

13.0 Transport & Accessibility

13.1 Introduction

This chapter has been prepared by Vectos and reports the potential likely significant effects of the proposed development in relation to transport and accessibility.

This chapter should be read in conjunction with *Chapters 3 and 4*, which provide details of the site and the proposed development, as well as the standalone Transport Assessment (TA) (including Travel Plan), which has been submitted separately as part of the planning application.

The chapter is supported by the following figures and appendices.

| Figures | Title |
|--------------------|------------------------------------------|
| <i>Figure 13.1</i> | Study Network |
| <i>Figure 13.2</i> | Existing Walking & Cycling Routes |
| <i>Figure 13.3</i> | Proposed Pedestrian & Cycle Improvements |
| <i>Figure 13.4</i> | Link Sensitivity Plan |
| Appendices | Title |
| <i>Appendix M1</i> | Traffic Flow Data |

13.2 Scoping and Consultation

The following key issues were identified for consideration in the assessment and are reported in this chapter:

- Temporary disturbance to local road users (including pedestrians and cyclists) arising from the construction works and associated traffic; and
- Changes to the flows on the local highway network as a result of the occupation of the proposed development, and associated effects on severance, pedestrian delay, pedestrian amenity and accidents and safety.

13.3 Assessment Methodology

13.3.1 Guidance

The Institute of Environmental Assessment (IEMA) 'Guidelines for the Environmental Assessment of Road Traffic'¹ have been used to ensure that adverse environmental effects arising due to predicted changes in traffic levels are properly and comprehensively addressed.

The IEMA guidelines advise the use of a 'check-list' of likely effects covering noise, vibration, visual effects, severance, driver delay, pedestrian delay, pedestrian amenity, fear and

¹ Institute for Environmental Assessment, 1994. Guidelines for Environmental Assessment of Road Traffic. [Now the Institute of Environmental Management and Assessment (IEMA)]

intimidation, accidents and safety, hazardous loads, air pollution, dust and dirt, ecological effect and heritage and conservation areas.

The guidelines acknowledge that for many developments, some of the effects listed may not be relevant. For example, it is stated that most developments will not result in an increase in the number of movements of hazardous/dangerous loads.

This Chapter deals only with those likely significant transport effects arising as a result of the proposed development. Effects relating to noise, vibration, air quality, ecology and visual amenity are reported in separate chapters of the ES. It is not anticipated that the proposed development will generate hazardous or dangerous loads and therefore this element has not been examined in detail. The transport effects considered within this Chapter comprise:

- Severance;
- Driver delay;
- Pedestrian delay;
- Pedestrian amenity; and
- Accidents and safety.

The TA is included as a standalone document as part of the planning application. This document contains a detailed analysis of the transport aspects of the proposed development and in particular a thorough analysis of the traffic effects and driver delay potentially caused by the proposed development. A summary of these driver delay impacts is reported in this ES Chapter.

Within this Chapter, the future baseline traffic conditions are compared with the future 'baseline plus development' traffic conditions, to assess the effect of the proposed development traffic.

Where there are likely to be significant adverse impacts, mitigation measures have been identified and the effects following implementation of these mitigation measures are then assessed and reported in this Chapter.

The remainder of this section describes the methodology used to undertake the above assessment.

13.3.2 Assessment Years

The following assessment years have been considered:

- Base Year: 2017; and
- Future Base Year: 2031.

2017 has been selected as the base year as this is when traffic surveys were undertaken.

A future base year of 2031 has been assessed for the Future Baseline and Future Baseline plus Development scenarios as it is anticipated this is when the development will be completed. These assessment years have been agreed with West Berkshire Council (WBC).

It should be noted that the site forms part of a wider strategic site with the proposed Sandleford Park West development (see *Chapter 4*). As part of the assessment to understand the likely

significant effects of the proposed development, an assessment of the strategic site (1,500 units) has also been undertaken. As outlined in *Chapter 4*, the proposed Sandleford Park West development will provide a new vehicle access via Warren Road, which will influence traffic distribution.

To undertake this assessment, traffic data has been extracted from the WBC VISSIM traffic model. The WBC VISSIM model considers the trip generation and distribution of the strategic site as a whole, in addition to considering the Sandleford Park and Sandleford Park West developments separately.

Traffic data has been extracted from the WBC VISSIM traffic model to assess the likely significant effects of the proposed development and proposed highway mitigation. Traffic within the VISSIM model is assigned on a zonal level, so proposed development traffic can enter and leave the model at given points but can use multiple routes in the model when available to travel between their origin and destination zones. As such, the introduction of highways mitigation has the potential to influence the distribution of traffic within the model.

