

6 Traffic and transport

Introduction

- 6.1 This chapter assesses the effects of the proposed development on transportation and access. In particular it considers the potential effects of severance, driver stress and delay, pedestrian and cyclist amenity and delay, and accidents and safety.
- 6.2 This chapter (and its associated figures and appendices) should be read in conjunction with chapters 1 and 2 of this ES. The assessment presented in this chapter is based on the development specification and the proposed development, as set out in chapter 2: The site description and the proposals.
- 6.3 The transport assessment (TA) produced by WSP UK Ltd (WSP) provides further detailed traffic and transport information relating to the proposed development and forms technical appendix E to this ES. The TA forms a reference document for the application but does not need to be relied upon in terms of the presentation of impacts contained in this chapter.
- 6.4 The scope of this chapter has been agreed with Cherwell District Council (CDC) through its screening opinion, dated 25 April 2012, as appropriate to this assessment. Further to this, through correspondence between WSP and Michael Deadman at Oxfordshire County Council (OCC), the highway authority, on 22 June 2012 the approach to ascertaining the traffic flows used in the assessments was agreed.
- 6.5 This chapter first outlines any specific transport planning policy before discussing the relevant assessment criteria and scope of the assessment. The construction and operational transport effects associated with the proposed development are then assessed. The appropriate mitigation measures and residual effects are then outlined.
- 6.6 The data sources used for the assessment are set out in table 6.1.

Cherwell District Council Cherwell Local Plan [online]. Available at http://www.cherwell.gov.uk/index.cfm?articleid=1720
Cherwell District Council Non-Statutory Cherwell Local Plan 2011 [online]. Available at http://www.cherwell.gov.uk/index.cfm?articleid=1720
Department for Communities and Local Government (March 2012) National Planning Policy Framework [online]. Available at http://www.communities.gov.uk/publications/planningandbuilding/nppf
Department for Transport (DfT) (July 2004) The Future of Transport: A Network for 2030
Department for Transport (DfT) (March 2007) Guidance on Transport Assessment [online]. Available at http://www.dft.gov.uk/publications/guidance-on-transport-assessment
Highways Agency (various dates) Design Manual for Roads and Bridges (DMRB) [online]. Available at http://www.dft.gov.uk/ha/standards/dmr/index.htm
Institute of Environmental Management and Assessment. (2003). Guidance for Environmental Assessment of Road Traffic. Lincoln: IEMA
Oxfordshire County Council Oxfordshire Local Transport Plan 3 2011-2030 (April 2011) [online]. Available at http://www.oxfordshire.gov.uk/cms/public-site/local-transport-plan
The Secretary of State (May 2009) The South East Plan: Regional Spatial Strategy for the South East of England, May 2009 [online]. Available at http://webarchive.nationalarchives.gov.uk/20100528142817/http://www.gos.gov.uk/gose/planning/regionalPlanning/815640/
WSP UK Ltd (July/August 2012) Transport Assessment
Table 6.1: Data sources

Legislation, policy and guidance

Legislative framework

- 6.7 There is no legislation that is directly relevant to the scope of this chapter, although other disciplines informed from the outputs of the transportation work may be subject to such legislation.

Planning policy

- 6.8 Planning policy at the national, regional, county and local level that is of particular relevance to transport matters is summarised below.

National Planning Policy Framework

- 6.9 The National Planning Policy Framework (NPPF) was published in March 2012 and abolishes all PPGs and PPSs. It contains central government's policy framework to enable sustainable development. Section 4 of the NPPF focuses on promoting sustainable transport, whilst acknowledging that the opportunities to maximise sustainable transport vary within different communities and from rural to urban areas.
- 6.10 The NPPF therefore provides guidance for local planning authorities to enable them to create good quality developments and recognises the positive role of sustainable urban extensions in achieving this. It promotes mixed-use development, particularly for larger sites, as well as the use of travel plans.

The Future of Transport: A Network for 2030

- 6.11 In July 2004 the government set out its policy for the future of transport in the White Paper *The Future of Transport: A Network for 2030*. The document looks at the factors that will shape travel and transport over the next thirty years and sets out how the government will respond to the increasing demand for travel, maximising the benefits of transport while minimising the negative impact on people and the environment.

