
c) lorry (hgv)	2.3
d) bus	2
e) motor cycle	0.4
f) cycle	0.2

- 2.8. Counts at each site were undertaken to establish:
- vehicles entering and leaving the site and their direction of arrival/departure
 - traffic levels in the highway at the site entrance.

3. Survey Findings and Analysis of Proposal Sites

a) Residential traffic generation

- 3.1. Findings of the two surveys of residential sites undertaken and results of the existing survey at Harrison Way were as follows:

Table 2 Trip Rates from Residential Sites (am peak)

Site	Number of movements	No. of Residential unit	Movements per unit
International Way, Sunbury	94	238	0.39
Wraysbury Gardens, Moor Lane, Staines	31	65	0.45
Harrison Way, Shepperton ¹	-	-	0.59

Note ¹ – the survey of Harrison Way by consultants did not define the extent of the estate surveyed or actual vehicles counted but only gave the trip generation rate per residential unit. The findings have been agreed by Surrey County Council as part of a traffic assessment of the Rodd Engineering site and therefore considered in this study.

- 3.2. The Council's policy for residential mix in new developments is to secure 80% 1 and 2 bedroom dwellings and, across all sites, 40% to be social housing. Social housing generally has lower levels of vehicle movement.
- 3.3. Both Harrison Way and Wraysbury Gardens are predominantly family housing with limited or no very small dwellings. They broadly equate to the existing mix of housing in the Borough and therefore are useful in establishing likely travel levels from the existing housing stock. The International Way site had no social housing in that part of the site surveyed leading to possibly higher traffic levels than might otherwise be the case. It also had a slightly higher level of 2 bed units as against 1 bed with 1 and 2 bed units representing 95% of the scheme. However, it also had a relatively high car parking provision at 1.43 spaces per dwelling compared to the likely average for the plan period which will include a number of large town centre sites and at least 200 extra care residential units. The site is some 400 metres from public transport services and not as well served as many of the proposed sites in the emerging LDF. On balance it is considered these factors suggest the ratio of 0.39 vehicle movements per dwelling is a reasonable and suitably cautious measure of traffic generation from the mix of generally smaller dwellings being proposed in the emerging LDF.
- 3.4. Movements in and out of the International Way site constituted a 6.5% inward movement in the am peak and 93.5% out. This split is used in assessing the Proposal sites.

b) Commercial Traffic Generation

- 3.5. Survey information from three similar occupied commercial sites has been used to assess likely traffic levels at site P3 – Feltham Hill Road/Poplar Road and P8 – Riverside Works/Fordbridge Road, Sunbury. The surveyed sites are primarily industrial sites.
- 3.6. The three sites used to provide average trip rates for commercial sites surveyed as part of the study included 158/166 Feltham Road, Ashford and Land adjoining Harrow Road, Ashford and the third, Shepperton Business Park, which was surveyed by consultants as part of the assessment of the Rodd Engineering site (results agreed by Surrey County Council).

Table 3 Average trip rates from commercial sites

Commercial Sites	Sq metre to vehicle ratio (rounded)
158/166 Feltham Road, Ashford	126
Land adjoining Harrow Road, Ashford	182
Shepperton Business Park	80
Average	129

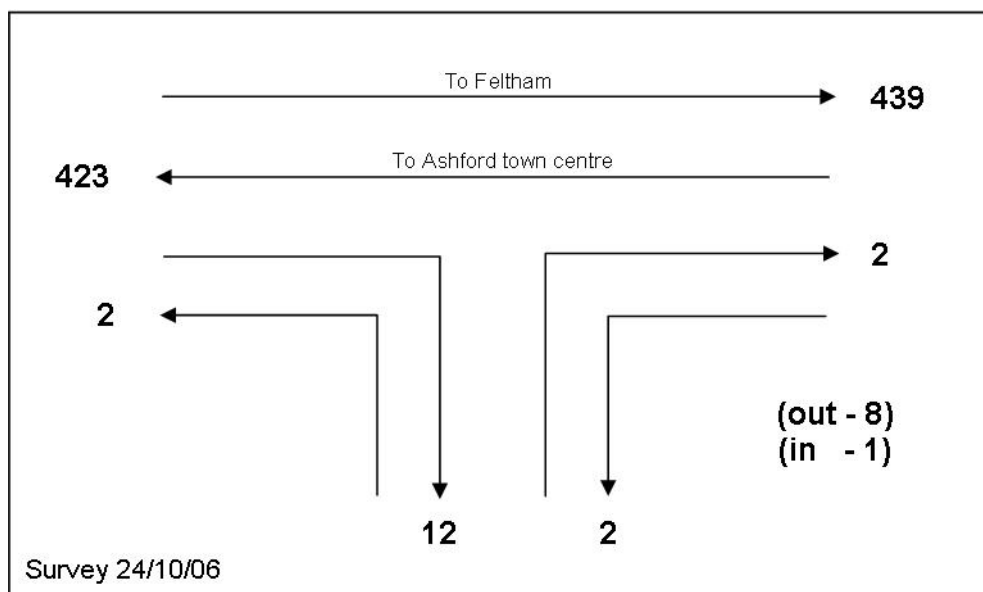
- 3.7. An average of the findings shows a figure of 129m² per vehicle movement in the am peak. This figure is used to assess the trips generated at Proposal sites P3 and P8.

c) Assessment of each site

P1 – 28-44 Feltham Road, Ashford

- 3.8. The existing am peak movements were 17 and the projected residential am peak movement is 9 (23 dwellings x 0.39 trip rate).
- 3.9. Actual and projected traffic movements at the site entrance are summarised in the following diagram with numbers in brackets being the projected residential movements.

Figure 1 28-44 Feltham Road

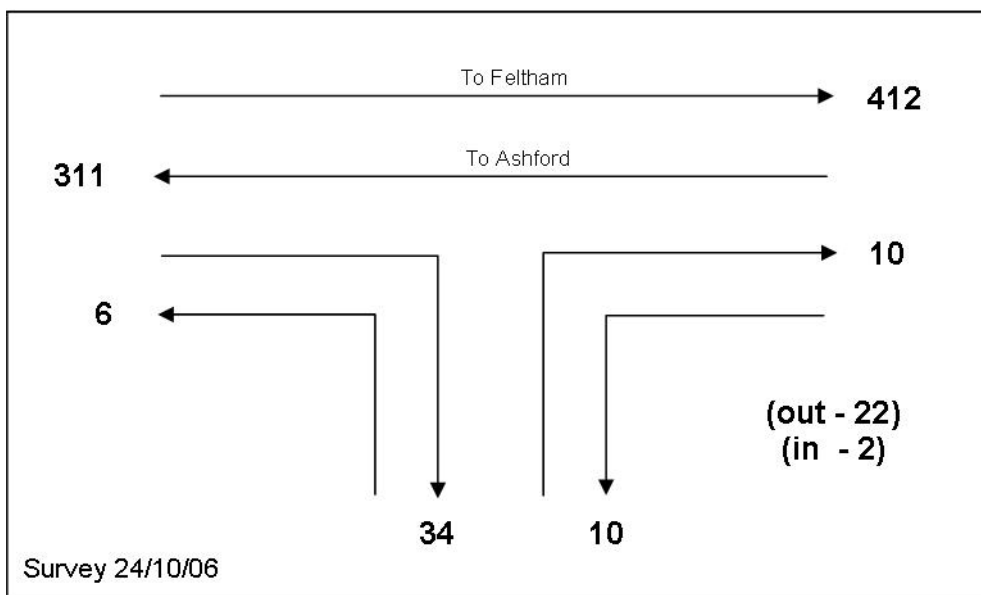


- 3.10. Existing site movements represent 0.02% of movements in Feltham Road and projected movements only 0.01%.
- 3.11. Projected residential movements at the site will represent only 52% of existing site traffic movements in the am peak.