In light of the above, there are three Future Year scenarios as follows:

- 2031 Future Year plus Development (covered in *Section 13.6*);
- 2031 Future Year plus Development with Highway Mitigation (covered in *Section 13.6*);
- 2031 Future Year plus Strategic Development (i.e. up to 1,500 units) (covered in *Section 13.7*).

An assessment of the strategic site (1,500 units) is considered a worst-case cumulative assessment.

13.3.3 Study Area

The study area has been defined, in accordance with IEMA guidelines, by identifying links or locations where it is considered that significant environmental effects may occur as a result of the proposed development. The geographical extent of the study area is presented in *Figure 13.1*.

| Link Reference | Link Location |
|-----------------------|--------------------------------------------------|
| 7 | A339 Newbury (South of Robin Hood) |
| 8 | A339 Newbury (North of Retail Park) |
| 9 | A339, Newbury (South of Pinchington Lane) |
| 11 | A343 Andover Road Newbury (West of Newtown Road) |
| 13 | Essex Street, Newbury |
| 14 | A343 Andover Road, Newbury |
| 15 | Monks Lane, West of Access |
| 16 | Pinchington Lane Newbury |
| 17 | Greenham Road, Newbury |
| 22 | B3421 Kings Road, Newbury |
| 263 | A339, East of Swan Roundabout |
| 23 | A343, South of A34 |
| 24 | Monks Lane, East of Access |

13.3.4 Desk Based Research and Data Sources

The following data sources have informed this assessment:

- Google Maps;
- Traveline website (used for bus services information);
- Sustrans (used for cycle route information);
- WBC website (used to obtain planning policy and information on Public Rights of Way);
- Traffic flows extracted from WBC VISSIM traffic model.

13.3.5 Field Survey

To obtain base flows for the assessment, Automatic Traffic Count survey data has been provided by WBC from 2017 surveys, on the following links.

- A339 Newbury (South of Robin Hood)
- A339 Newbury (North of Retail Park)
- A339, Newbury (South of Pinchington Lane)
- A343 Andover Road Newbury (West of Newtown Road)
- Essex Street, Newbury
- A343 Andover Road, Newbury
- Monks Lane, Newbury
- Pinchington Lane Newbury
- Greenham Road, Newbury
- B3421 Kings Road, Newbury
- A339, East of Swan Roundabout, Newbury
- A343, south of A34, Newbury.

13.3.6 Assessing Significance

Link Sensitivity

The sensitivity of a road can be defined by the vulnerability of the user groups who may use it (e.g. elderly people or children). A sensitive area may be where pedestrian activity is high, for example in the vicinity of a school or where this is already an existing safety issue. It should be noted that sensitivity of the receptor is judged on the sensitivity of road users (primarily pedestrians). It also takes account of the existing nature of the road e.g. an existing 'A' road is likely to have a lower sensitivity than a minor residential road.

Table 13.2 provides a summary of the types of receptors and the sensitivity of each, defined as substantial, moderate, minor and negligible in the IEMA guidance.

| Receptor Type | Receptor Sensitivity |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Receptors of greatest sensitivity to traffic flow: schools, colleges, playgrounds, accident clusters, retirement homes, roads without footways that are used by pedestrians | Substantial |
| Traffic flow sensitive receptors: congested junctions, doctors' surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, recreation facilities | Moderate |
| Receptors with some sensitivity to traffic flow: places of worship, public open space, tourist attractions and residential areas with adequate footway provision | Minor |
| Receptors with low sensitivity to traffic flows and those sufficiently distant from affected roads and junctions | Negligible |

A desktop exercise and a site visit on the 23rd February 2018 has been undertaken to identify the sensitivity of each receptor in the study area. All road links within the study area have been assessed and assigned sensitivity primarily based on the criteria set out in *Table 13.2*, as well as the assessors experience and judgement.

Screening Process

Within the IEMA guidance, two broad rules are suggested which can be used as a screening process to limit the scale and extent of the assessment:

- Rule 1: include highway links where traffic flows will increase more than 30% (or the number of heavy goods vehicles (HGV) will increase by more than 30%); and
- Rule 2: include any other specifically sensitive areas where traffic flows have increased by 10% or more.

Where the predicted increase in traffic flows is lower than the above thresholds, the IEMA guidelines suggest the significance of the effects can be stated to be negligible and further detailed assessments are not warranted. Furthermore, increases in traffic flows below 10% are generally considered to be insignificant in environmental terms given that daily variations in background traffic flow may vary by this amount.