The South East Plan: Regional Spatial Strategy for the South East of England, May 2009

- 6.12 The South East Plan (SEP) was adopted in May 2009 and provides a vision for the South East for the period to 2026. It provides an outline of how the region needs to respond to the challenges it faces including housing, the economy, transport and the need to protect the environment. It is the Regional Spatial Strategy for the South East and was a material consideration in the determination of the South West Bicester planning application. Whilst the Secretary of State has indicated his intention to revoke regional strategies, they currently remain in force and are therefore relevant to the decision making process.

- 6.13 The overall vision for the South East, as set out within the SEP is:

“A socially and economically strong, healthy and just South East that respects the limits of the global environment. Achieving this will require the active involvement of all individuals to deliver a society where everyone, including the most deprived, benefits from and contributes to a better quality of life. At the same time the impact of current high levels of resource use will be reduced and the quality of the environment will be maintained and enhanced.”

- 6.14 A key crosscutting theme in the SEP is the need for investment, from the government and developers, in physical and community infrastructure to sustain current levels of growth.

- 6.15 Several objectives are outlined within the SEP with regard to transport. These include:

- *“To facilitate urban renaissance and foster social inclusion by re-balancing the structure and use of the transport system. In particular, bringing forward measures that encourage modal shift to more sustainable modes and significantly improve the attractiveness of local public transport services, walking and cycling”*
- *“To maintain the existing transport infrastructure as an asset”*

6.16 The transport strategy and policies within the SEP are focused on a set of core principles, which include:

- Managing and investing
- Mobility management
- Road pricing and charging
- Communications technology
- The rural dimension
- Regional hubs and spokes
- The gateways, airports and ports
- Freight

6.17 With regards to the region's transport system and its capacity, the SEP states that:

“Achieving a more sustainable pattern of development is dependent upon accepting that the transport system within the region is a resource that has a finite capacity at any point in time. While this capacity will increase as a consequence of the investment already programmed, the RTS reflects the simple fact that it is not possible to build our way out of the problem. Future investment in the transport system must play its proper role in tackling climate change as well as supporting people's desire for mobility.”

Local planning policy

Oxfordshire Local Transport Plan, April 2011

6.18 The Third Oxfordshire County Council (OCC) Local Transport Plan was adopted in April 2011 and covers transport policies for the county for the period from the year 2011 to 2030. The policies set out a vision for transport in Oxfordshire in regards to tackling congestion, delivering accessibility, safer roads, better air quality and improving the street environment.

6.19 In order to reduce the impact of congestion across the whole of Oxfordshire the policy proposes a dual approach including managing traffic growth (by improving public transport provision) as well as limited targeted network capacity increases such as junction improvement schemes.

Cherwell Local Plan

6.20 Cherwell District Council is currently in the process of developing a local plan. The local plan, which will be the key document setting out planning policy for the period until 2026, was considered by the Cherwell District Council Executive on 28th May 2012, with public consultation due to take place later this year. We currently understand that the council intend that submission will take place before the end of the year.

Non-Statutory Cherwell Local Plan

6.21 This plan, whilst not part of the development plan for the district, was approved by the council as an interim policy document for development control purposes. It was a key material consideration when the Outline Planning Application for South West Bicester was being determined.