P2 – 158-166 Feltham Road, Ashford

- 3.12. The existing am peak movements were 60 and the projected residential am peak movement is 24 (60 dwellings x 0.39 trip rate).
- 3.13. Actual and projected traffic movements at the site entrance are summarised in the following diagram with numbers in brackets being the projected residential movements.

Figure 2 158-166 Feltham Road



- 3.14. Existing site movements represent 7.6% of the vehicle movements in Feltham Road at this point. The residential movements at the site will represent 3.0%.
- 3.15. Projected residential movements at the site represent only 40% of existing traffic movements in the am peak.

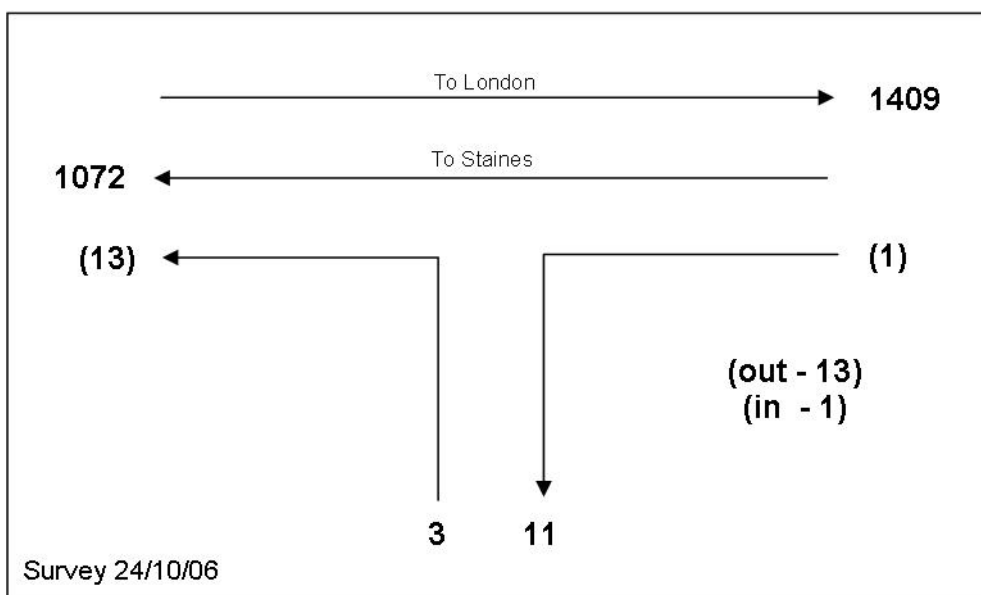
P3 - Land adjoining Feltham Hill Road and Poplar, Ashford

- 3.16. The site is unoccupied and survey data from comparable sites is used to project existing movements for the site.
- 3.17. The projected existing am peak movements for the site are 59 and the projected residential am peak is 22 (70 dwellings x 0.39 trip rate).
- 3.18. Existing traffic levels in Feltham Hill Road or Poplar Road have not been surveyed because the projected movements are less than existing.
- 3.19. Residential movements at the site represent only 37% of existing projected traffic movements in the am peak.

P4 – Works adjoining Harrow Road, Ashford

- 3.20. The existing am peak movements are 14 and the projected residential am peak movement is 14 (36 dwellings x 0.39 trip rate).
- 3.21. The site has an access onto the A30 Trunk Road. Actual and projected traffic movements at the site entrance are summarised in the following diagram with numbers in brackets being the projected residential movements. It should be noted that at this site the A30 is on dual carriageway with only left in and left out movement to and from the site being possible. There is a very small element of the frontage of the site used for car sales and intentionally visible from the A30. This use presents a potential slight distraction to motorists and therefore a nominal safety issue. Whilst this safety issue has not been quantified the removal of the car sales use as a result of residential use will remove that risk.
- 3.22. The survey of the A30 itself was undertaken by alternating 5 minute counts of each carriageway through the am peak i.e. a total of 30 minutes in each direction. The results were then factored up to give a full peak hour flow.

Figure 3 Land adjoining Harrow Road

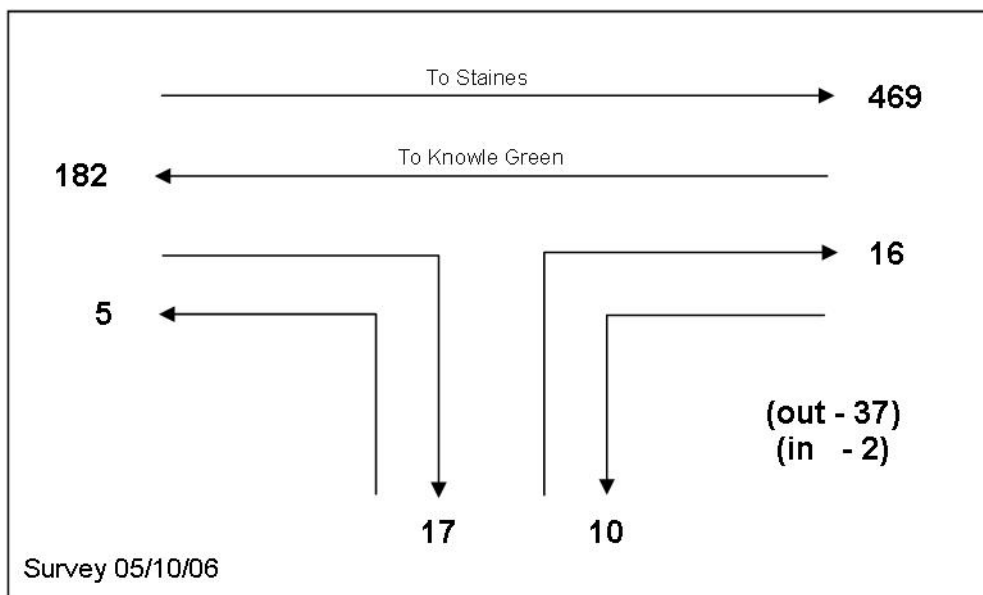


- 3.23. Existing site movements represent just 0.0056% of total movements on the A30 at this point. As projected flows remain the same the proportion of residential movement to commercial does not change for residential use.

P5 – Steel Works and Builders Merchants, Gresham Road, Staines

- 3.24. The existing am peak movements were 48 and the projected residential am peak movement is 39 (100 dwellings x 0.39 trip rate).
- 3.25. Actual and projected traffic movements at the site entrance are summarised in the following diagram with numbers in brackets being the projected residential movements.

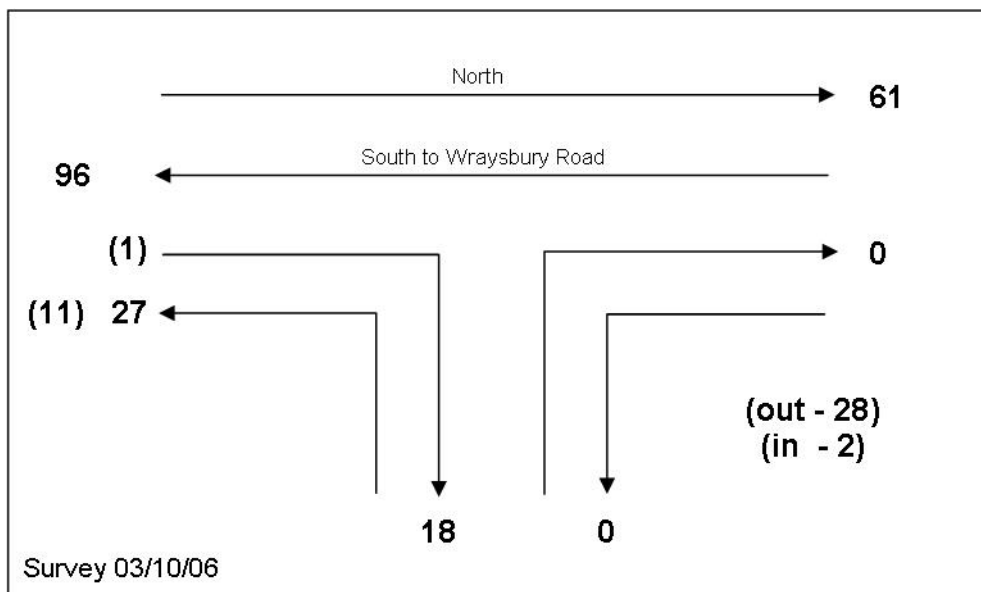
Figure 4 Steel Works/Builders Merchants, Gresham Road



- 3.26. Existing site movements represent 7.3% of the vehicle movements in Gresham Road at this point. The residential movements at the site would represent 5.9%.
- 3.27. Residential movements at the site represent only 81% of existing traffic movements in the am peak.