Magnitude of Impact (Criteria)

Table 13.3 summarises the criteria used to determine magnitude of impacts based on the IEMA guidelines. This guidance sets out consideration, and in some cases thresholds, in respect to changes in the volume and composition of traffic to facilitate a subjective judgement of traffic effect and significance. These thresholds are guidance only and provide a starting point by which a detailed analysis will inform a subjective analysis of the effect magnitude.

It should be noted that the absolute level of an impact is also important (e.g. the total flow of traffic or HGVs on a link). This is because an increase, for example, of 100% in the traffic flow on a road is still likely to lead to negligible or minor effects if the existing flows are low.

| Impact | Negligible | Minor | Moderate | Substantial |
|--------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------|
| Severance | Change in total traffic or HGV flows of less than 30% | Change in total traffic or HGV flows of 30-60% | Change in total traffic or HGV flows of 60-90% | Change in total traffic or HGV flows of over 90% |
| Driver Delay | A judgement based on the results of traffic analysis using LinSig, ARCADY and PICADY models | | | |
| Pedestrian Delay | Two-way traffic flows <1,400 vehicles per hour | A judgement based on the road links with two-way traffic flow exceeding 1,400 vehicles per hour, in context of the individual characteristics | | |
| Pedestrian Amenity | Change in total traffic or HGV flows <100% | A judgement based on the routes with >100% change in context of their individual characteristics | | |
| Accidents & Safety | A judgement based on quantitative analysis | | | |

Significance

The significance of the effect will be judged on the relationship of the magnitude of effect to the assessed sensitivity of the receptor. The predicted significance of the effect is summarised in

| Sensitivity | Magnitude of Change | | | |
|--------------------|----------------------------|--------------|-----------------|--------------------|
| | Negligible | Minor | Moderate | Substantial |
| Negligible | Negligible | Negligible | Negligible | Minor |
| Minor | Negligible | Negligible | Minor | Moderate |
| Moderate | Negligible | Minor | Moderate | Substantial |
| Substantial | Minor | Moderate | Substantial | Substantial |

Likely significant effects can be either beneficial or adverse and are described as short, medium or long term, or permanent as shown below. For the operational assessment the effects are permanent, whereas for construction they will be short, medium or long term temporary effects.

- Short term: < 12 months
- Medium Term: 1 - 5 years
- Long term: + 5 years
- Permanent: effects that are considered to be irreversible or extremely long lasting

Limitations and Assumptions

The scheme parameters used in the assessment are set out in *Chapter 4* and are used to derive traffic generation estimates for the site.

The assumed future year to be assessed is 2031, broadly 11 years after submission of the planning application.

The main limitation to the baseline conditions presented within this Chapter is the precision of the traffic counts. Such counts are recorded over a day or a week and are subject to an accuracy of + or – 10%.

13.4 Baseline Conditions

13.4.1 Local Highway Network

Monks Lane runs east-west forming the northern boundary of the site. The carriageway is approximately 7 to 7.5m in width and traffic travelling along Monks Lane is subject to a 30mph speed limit and benefits from street lighting. There is a footway on the northern side and a shared footway/cycleway on the southern side of Monks Lane.

At its western end, Monks Lane meets the A343 Andover Road and Essex Street at a double mini roundabout junction. The A343 Andover Road leads north-east into Newbury town centre. To the south west the A343 gives access to the A34 Newbury Bypass and further afield to Andover.

The A34 Newbury Bypass leads north to the M4 giving access to London and the West of England. In addition, the A34 enables vehicles to travel west along the A4 to Marlborough and Swindon. The A34 continues north to Oxford. To the south the A34 leads to Winchester and Southampton and the M3.

At its eastern end, Monks Lane first meets Newtown Road (a 4-arm roundabout), which gives access to Newbury College and to Newbury Town Centre. This 4-arm roundabout links into another 4-arm roundabout which provides access to the A339 and to Pinchington Lane. In the vicinity of the A339 Pinchington Lane junction, traffic on the A339 is subject to a 50-mph speed limit.

To the south, the A339 continues to Basingstoke and the M3. To the north, the A339 gives access to Newbury Town Centre and joins the A4 east leading to Thatcham and Reading. The A339 continues north joining the A34 Newbury Bypass leading to the M4 and Oxford. The eastern arm of the roundabout, (Pinchington Lane) provides a link to the Newbury Retail Park which includes a Tesco superstore.