- 6.22 Transport policies within the Non-statutory Cherwell Local Plan (NSCLP) have been prepared alongside Oxfordshire County Council, Integrated Transport and Land Use Strategies for Banbury and Bicester. The main aim of the strategies is to seek to accommodate planned development whilst minimising the growth in motorised traffic. The NSCLP thus takes into account the following key principles:
- *“Direct new development to locations where it can be accessed by walking, cycling and public transport and so reduce the need to travel, particularly by motor car”*
 - *“Facilitate improvements to transport infrastructure”*
 - *“Adopt reduced parking strategies as maxima for new developments”*
- 6.23 In order to provide credence to these key principles, a number of policies have been adopted covering all areas including transport:
- Policy TR6: *“The Council will seek to facilitate the provision and operation of an effective public transport system as a genuine alternative to the use of private vehicles”*
 - Policy TR9: *“All new development shall provide cycle parking to Oxfordshire County Council standards”*
- 6.24 Housing allocations for Bicester within the NSCLP have been made with regard to the structure plan and central government guidance in making, *“the best use of previously developed land and in reducing the need to travel particularly by private car”*.
- 6.25 South West Bicester was identified as a mixed-use urban extension within the NSCLP. Policy H13 sets out a framework for development in the area.
- 6.26 Insert 2 of the NSCLP identifies the allocation of employment to the east of the A41 and strategic footpaths and cycle links through South West Bicester. Policies H13 and TR31 detail the ability of South West Bicester to meet the overarching sustainable transport objectives of national policy through to local planning policy.
- 6.27 Land use and transport policies are stated to be integrated and support the strategic aims of the Oxfordshire Local Transport Plan. Chapter 6 of the NSCLP sets out transport policies in relation to the development of local transport infrastructure in the Cherwell District.
- 6.28 Policy TR5 advocates that development should not compromise the safe movement and free flow of traffic, whilst policy TR6 seeks to facilitate the provision and operation of an effective public transport system as a genuine alternative to the use of private vehicles.
- 6.29 Other transport policies of relevance to the proposed development at South West Bicester include policy TR11 regarding parking provision, policy TR19 for roads in residential areas as well as policies TR26 and TR27 regarding highway schemes in Bicester.
- 6.30 The latter two policies are of particular importance for the development at South West Bicester in their detailing of the A41/A4095 link road and the associated roads from the A41 to Howes Lane / Middleton Stoney Road. The

A41/A4095 link road scheme, also known as the South West Bicester Perimeter Road, was successfully delivered ahead of schedule and was totally funded by Countryside Properties (Bicester) Ltd.

Guidance

Institute of Environmental Management and Assessment Guidelines for the Environmental Assessment of Road Traffic

6.31 Best practice guidance considered as part of this assessment includes the Institute of Environmental Management and Assessment's (IEMA) note *Guidelines for the Environmental Assessment of Road Traffic (Guidance Note No. 1)*. This note sets out the recommended list of likely environmental impacts which could be considered as potentially significant whenever a new development is likely to give rise to changes in traffic flows. These are:

- Severance
- Driver stress and delay
- Pedestrian delay
- Pedestrian and cyclist amenity
- Accidents and safety
- Hazardous loads
- Exceptional loads

6.32 In accordance with IEMA's *Guidelines on the Environmental Assessment of Road Traffic* an assessment of sensitive receptors has been undertaken identifying the proximity of each to the local highway network. Sites that have been considered to be sensitive receptors are:

- Schools
- Health facilities (GP surgeries, dental practices etc.)
- Community facilities and sheltered housing
- Congested junctions

6.33 In order to determine the extent of the local highway network to be assessed within this chapter, the following thresholds have been applied in accordance with the IEMA guidelines:

- Include links where traffic flows are expected to increase by more than 30%, or where HGV flows are expected to increase by more than 30% as a result of the proposed development
- Include links in proximity to sensitive receptors, as defined previously, where traffic flows are expected to increase by more than 10% as a result of the proposed development

Guidance on Transport Assessments (Department for Transport and the Department for Communities and Local Government)

6.34 This guidance, published in March 2007, outlines the methodology on the required content and preparation of a TA. Detailed analysis has been undertaken within the TA accordingly. Guidance on the derivation of assessment years, the analysis period and trip generation have not been replicated in this chapter.

Design Manual for Roads and Bridges (DMRB)

- 6.35 In order to assess the transport effects of the proposed development, the DMRB has been consulted. Specifically, severance has been assessed using guidance provided in Volume 11, Section 3, Part 8, entitled Pedestrians, Cyclists, Equestrians and Community Effects.
- 6.36 Driver stress has been assessed using guidance provided in Volume 11, Section 3, Part 9, entitled Vehicle Travellers, and Volume 13, Section 1, Part 5, entitled Speeds on Links.
- 6.37 Furthermore, accident and safety calculations have been undertaken in accordance with guidance in Volume 13, Section 1, Part 2, entitled, The Valuation of Costs and Benefits. The guidance allows for expected and actual accident rates to be calculated and compared for links and junctions of a similar nature.