P7 – Builders Merchants, Moor Lane, Staines

- 3.28. The existing am peak movements were 45 and the projected residential am peak movement is 12 (30 dwellings x 0.39 trip rate).
- 3.29. Actual and projected traffic movements at the site entrance are summarised in the following diagram with numbers in brackets being the projected residential movements.

Figure 5 Builders Merchants, Moor Lane, Staines

- 3.30. Existing site movements represent 22% of movements in Moor Lane in the am peak. The residential movements would represent 5.9% of movements.
- 3.31. Residential movements at the site represent only 26% of existing traffic movements in the am peak.

P8 – Riverside Works, Fordbridge Road, Sunbury

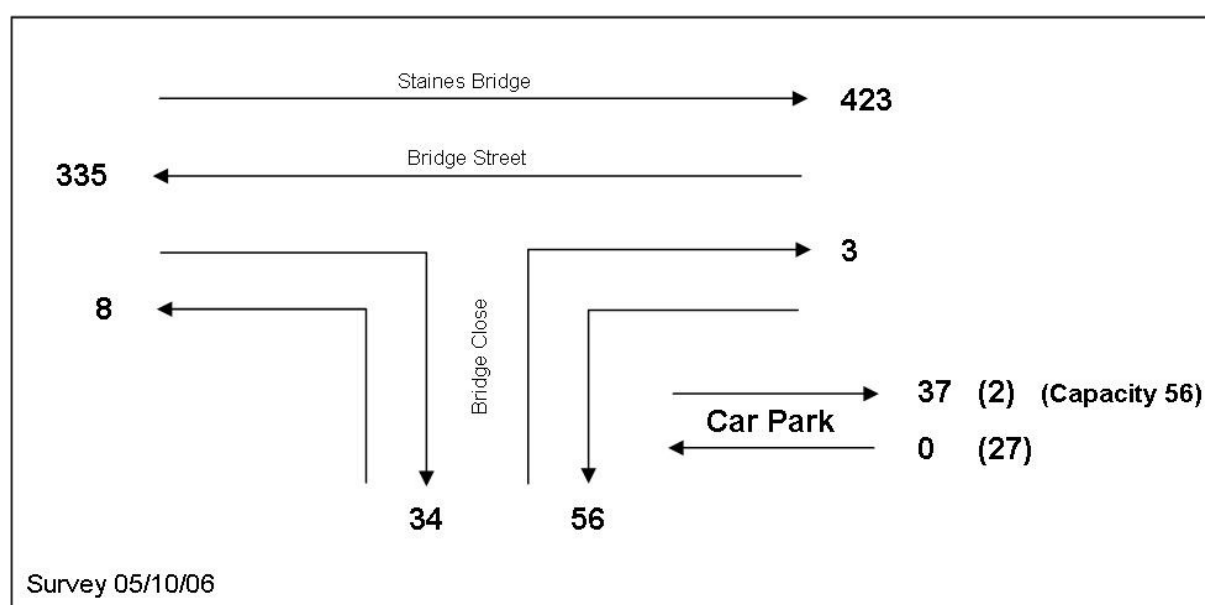
- 3.32. The proposed existing am peak movements for that part of the site proposed for redevelopment are 22 and the projected residential am peak is 20 (50 dwellings x 0.39 trip rate).
- 3.33. The existing site is a partly vacant Environment Agency depot/base and therefore the existing traffic levels would not give a picture of the sites likely traffic pattern when in full use. It should be noted that the existing site has a small office building which is a use likely to have a worker to floorspace ratio greater than industrial use and therefore more traffic movements. There is also a large area for vehicles to park which was used for vehicles used off site. The use of average traffic trips for industrial uses may underestimate the sites existing traffic generating potential compared to the proposed residential use.
- 3.34. Residential movements at the site represent 90% of projected existing movement potential.

P9 – Bridge Street Car Park, Bridge Street, Staines

- 3.35. This proposed site has a two level car park of 280 spaces. 100 of the spaces are licensed to the occupier of the adjoining Ashby House. At the time of the survey Ashby House was only partly occupied and its parking needs were substantially met by its own basement car park. Only six cars were parked in the restricted area of the Bridge Street Car Park set aside for the occupiers of Ashby House. The Sea Cadet Building was not in use during the am peak.

- 3.36. The traffic survey showed 37 cars entering the car park. However, as 94 spaces were not being taken up, only 186 spaces or 66% of the capacity was in use. The count of 37 has been increased pro-rata to reflect the position if Ashby House were fully occupied and its quota of spaces in the car park were fully used.
- 3.37. The projected am peak movements with the car park being used fully are 56. The projected residential am peak movement is 29 (75 dwellings x 0.39 trip rate).
- 3.38. The car park is accessed from Bridge Close which has a junction with Bridge Street. Two office buildings also gain access from Bridge Close. Actual and projected traffic movements into the car park are summarised in the following diagram which shows movements in both Bridge Close and Bridge Street. Projected residential movement are shown in brackets unless notes indicate.

Figure 6 Bridge Street Car Park, Staines



- 3.39. Projected existing traffic movements between the car park and Bridge Street are 7.4% of the Bridge Street Flow. Projected residential movements are 3.8%.
- 3.40. Residential movements to the site will represent only 48% of existing traffic movements in the am peak.

P10 – Land to the West and South of the Elmsleigh Centre

- 3.41. Mixed use extensions to the Elmsleigh Centre are proposed comprising:
- 20,500 m² of retail
 - 95, 1 and 2 bed residential units
 - other uses appropriate to a town centre
 - improved bus station
- 3.42. The existing proposal site already has some 7,842m² of floorspace comprising retail and other D2 uses in the form of a library, museum, community centre, night club and Masonic hall.