13.4.2 Sustainable Accessibility

Walking & Cycling

A plan indicating the existing walking and cycling network between the development site and Newbury Town Centre is presented at *Figure 13.2*.

In the immediate vicinity of the site on Monks Lane, which is street-lit throughout, there is a 3.0m wide shared foot/cycle way on the southern side of Monks Lane, while on the northern side of the carriageway there is a continuous 1.8m – 2.0m wide footway.

Two signal-controlled pedestrian crossings are provided on Monks Lane to facilitate crossing between the northern and southern footways. One is located to the west of the application site and is located approximately 30m west of the Newbury Rugby Club site access. The second

signal-controlled crossing is located adjacent the application site approximately 25 m west of the junction between Monks Lane and Rupert Road.

From this latter crossing, the footway on Monks Lane connects into the footway on Rupert Road which routes north through the predominantly residential area to the north of the application site and, by way of the wider footway network, provides links to Newbury Town Centre.

Moving onto Andover Road, to the west of the application site, and which also benefits from street lighting, 1.8 – 2.0m wide footways are provided on both sides of the road. A pelican crossing point is provided across Monks Lane approximately 30m west of the Newbury Rugby Club Access.

At the Monks Lane / Andover Road / Essex Street junction, dropped kerbs and a pedestrian refuge are available on the Monks Lane arm and a zebra crossing with tactile paving is provided on Essex Street.

The crossing points here provide connection into the footways on Andover Road, which in turn provide links to Newbury Town Centre to the north and Wash Common to the south. It also provides a link to local shops to the north west of the junction.

To the east of the application site at the Monks Lane / Newtown Road / A339 / Pinchington Lane / Newbury College roundabout junction, dropped kerbs, tactile paving and pedestrian refuges are provided on the College and Monks Lane arms.

The crossing over the Monks Lane arm provides a connection to the footway that runs along Newtown Road and leads north to Newbury Town Centre while the crossing over the Newbury College arm provides a link towards the A339 Newtown Road and Pinchington Lane.

Dropped kerbs are provided on the A339 and the link road between the two roundabouts and signalised pedestrian crossings are provided on Pinchington Lane and the A339 Newtown Road southern arm. The crossings over these roads provide links towards Pinchington Lane and the Newbury Retail Park and Tesco Supermarket to the east of the junction and south along the A339 and south towards Newtown.

Considering routes to the Greenham Common area from the application site, the most direct route for pedestrians runs from the northern boundary of the application site and east along Monks Lane and crosses over the A339 / Pinchington Lane / Newtown Road / Newbury College junctions by way of uncontrolled and a signal-controlled crossing points and continues along Pinchington Lane until it meets Greenham Road where access to Greenham Common is provided.

A second route runs from the application site and south along the footway on the A339 Newtown Road to the A339 / B4640 'Swan' roundabout junction, the route then continues east along the A339 which has footway provision on its northern side. Access to Greenham Common is then provided by way of a rural lane, which has no footway provision that runs north from the crossroads junction for the settlement of Adbury.

A Public Right of Way (PROW) extends through the Site from Warren Road to the A339. The PROW takes the form of an unsurfaced track.

A shared foot/cycleway runs past the application site along Monks Lane. In addition to the route adjacent the site, there is an extensive identified network of cycle routes that permeates through Newbury and comprises both signed on and off carriageway signed routes and various 'quiet routes' (i.e. lightly trafficked roads).

At its eastern end, the shared foot/cycleway connects into the shared foot/cycleway on the A339 Newtown Road and, by way of the identified 'quiet route' along Deadmans Lane, onto the shared foot/cycleways on Pinchington Lane which head to Greenham.

At its western end the shared foot/cycleway provides a link to the western corridor of identified on-road 'quiet routes' that route south towards Wash Common and north to the 'West Fields' area of Newbury and on into Newbury Town Centre.

In addition, Rupert Road is an identified 'quiet route' and this, either by way of other 'quiet routes' that permeate the predominantly residential area to the north, or by way of the shared foot/cycleway that runs along the eastern side of Newtown Road, provides another route towards Newbury Town Centre.

Finally, in terms of long distance cycle routes, National Cycle Route 4 (NCR 4), which runs from London to Fishguard, passes through Newbury and lies approximately 2.3 km to the north of the application site. NCR provides connection to Thatcham approximately 4.0 km to the east of the centre of Newbury and to Hungerford 13.5 km to the west.