Assessment methodology and significance criteria

Scope of the assessment

- 6.38 With regards to transportation and access the following conditions on the road network have been assessed in detail:
- Severance
 - Driver stress and delay
 - Pedestrian amenity and delay
 - Cyclist amenity and delay
 - Fear and intimidation
 - Accidents and safety
 - Hazardous loads
- 6.39 It is considered that any movements of hazardous loads would be restricted to the construction phase of the development. In this respect, an assessment of hazardous loads has been carried out only for this stage of the proposed development.
- 6.40 The effects of hazardous loads were scoped out of the assessment of effects during operation as it was considered there would be no significant or abnormal movements of hazardous materials to or from the application site during the operational phase due to the nature of the proposed development.

Assessment of severance

- 6.41 There are no published definitive guidelines on the assessment of severance; however, severance is defined in the DMRB as: “...*the separation of residents from facilities and services they use within their community caused by new or improved roads or by changes in traffic flows.*”

- 6.42 Several factors are considered in determining the existing level of severance. These include road width, traffic flow and composition, traffic speeds and the availability of pedestrian crossing facilities.
- 6.43 The DMRB provides a set of measures for the identification of community severance and offers guidance as to the level of pedestrian diversion that may follow in terms of the two-way AADT of a link. Table 6.2 outlines the thresholds of community severance as prescribed by the DMRB, relating to traffic flows and increases in journey length (diversion).

Severance Level	Traffic Flow (AADT)	Diversion
Slight	<8,000	<250 m
Moderate	8-16,000	250-500 m
Significant	>16,000	>500 m

Table 6.2 Thresholds of severance levels

Source: Design Manual for Roads and Bridges

- 6.44 The DMRB provides guidance on the level of relief of severance that may be afforded by pedestrian crossings. Table 6.3 outlines the extent to which severance may be reduced by reductions in traffic flows, e.g. where existing traffic flows are reduced by 30-60% in a built up area, moderate relief from severance may be achieved.

Location	Slight	Moderate	Significant
Built-up-area	<30%	30-60%	>60%
Rural area	60-75%	75-90%	>90%

Table 6.3: Relief from severance by reductions in existing traffic

Source: Design Manual for Roads and Bridges

- 6.45 For the purpose of determining the magnitude of change (relating to severance) resulting from the proposed development, the thresholds set out in table 6.3 will be applied.

Assessment of driver stress and delay

- 6.46 Driver stress, as outlined in the DMRB Volume 11 Section 3 Part 9, has three principal elements: frustration, fear of potential accidents, and uncertainty relating to the route being followed. The weight of these factors varies depending on the driver. For example, those who drive for commuting purposes will often have a higher stress threshold due to their experience and knowledge of a route compared to those who may only drive occasionally for leisure or personal purposes.
- 6.47 The DMRB outlines the thresholds of traffic flow and average journey speeds at which driver stress is perceived to change. These thresholds are summarised for single and dual carriageway roads in tables 6.4 and 6.5. It should be noted that the measure of traffic flow is in units as set out in the DMRB. Accordingly, for the purposes of determining driver stress only, a light vehicle will be considered as 1 unit and heavy goods vehicles will be considered as 3 units.

Average peak hourly flow per lane	Average journey speed (kph)		
	<50	50-70	>70
<600	High*	Moderate	Low
600-800	High	Moderate	Moderate
>800	High	High	High

Table 6.4: Driver stress thresholds for single carriageway roads

Source: Design Manual for Roads and Bridges

*Moderate if in urban area

Average peak hourly flow per lane	Average journey speed (kph)		
	<60	60-80	>80
<1,200	High*	Moderate	Low
1,200-1,600	High	Moderate	Moderate
>1,600	High	High	High

Table 6.5: Driver stress thresholds for dual carriageway roads

Source: Design Manual for Roads and Bridges

*Moderate if in urban area

- 6.48 For the purpose of determining the magnitude of change (relating to driver stress and delay) resulting from the proposed development, the thresholds set out in table 6.3 will be applied.
- 6.49 The sensitivity of driver stress and delay along each link will be based on the nature of the links. For example it is likely that vehicle drivers are more sensitive to changes in driver stress and delay along strategic routes where they expect to be able to travel uninterrupted, than for example along quiet residential roads that provide local access only.