- 3.43. It is intended that the library, museum and community centre are re-provided in the development and it is assumed, for the purposes of this transport statement, the other D2 uses, whether or not returning with their current occupiers, represent a level of D2 use nevertheless appropriate to a mixed use scheme of this nature. Re-provision of the existing 2,200m² of retail would be over and above the 20,500m² proposed additional retail floorspace.
- 3.44. Whilst the nature of the proposal is still in general terms, so far as other uses are concerned, for the purposes of this traffic assessment, it is assumed 5,000m² of offices may also be provided. It is assumed that the traffic generated would be limited by lack of dedicated parking, parking charges and ready availability of public transport. A trip rate of 30% of office movement surveyed at the Knowle Green Council Offices is assumed giving a total of 35 am peak movements. (A survey of am peak trips to and from the offices showed a rate of 20.3 movements per 1000m² of gross floorspace).
- 3.45. The size of the proposed retail extensions, at 22,500m² broadly equate to the size of the existing Elmsleigh centre at 23,410m² and can reasonably be used as a measure of an extension servicing traffic. During the am peak no shops in the existing Elmsleigh Centre were open for any significant trading and it is assumed an extension will not generate shopper traffic during this time. There is some servicing activity and use of the existing service ramp was surveyed for the am peak. 15 vehicles entered and 10 departed giving combined numbers of 25. Some shop employees were observed opening premises in the period before 9am and it is assumed some of them arrived in Staines during the am peak. The traffic associated with the employees cannot be readily surveyed. In the absence of survey data it is assumed the number of premises in the Elmsleigh Centre which have car park season tickets represents 75% of vehicle movement associated with shop staff during the am peak. Council records show 19 season tickets were current at the time of the survey and a traffic flow of 25 is therefore derived on this basis. A relatively low trip generation figure is considered justified by the cost of all day parking and ready access to public transport.
- 3.46. Residential trip generation is assumed to be only two thirds of survey results at International Way due to close proximity to public transport facilities. This might still be a little high for such a central town centre site but nevertheless provides a robust figure for assessment purposes.
- 3.47. In summary, the additional traffic generated by the Elmsleigh Centre proposals is considered to be:

Table 4 Elmsleigh Centre extensions traffic generation

Retail extension of 22,500m²	
Shopper traffic	0
Servicing traffic	25
Shop workers traffic	25
D2 uses – replacing existing - no net gain	0
Offices 5,000 m ²	35
Residential $0.39 \div \frac{2}{3} \times 95$	24
Total	109

- 3.48. It should be added that the retail provision is intended to meet assessed growth in retail requirements in the Staines shopping catchment area. If the space were not provided it is likely that people would travel to other centres of a similar or larger size such as Windsor, Woking, Camberley, Hounslow and Kingston which would take up the retail capacity not provided for in Staines. Therefore, whilst the projected additional retail related am peak movement of 50 would not arise necessarily on the town centre itself, the movement would occur on the wider highway network due to retail provision being made elsewhere. This also applies to shoppers, albeit not travelling in the am peak, who would be likely to travel greater distances from the catchment area to other centres resulting in more movements per road length overall than if retail provision is made in Staines.
- 3.49. The net effect of the Elmsleigh Centre proposal on Staines Town Centre may be up to 109 movements but only some 49 net additional movements on the wider highway network.

Rodd Engineering, Govett Avenue, Shepperton

- 3.50. The site is currently the subject of planning applications. This site was consulted on at the Issues and Options stage of the LDF process but omitted at the Preferred Options stage due to a flooding objection. The flooding issue has been resolved by developers and it is intended the proposal will be re-inserted in the Submission Draft.
- 3.51. There is an existing traffic survey undertaken by consultants WSP for the developers Persimmon Homes which has been agreed by Surrey County Council. The findings of the report are summarised as follows:

Table 5 Rodd Engineering Traffic Generation

	AM		PM	
	In	Out	In	Out
Existing BI use	79	19	15	79
Residential use at 96 dwellings	15	42	52	21

- 3.52. The site is vacant so traffic generation figures for industrial were taken from a survey of the adjoining Shepperton Business Park.
- 3.53. The residential traffic figures were taken in the main from Harrison Way in Shepperton – an area of mainly family housing. These figures are also compared by WSP to other sites on the TRICS database. The number of residential units to be proposed in the plan is only 85 and the nature of Harrison Way is not wholly comparable to the proposal for the Rodd site where there would be a high proportion of smaller units. Harrison Way had a trip generation rate of 0.59 compared to this study's figures of 0.39 from what is regarded as a more comparable site due to its dwelling mix. Applying the lower number of dwellings and the 0.39 trip rate total projected flows would be 33 in the am peak as against 57 projected in the alternative trip data. The lower figure is used for comparative purposes in this study and not to be used for the purposes of assessing a planning application.

4. Conclusions

- 4.1. At all proposal sites, except the Elmsleigh Centre and Harrow Road, there is a net reduction in traffic movements on implementation of the proposed new use. Harrow Road shows no change. The sites are grouped by area of the Borough so the cumulative impact can also be seen. See Table 6 below.

Table 6 Summary and Cumulative Impact of Proposal Sites in AM Peak

Proposal Site	Existing Traffic Flow	Flow from Proposals
Ashford		
P1 28-44 Feltham Road	17	9
P2 158-166 Feltham Road	60	24
P3 Feltham Hill Road/Poplar Road	59	22
P4 Adj Harrow Road	14	14
Sub Total	150	69
Staines		
P5 Steel Works/Builders Merchants	48	39
P7 Builders Merchants, Moor Lane	45	12
P9 Bridge Street Car Park	56	29
P10 Elmsleigh Centre - residential	0	24
- other uses (net)	0	85
Sub Total	149	189
Sunbury/Shepperton		
P8 Riverside Works, Sunbury	22	20
Rodd Engineering, Shepperton	98	33
Sub Total	120	53
OVERALL TOTAL	419	311

- 4.2. For Harrow Road traffic movements remain the same but are very low.
- 4.3. The Elmsleigh Centre is by far the biggest proposal, but, because a large part of it is a retail use, which is not open to shoppers in the am peak, trips are relatively low at 109 movements. Of the 109 movements 49 would arise anyway on the wider highway network as retail provision would otherwise be made elsewhere.
- 4.4. This assessment has not considered the likely impact over time of emerging policies in the LDF to further encourage non-car based travel. Those policies would be expected to have the effect of reducing further the projected am peak movements from the sites.
- 4.5. Only in the case of the Elmsleigh Centre is there a net growth in traffic. When taken with other proposals in the town centre area (and the net impact of Elmsleigh of 60 movements), there is still a small net drop in traffic movements from 149 to 140 (189 minus 49).
- 4.6. All of the proposals together result in a drop in the traffic movements from 419 to 311 in the am peak which is only 74% of existing flows from all the sites.

- 4.7. It is concluded that as a whole none of the site proposals will result in an adverse highway impact on the local highway networks of Ashford, Staines, Sunbury and Shepperton.
- 4.8. Draft 'Guidance on Transport Assessment' – August 2006, states at paragraph 2.11 that generally development typically generating less than 30 two-way peak hour vehicle trips would not require formal assessment by way of either a Transport Statement or Transport Assessment. It is of note that of the 10 proposals assessed in the assessment, seven of the sites individually fall below this threshold and only three are above.

Appendix F

Public Transport Accessibility in Spelthorne

1. Introduction

- 1.1. The purpose of this report is to assess accessibility of public transport in Spelthorne.
- 1.2. In particular it will:
 - a) Identify existing provision.
 - b) Define for the purpose of development plan making and monitoring.
 - i. Those parts of the Borough within 30 minutes public transport travel time of a GP, hospital and primary and secondary school, employment and shopping facilities.
 - ii. Those parts of the Borough with 400 metres or five minutes walk of a half hourly bus service.
 - c) Provide a basis for assessing the relative availability and therefore sustainability in travel terms of proposals in the emerging Local Development Framework.
 - d) Areas where public transport provision might be improved.
- 1.3. Much of the evidence is set out in maps.

2. Existing Provision

- 2.1. Spelthorne is a relatively small Borough geographically being some 6 miles long and 2.5 miles wide. It has relatively compact urban areas.
- 2.2. Map 1 shows the existing network of bus routes in the Borough and also the rail network. Most of the urban area is covered by bus services.
- 2.3. There are key locations where a number of bus routes converge particularly Staines (and in particular the bus station), Ashford Hospital, Ashford (Church Road) and Sunbury Cross.