Buses

The nearest bus stops to the site are located on Monks Lane, approximately 150 metres from the proposed site access.

Table 13.5 below summarises the routes and service frequencies from Monks Lane.

| Table 13.5: Local Bus Services | | | | | |
|--------------------------------|---------------------------------|-----------------------------------|-------------------|------------|------------|
| No. | Operator | Route | Average Frequency | | |
| | | | Weekday | Saturday | Sunday |
| 7A | Stagecoach in Hampshire Andover | Burghclere - Newbury | 3 per day | | No Service |
| 8 | Kennections | Newbury – Greenham (-Wash Common) | Hourly | | No Service |
| 103 | Newbury & District | Newbury – Greenham Common | 4 per day | No Service | |

Rail Services

Newbury railway station lies on the Reading to Taunton line, which is a major branch of the Great Western main Line. The station is served by local services operated by First Great Western from Reading to Newbury and Bedwyn, and by inter-city trains operated by First Great Western from London Paddington to the West Country with regular services throughout the day (frequency 30 – 60 minutes) into Reading and London Paddington.

The rail station is a 3.0 km cycle distance from the site enabling the future residents of the development to cycle to the railway station. In addition, Newbury Railway Station is only a short walk from Newbury Bus Station.

13.4.3 Accident Analysis

In order to assess the potential impact of the development proposals on road safety, the latest available personal injury collision (PIC) data was obtained for the period 01/05/2014 and 30/04/2019. A total of 95 collisions were recorded within the study network during the five-year period that data was obtained for, which resulted in 116 casualties.

A summary of the collisions and resultant casualties is provided in *Table 13.6* below.

| Casualty Classification | Number of Collisions | Number Resulting Casualties |
|--------------------------------|-----------------------------|------------------------------------|
| Slight | 81 | 102 |
| Serious | 13 | 13 |
| Fatal | 1 | 1 |
| Total | 95 | 116 |

The data indicates that there is no discernible pattern to collisions occurring within the study area, and that an increase in traffic is unlikely to have a direct correlation with an increase in collisions.

13.4.4 Baseline Traffic Flows

A baseline assessment year of 2017 has been selected. The baseline assessment establishes the existing traffic conditions in the study area.

As described previously, in order to obtain base flows for the assessment, traffic flows were extracted from WBC VISSIM traffic model. The Baseline traffic flows for the highway network are shown in *Appendix M1, Table 13.7 – Table 13.9*. The traffic data is presented in 'Total Vehicles' and 'Heavy Duty Vehicles (HDV)'. The HDV traffic flows not only include heavy goods vehicles but also buses.

13.4.5 Future Baseline Traffic Flows

In relation to the Future Baseline, there will be changes to traffic flows on the highway network irrespective of the proposed development coming forward. These are due to growth in traffic arising from other developments in Newbury. This therefore represents a cumulative assessment, as it takes into account expected growth in the surrounding area, as well as traffic generated by the proposed development.

The 2031 future year traffic flows have been provided by WBC. The traffic flows were extracted from WBC VISSIM traffic model.

The 2031 Future Baseline traffic flows for the highway network are shown in *Appendix M1, Table 13.10 – Table 13.12*. It is noted that the baseline and future baseline traffic flows have been agreed with West Berkshire Council (WBC).

13.5 Mitigation Measures

When considering the design of the site, the overarching transport vision for the proposed development was to reduce the need to travel offsite by private car. Sustainable means of

travel will be supported and incentivised in order to achieve a modal shift away from private car journeys.

13.5.1 Inherent Mitigation Measures

Proposed Site Accesses

There will be two points of vehicular access into the site; both from Monks Lane on the site's northern most boundary.

The primary access would take the form of a new three arm roundabout junction and would be located approximately 260m west of the junction between Monks Lane and Rupert Road. Monks Lane would form the eastern and western arms while the main site access spine road, which would have a carriageway width of 6.5m, would form the southern arm.

Additional Site Accesses

A new vehicle access will be provided at the eastern boundary of the site which will connect to the proposed A339 link located immediately to the north of the WBC Recycling Centre as part of the permitted Highwood Copse School development. This new access could also link to the recycling centre.

The proposed Sandleford Park West development will also provide a new vehicle access to the site via Warren Road. A proposed access at the western boundary will provide a link between the two sites to ensure efficient movement of traffic through the road network.

Pedestrian & Cyclists

In terms of pedestrian and cycle access, the shared foot/cycleway on Monks Lane would tie into a 3.0m wide shared foot/cycleway provided on the western side of the carriageway and would continue along the length of the spine road, while a 2.0m wide footway would be provided on the eastern side of the carriageway and would connect into the network of footways that would permeate throughout the site.