Assessment of pedestrian and cyclist delay and amenity

- 6.50 Increases in traffic levels as a consequence of a development are likely to lead to a greater degree of delay to pedestrians wishing to cross roads. The degree of pedestrian delay is therefore correlated with severance.
- 6.51 Few quantitative methods for assessing pedestrian delay exist. IEMA *Guidance for the Environmental Assessment of Road Traffic* suggests a range of pedestrian crossing times of 10 seconds (lower threshold) to 40 seconds (higher threshold), which equate to a link with no crossing facilities of a two-way flow of approximately 1,400 vehicles in the peak periods. However, the guidance also recommends that assessments should be based on judgement rather than specific thresholds to determine whether or not there is significant pedestrian delay. Nonetheless, the thresholds described in the guidance have been used as a starting point for this assessment. No specific guidance exists for the assessment of cyclist delay and amenity.
- 6.52 For the purpose of the assessments contained within this chapter, and in combination with professional judgement, pedestrian and cyclist delay will be classed as low where traffic flows are less than 1,400 vehicles per average peak hour, moderate where flows are between 1,400 and 2,800 vehicles per average peak and high where traffic flows exceed 2,800 vehicles per hour.

- 6.53 Pedestrian and cyclist amenity will be rated on a five point scale, ranging from very poor, poor, average, and good to excellent. It should be noted that the level of amenity is based on the nature of the link, for example pedestrian amenity along a rural lane without footways could be rated as average whereas along a residential road this would be classed as poor or very poor.
- 6.54 For the purpose of determining the magnitude of change (relating to pedestrian and cyclist delay and amenity) resulting from the proposed development, the thresholds set out in table 6.3 will be applied to the HGV traffic flows.
- 6.55 The sensitivity of pedestrian and cyclist delay and amenity along each link will be based on the nature of the links and the likely pedestrian and cyclist demand.

Assessment of fear and intimidation

- 6.56 There is no formal guidance and no consensus of thresholds for the assessment of the level of fear and intimidation experienced by pedestrians. However, the degree of fear and intimidation experienced is generally dependent on traffic volumes, composition and the presence of protection such as wide footways or guardrails. Therefore, the assessment of the level of fear and intimidation has been made based on professional judgement, taking into account the combination of these factors.
- 6.57 For the purpose of determining the magnitude of change (relating to fear and intimidation) resulting from the proposed development, the thresholds set out in table 6.3 will be applied to the HGV traffic flows.
- 6.58 The sensitivity of fear and intimidation along each link will be based on the nature of the links and the likely pedestrian demand.

Assessment of accidents and safety along links

- 6.59 Personal Injury Accident data for a five year period ranging from 1 January 2007 to 31 May 2012 were obtained from OCC for the study area and the actual average annual accident rate will be determined. Typical accident rates along links calculated in accordance with guidance provided in the DMRB will then be compared to the actual accident rates.
- 6.60 For the purpose of determining the magnitude of change (relating to accidents and safety) resulting from the proposed development, the thresholds set out in table 6.3 will be applied.
- 6.61 The sensitivity of accidents and safety along each link will be based on the actual average annual accident rate in comparison to the typical average annual accident rate. Where the actual rate is lower than the typical, sensitivity would be classed as low, where the rates are approximately equal, sensitivity would be classed as medium and where the actual rate is higher than the typical sensitivity would be classed as high.

Proposed development and planning history

- 6.62 The development proposals are set out in detail in chapter 2: The site description and the proposals of this ES; however, a brief summary is provided in the following paragraphs.
- 6.63 The Section 73 application relates to an existing planning permission for 1,585 dwellings on the South West Bicester site and thus benefits from a consented level of trip generation. Against this, it is considered that the increase in the trip generation resulting from the additional 100 dwellings would not be material to the operation of the surrounding road network. An estimate of the trip generation is set out in table 6.6.