3. Access to Frequent Bus Services

- 3.1. Map 2 shows those bus routes with a half hourly frequency and the areas of the Borough within 400 metres or five minutes walk of those routes.
- 3.2. This measure of frequency is suggested by the Department of Communities and Local Government (DCLG) in the document 'Local Development Framework Monitoring: A Good Practice Guide' as a possible local output indicator to monitor the relative accessibility of new development.
- 3.3. An extensive part of the urban area of the Borough is covered by services of this frequency.
- 3.4. Frequency is considered in the context of day time services. Many services are more limited in the evenings.

4. Accessibility of Key Local Facilities by Bus Services

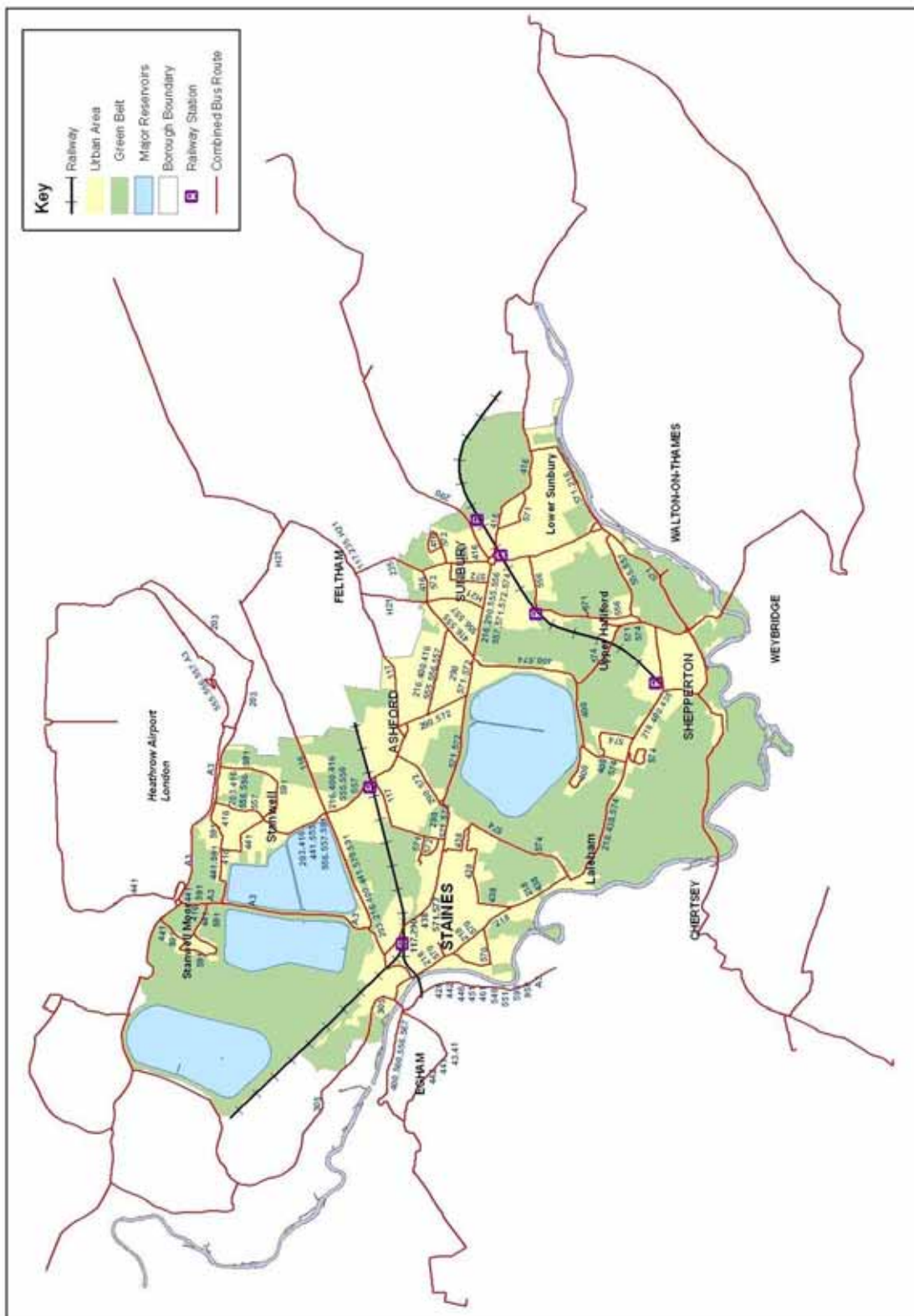
- 4.1. The guidance from DCLG referred to in paragraph 3.2 above identifies accessibility to a range of local facilities as a 'core output indicator'.
- 4.2. The measure assesses accessibility within 30 minutes public transport time of a:
 - a) GP Surgery/Health Centre (Map 3)
 - b) Hospital (Map 4)
 - c) Primary School (Map 5)
 - d) Secondary School (Map 6)
 - e) Mayor employment location (Map 7)
 - f) Shopping/Town Centre (Map 8)
- 4.3. Maps 3 to 8 show in turn the respective 30 minute travel isochrone(s) for the above. The area accessible for all of the facilities is the same as that shown for public transport 30 minute accessibility to a Hospital (Map 4)
- 4.4. The accessibility areas have been calculated on the basis of the Borough Council's own assessment of accessibility in relation to published public transport information. The information has been plotted on the Council's GIS system to produce 30 minute travel isochrones for each type of facility.
- 4.5. This approach has been used instead of the Public Transport Accessibility Model (PTAM) used by the County Council. That model uses the Accession software package. The PTAM is not an exact measure; for example it uses a coarse origin grid of 250 metre intervals and does not include school bus services. The Borough's approach uses exact travel distances and all available public transport information.
- 4.6. The Borough's approach uses the same assumptions about walking distances and speeds as the Accession model. A maximum walking distance of 0.8km as the 'crow flies' is taken but then factored by 1.2 to account for the actual walking distances. A walking speed of 4.8km per hour is used. On this basis a maximum 12 minutes walk is assumed.
- 4.7. A five minute wait is assumed for all bus services and the walking distance at the destination between the service stop and facility visited is accounted for in the 30 minute travel time.
- 4.8. Accessibility is based on day time services. Evening services are generally less frequent making some facilities much less accessible.
- 4.9. The series of maps show that for all facilities, except hospitals, bus services give a 30 minute public transport travel time from virtually all parts of the Borough. The only exceptions are the Shepperton Lock area, Felix Lane area of Shepperton, a small part of Sunbury and small part of east Ashford. Well in excess of 95% of the urban area is covered.
- 4.10. In the case of access to hospitals, the facilities at Ashford and St. Peters have been assessed. Approximately 75% of the urban area of the Borough is accessible within 30 minutes travel time. (It should be noted that for A and E services an ambulance would be expected to be called).

- 4.11. This assessment has not taken into account community transport facilities in Spelthorne.