Mode of travel	Total AM Peak (08:00-09:00)			Total PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Non-car	10	40	49	23	10	33
Car driver	8	34	42	33	15	48
Car passenger	3	14	17	14	6	20
Total	21	88	109	71	31	102

Table 6.6 Peak hour trip generation by proposed development
Source: Consultant calculated

- 6.64 From a master planning perspective, it is envisaged that the additional 100 dwellings on site will be distributed across the majority of parcels within the site boundary and this will be done in full accordance with the existing parameter plans relating to height and density.
- 6.65 It is anticipated that no additional infrastructure will be required to enable the delivery of the additional residential units within the development and that the provision of the Design Code can be applied flexibly to the consideration of the slight density increase which certain areas will be subject to.

Consultation

- 6.66 Other than in the context of the screening process mentioned at the beginning of this chapter, no further consultation relevant to this chapter has been undertaken.

Method of baseline data collation

Desk study

- 6.67 Information about existing bus and rail services and facilities was obtained through desk studies, using operator websites.
- 6.68 Personal Injury Accident data have been obtained for roads within the study area.

Assessment modeling

- 6.69 Whilst a traffic model exists for the Bicester area, it was agreed with officers from OCC that, given the scale of the proposed development and the strategic nature of the model, the use of the model is not required for the purpose this report.
- 6.70 Part of the existing planning consent is under construction at the time of writing. As part of this, permission has been granted for the construction of the South West Bicester Perimeter Road. This was opened on 24 April 2012. The effect of the link road in terms of local traffic patterns are not likely to be fully felt for some time, as the highway network seeks to reach a new equilibrium. As a result, the best estimate as to the traffic conditions with the link road in place remains the South West Bicester Transport Assessment of traffic diversion. This has been used to inform the baseline and future baseline conditions in this chapter.
- 6.71 In terms of committed development, the assessment presented in this chapter accounts appropriately for the following in terms of the traffic flows:
- South West Bicester phase 1 (1,585 units) (06/00967/OUT)
 - South West Bicester reserved school site (46 units) (11/01502/OUT)
 - Eco-town Pilot Phase – residential (10/01780/HYBRID)
 - Gavray Drive – residential (10/01667/OUT)
 - Bicester town centre (07/00422/F)
 - Talisman Road (09/01595/F)
 - Bicester Business Park (07/01106/OUT)

Traffic flow scenarios

- 6.72 Traffic flows resulting from the consented developments were obtained from the transport assessments in support of the respective planning applications, where these were felt to have an influence on the network in the vicinity of the proposed development. In other cases, developments were considered not to have a direct effect on the area.
- 6.73 In addition to the consented developments, the following were considered for inclusion. However, due to their location or planning status within the timeline for the submission of the Section 73 application, these were agreed with OCC not to be explicitly required for inclusion in the traffic flows:
- Former DLO Caversfield, Skimmingdish Lane (11/00151/F & 11/00805/F)
 - Oxford Diocesan Board Business Park (05/01563/OUT & 09/01659/REM)
 - Graven Hill residential (11/01494/OUT) (not consented)

- 6.74 The traffic flow assessments also considered and were made aware of the following proposals in the pipeline;
- Albion Land Business Park
 - Tesco relocation / expansion to a larger store
 - Bicester Village Expansion and associated highway works
 - NW Bicester Eco-Town (5,000 dwellings)
- 6.75 However, at the time of submission, there are no TAs associated with the above projects, or any current applications. It was confirmed with OCC that these projects were not required to be included in the determination of background or forecasted traffic flows in connection with this application.
- 6.76 Traffic flows resulting from the proposed development were calculated using the trip rates and methodology used in the original transport assessment in support of the 2006 South West Bicester outline application.
- 6.77 In summary, this chapter assesses the following scenarios:
- 2019 Do minimum (2019 DM) – future year with consented developments
 - 2019 Do something (2019 DS) – future year with addition of consented developments and the proposed development

Significance criteria

- 6.78 The assessment of potential effects as a result of the proposed development will take into account both the construction and operational phases. The significance level attributed to each effect will be assessed based on the magnitude of change due to the development proposals, and the sensitivity of the affected receptor / receiving environment to change, as well as a number of other factors that are outlined in more detail in chapter 1: Introduction and methodology of this ES. The sensitivity of the affected receptor / receiving environment and the magnitude of change are assessed in accordance with the definitions provided in figures 6.1 and 6.2.