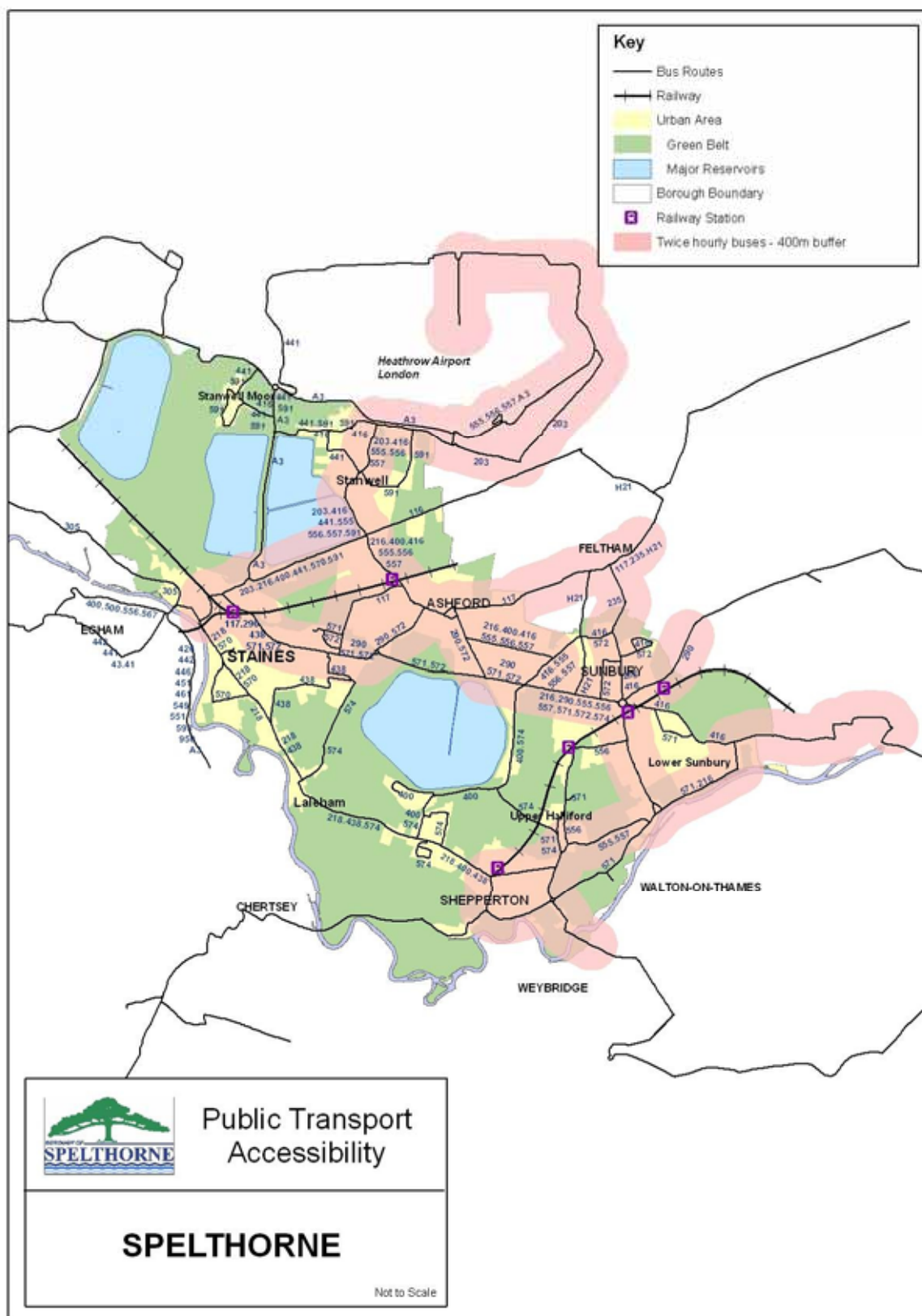
5. Assessment of Overall Public Transport Accessibility

- 5.1. The series of plans set out in this assessment record a relatively high level of accessibility to public transport from most of the urban areas of the Borough during the day time to a range of destinations including key facilities.
- 5.2. Key facilities are also accessible during the day to a large proportion of the Boroughs urban area.
- 5.3. There are areas where there are less frequent services and also travel between some areas is easier than others. There is scope to improve the accessibility and frequency of services within the Borough.
- 5.4. The coverage of public transport provision provides an existing network offering non-car based travel choices to a large part of the population and scope for significant modal shift. There is also scope to improve provision.

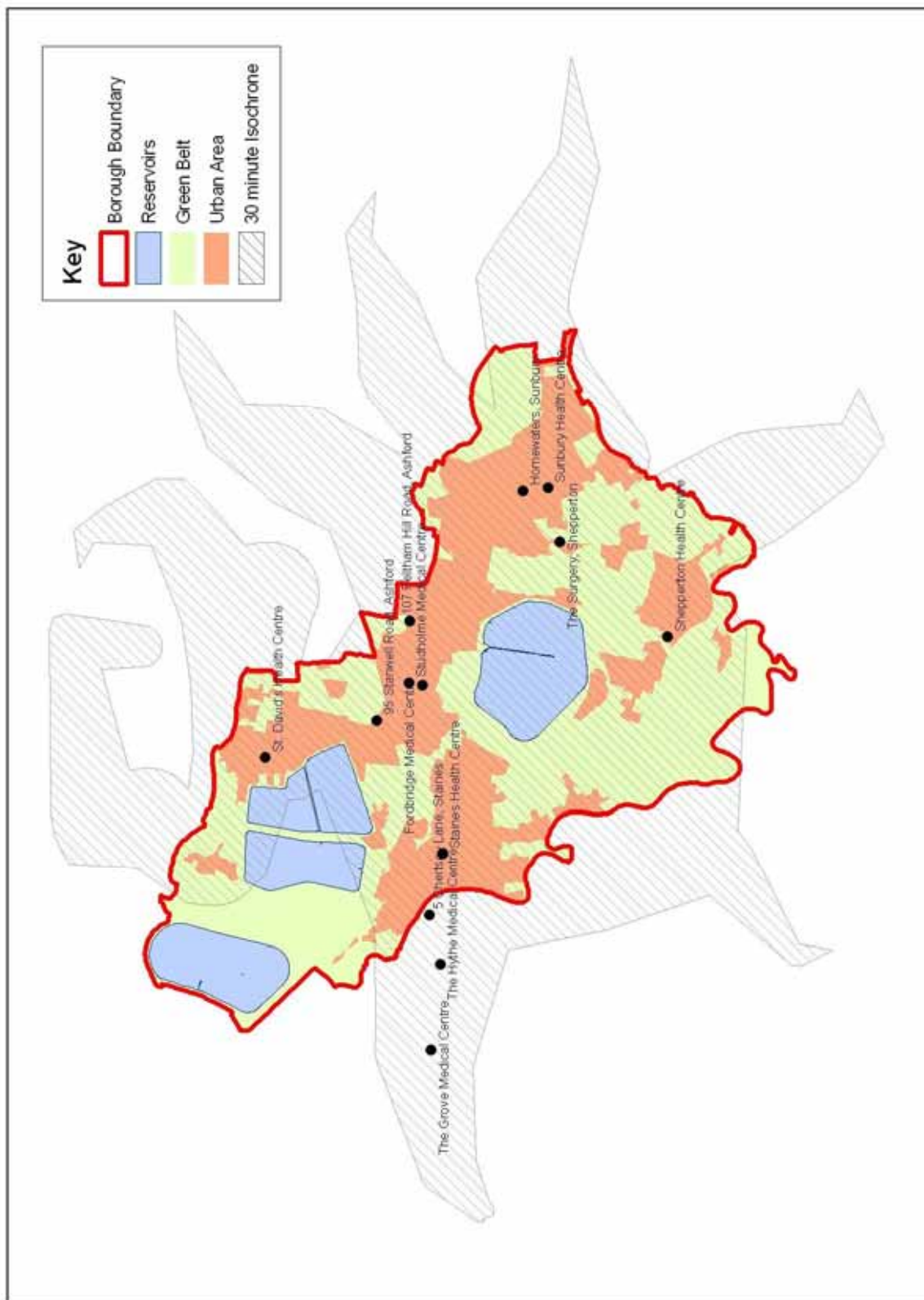
Map 1 Existing Bus and Rail Networks in the Borough



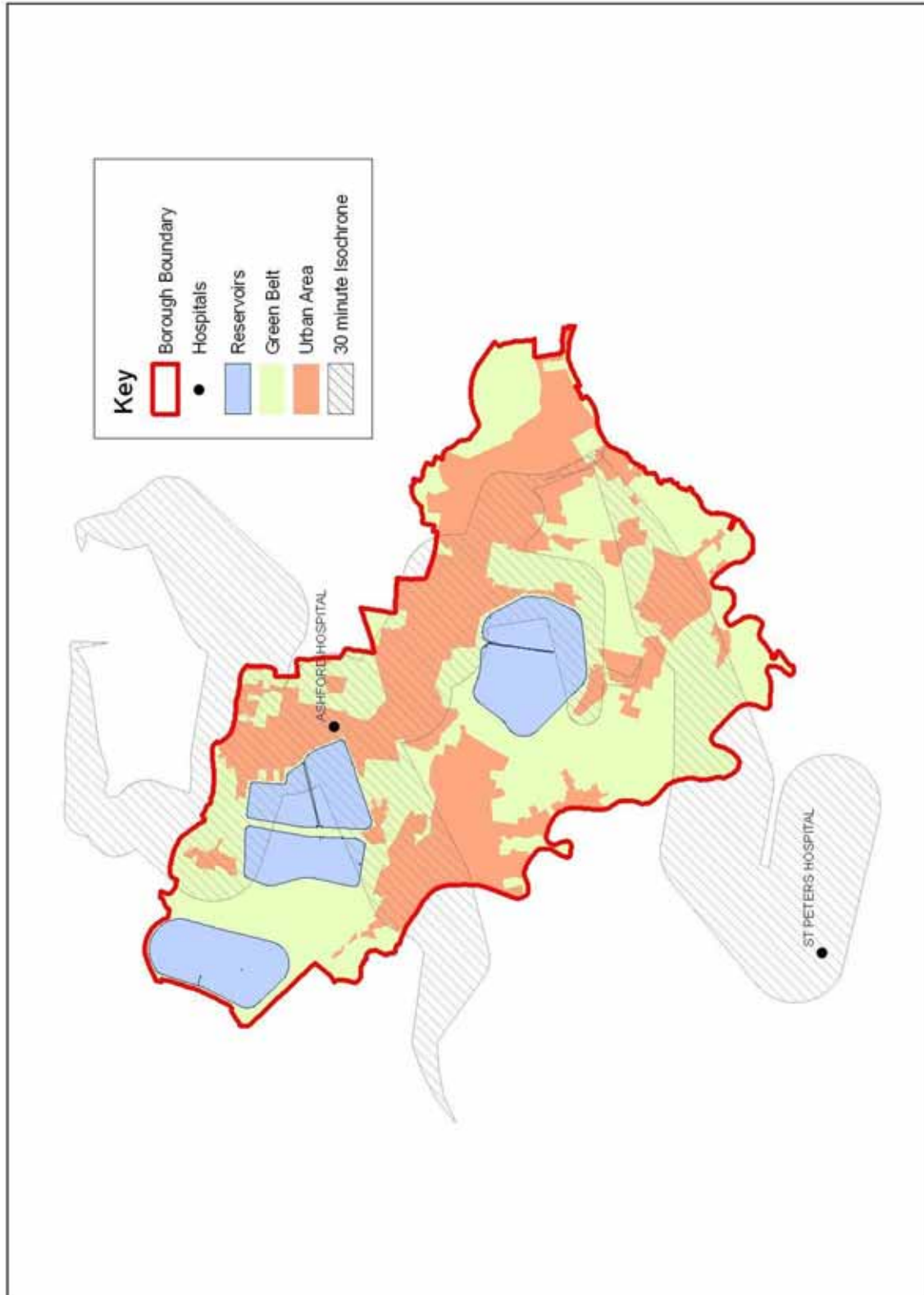
Map 2 400m buffer of twice hourly bus services in the Borough



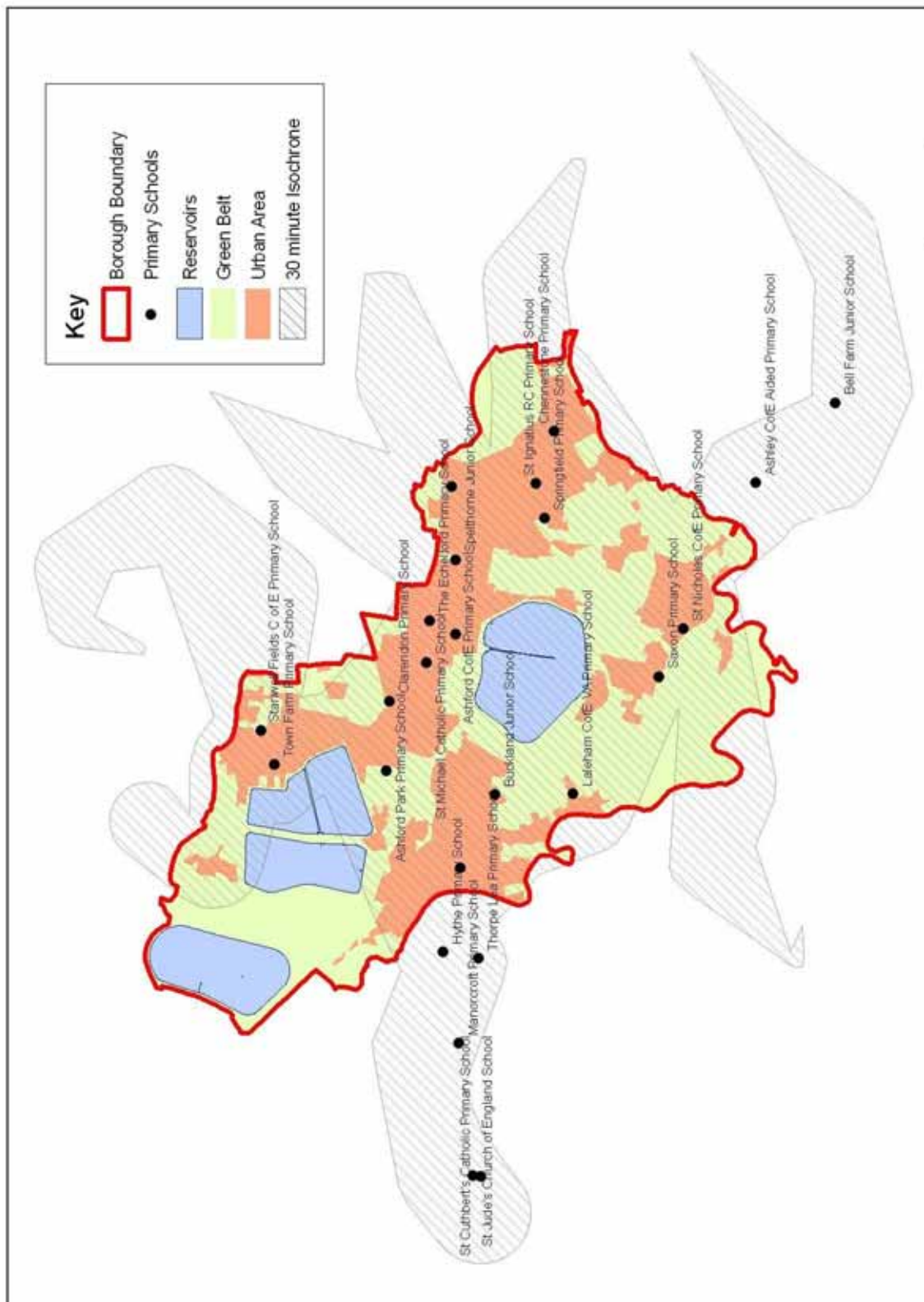
Map 3 30 minute Public Transport Accessibility to General Practitioners