Significance of effects

- 6.79 The following terms have been used to define the significance of the effects identified, in accordance with the definitions provided in figure 6.3:
- Very substantial effect (either beneficial or adverse) on transport conditions
 - Substantial effect (either beneficial or adverse) on transport conditions
 - Moderate effect (either beneficial or adverse) on transport conditions
 - Slight effect (either beneficial or adverse) on transport conditions
 - No effect

Baseline

Extent of the study area

- 6.80 It is considered that the highest increase in traffic flows because of the proposed development will occur on roads immediately adjacent to the site. Therefore, traffic flows for the following roads have been obtained:
- South West Bicester Perimeter Road
 - Middleton Stoney Road
 - A41 adjacent to the site
 - B4030 Oxford Road adjacent to the site
- 6.81 Out of all links, those that experienced an increase in total daily flows or daily HGV flows of 30% or more (or between 10% and 30% if there were any sensitive receptors along the link) are judged to be subject to further assessment, in line with the IEMA guidance (2003).
- 6.82 The future baseline traffic flow rates (2019 DM) for all corridors that were initially considered are shown in table 6.7 in the assessment section below and the locations of the corridors are shown on figure 6.4.

Assessment of effects

- 6.83 Table 6.7 shows the changes in traffic flows as a result of the proposed development.

Road link		Total vehicles (AADT)			HGV (AADT)		
		2019 DM	2019 DS	Increase	2019 DM	2019 DS	Increase
1	Perimeter Road (south of Middleton Stoney Road)	17,807	17,946	0.79%	2,315	2,333	0.79%
2	Perimeter Road (west of A41)	7,208	7,396	2.61%	937	961	2.61%
3	Middleton Stoney Road (east of Perimeter Road)	9,939	10,109	1.70%	696	708	1.70%
4	Middleton Stoney Road (west of Oxford Road)	12,072	12,126	0.45%	845	849	0.45%
5	A41 (south of Oxford Road)	45,449	45,498	0.11%	5,908	5,915	0.11%
6	Oxford Road (north of A41)	25,702	25,718	0.06%	1,799	1,800	0.06%

Table 6.7: Traffic flows and percentage increase in traffic flows with addition of proposed development

- 6.84 Table 6.7 shows that all increases in traffic flows from the proposed development fall well below the prescribed threshold for further assessment. It is therefore considered that no further detailed assessments relating to the transport effects of the proposed development are required.
- 6.85 Therefore, the effect on the transport criteria covered in paragraph 6.31 due to the operation of the proposed development is considered to be negligible for all road links.

Effects during construction

Transport and access effects during construction

- 6.86 The majority of construction traffic movements will be generated from construction workers' cars and vans, having a largely incidental impact on the surrounding highway network. In addition a relatively small number of construction HGV will be generated by the proposed development.
- 6.87 It is envisaged that the construction traffic would be managed through the construction environmental management plan (CEMP) that will already be in place in connection with the construction of the remainder of the South West Bicester development, and thus will benefit from established practices.
- 6.88 Whilst construction traffic flows have not been calculated for the purpose of this chapter, they are likely to be significantly lower than the flows associated with the occupied units at any one time, and the increase in traffic flows from the construction would ultimately be lower than the increase from the operation of the development (table 6.7).
- 6.89 Therefore, there will be no effect on the local highway network as a result of the construction of the proposed development.

Effects post-construction

- 6.90 Table 6.7 revealed that the increase in traffic flows from to the proposed development is not significant against the thresholds of traffic flows increase on which the assessment of transport effects is based.

Mitigation

Construction

- 6.91 As indicated in paragraph 6.87, it is anticipated that construction traffic will be managed through implementation of a CEMP.

Post-construction

- 6.92 No mitigation measures are proposed, or indeed required, specifically by the proposed development. However, any mitigation measures to be implemented through the planning consent for the South West Bicester outline application will also mitigate any effect resulting from the proposed development.
- 6.93 This includes the benefits that can be gained from ensuring that the additional 100 dwellings are covered by the same travel plan as South West Bicester. These will include the provision of measures aimed at promoting sustainable modes of transport. This could further benefit the longer term sustainability of public transport in the area, resulting from increased patronage, subject to discussions with OCC and the local operator.

Residual effects

- 6.94 There will be no significant residual effects on the local highway network either during or post-construction of the proposed development.