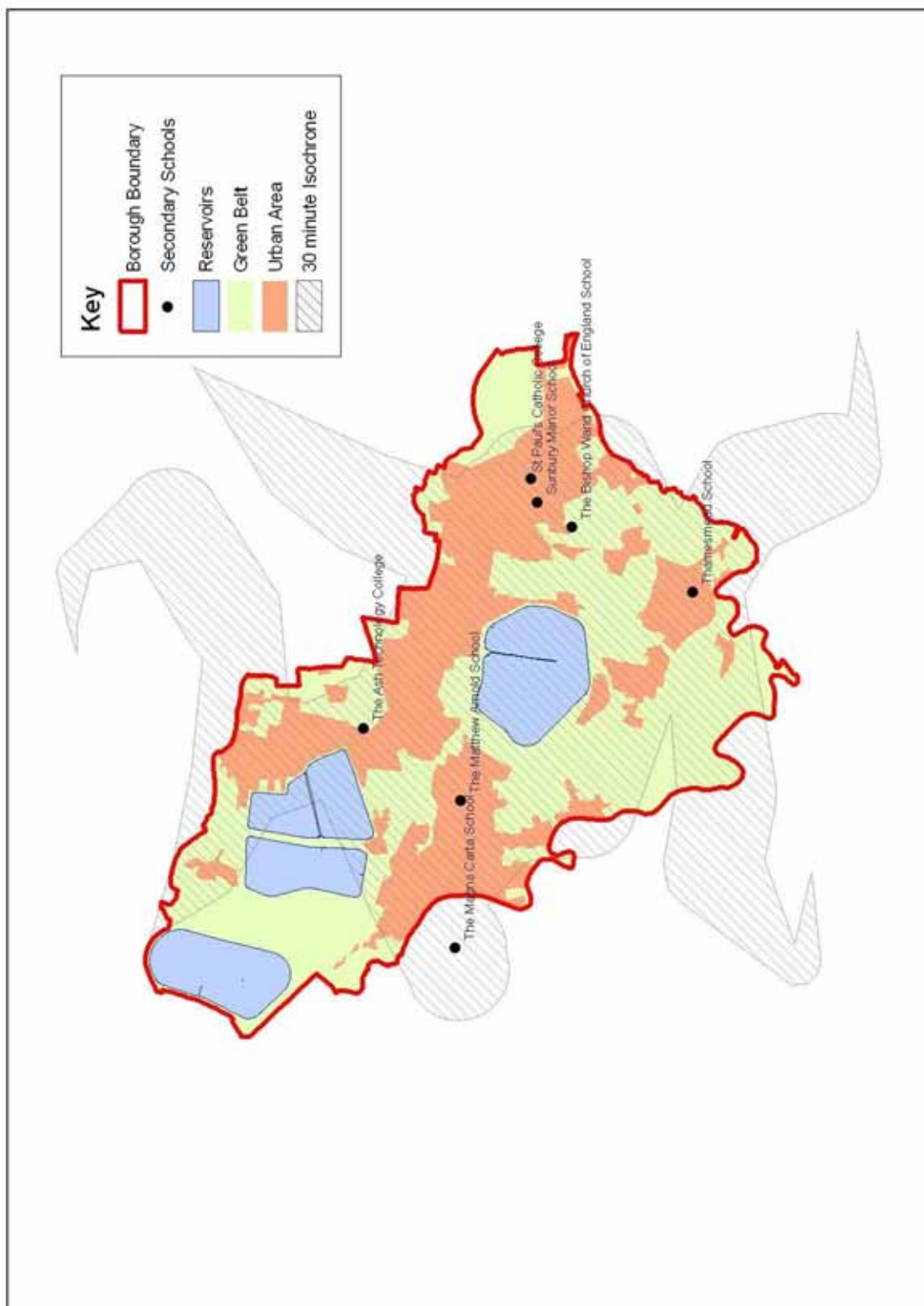
Map 4 30 minute Public Transport Accessibility to Hospitals



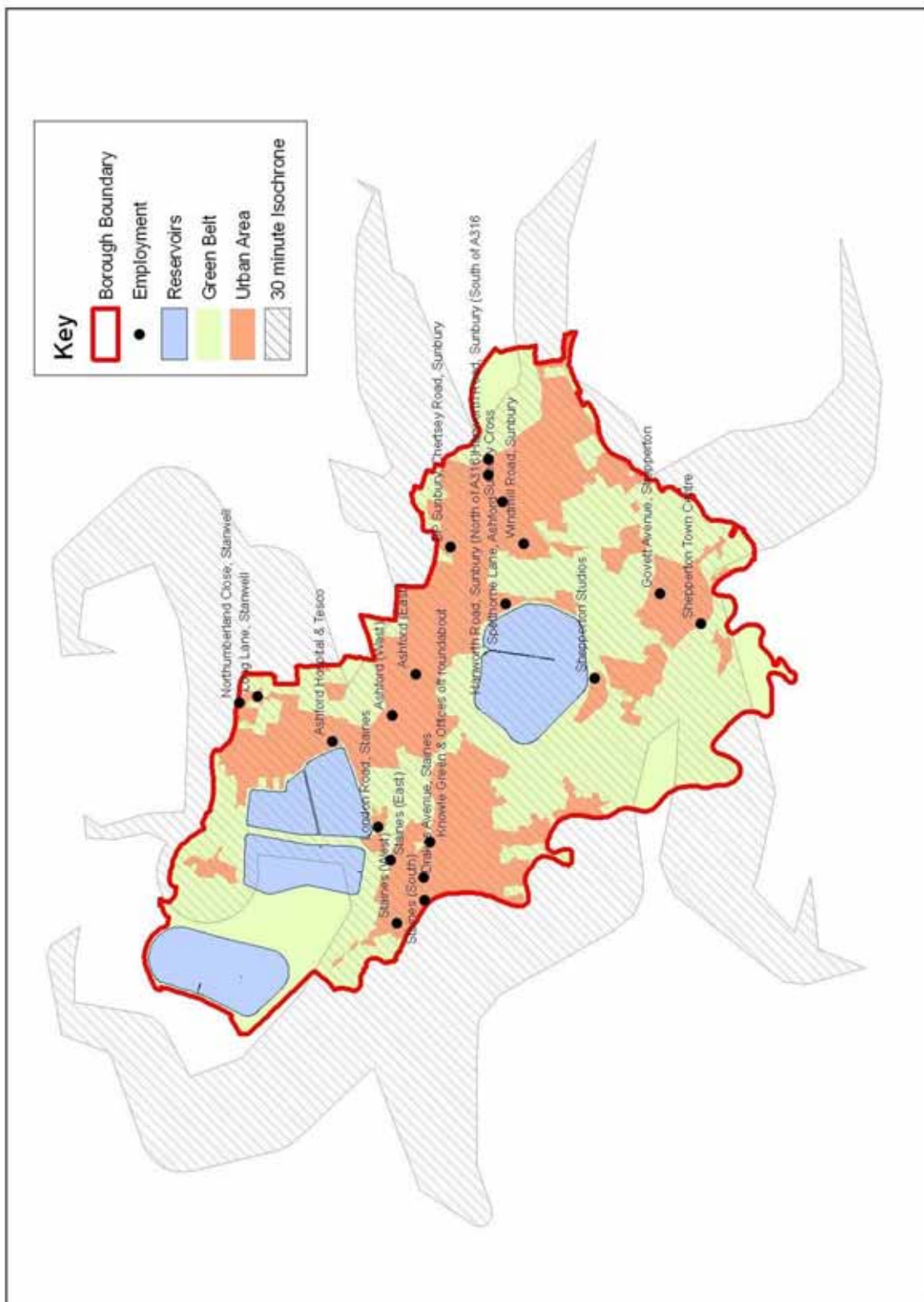
Map 5 30 minute Public Transport Accessibility to Primary Schools



Map 6 30 minute Public Transport Accessibility to Secondary Schools



Map 7 30 minute Public Transport Accessibility to Employment sites



Map 8 30 minute Public Transport Accessibility to Town