The existing PROW that currently runs through the southern part of the site will be retained and enhanced. The route connects the A339 at the east with Andover Road to the west of the site.

There will also be new pedestrian and cycle connections through the site and to its surroundings as shown on *Figure 4.1*.

13.5.2 Standard Mitigation Measures

A draft Construction Traffic Management Plan (CTMP) has been prepared to accompany the planning application (refer to Appendix F of the TA).

The final CTMP would help manage all types of construction vehicles to and from the site during construction with the aim of improving the safety and reliability of deliveries to site, reducing congestion and minimising environmental impacts. The draft CTMP has been prepared to demonstrate that traffic management of construction vehicles, reduction in congestion and impact on the environment have been considered. A final CTMP would be

produced in agreement with WBC, post-determination, when further details regarding the development of the site are known.

Specific mitigation contained in the CTMP includes:

- Phasing of construction;
- Access arrangements for workers and for HDVs;
- Routing restrictions;
- Vehicle sizes required and schedule of use;
- Necessary highway works;
- Traffic management;
- Parking and loading arrangements;
- Pedestrian and cyclist safety;
- Proposed working hours; and
- Proposed start and end dates for each phase of construction.

13.5.3 Actionable Mitigation Measures

Off-site Highways Works

As part of the development, it is proposed to implement several off-site highways improvement works at the Pinchington Lane/A339/Newtown Road roundabout junctions and St Johns Roundabout junction. As part of the development, it is proposed to convert the Pinchington Lane/A339/Newtown Road roundabout to a signalised crossroads and provide an additional southbound lane at the St Johns Roundabout junction. The proposals seek to provide additional capacity for traffic but also improve crossing facilities for both pedestrians and cyclists.

Drawings showing the proposed highways works can be viewed at Appendix I and Appendix J of the submitted TA.

Pedestrians & Cyclists

Newtown Road has a dedicated cycle lane, which connects to the town centre, and Rupert Road is a designated quiet route. To enhance the use of Rupert Road for both pedestrian and cyclists, way-finding signage is proposed in the form of 'gateway maps' and directional signs in order to enhance the legibility of the route and provide a feeling of continuity between the site and surrounding facilities. The prominence of this route for cyclists will be enhanced through additional road markings including the use of cycle symbols (Diagram No. 1057).

Wayfinding signage is also proposed on Newtown Road to improve legibility to the town centre and highlight access across the A339 to the east.

Further wayfinding signage will be provided on Andover Road to improve legibility to the west of the site.

The proposed improvements to the pedestrian and cycle network as a result of the proposed development can be viewed at *Figure 13.3*.

Public Transport

An objective of the proposals is to provide a good quality public transport service, which serves the site. The proposed service would provide an alternative mode of travel to the private car for new residents of the site.

The main purpose of the service will be to link the site with key employment, retail, leisure and transport destinations such as Newbury Town Centre and train station.

Discussions with local bus operators are taking place to aid the development of a proposed bus route.

Framework Travel Plan

As part of the development proposals, an overarching Framework Travel Plan will be submitted to support this planning application. This will encourage the use of non-car modes of travel and ensure the sustainability of the Proposed Development.

During the reserved matters application, separate Travel Plans for each proposed land use (i.e. residential, care home and school) will be produced and implemented.

A Travel Plan sets out the tools and measures deemed necessary to enable residents of the site to make informed decision about their travel, with the ultimate objective of reducing single occupancy vehicle trips. The travel plan includes targets to reduce travel by single occupancy vehicles, and a commitment to monitor travel against these targets through a series of travel surveys.

13.6 Assessment of Environmental Impacts

13.6.1 Link Sensitivity

A desktop study, augmented by a site visit undertaken on the 23rd February 2018 has been undertaken to identify the sensitivity of each receptor in the study area. All road links within the study area have been assessed and assigned sensitivity primarily based on the criteria set out in *Table 13.2* and the assessors' experience and judgement.

Figure 13.4 identifies the sensitivity of each link within the study area.

| Link Reference | Link Location | Link Sensitivity |
|----------------|--------------------------------------------------|------------------|
| 7 | A339 Newbury (South of Robin Hood) | Minor |
| 8 | A339 Newbury (North of Retail Park) | Minor |
| 9 | A339, Newbury (South of Pinchington Lane) | Minor |
| 11 | A343 Andover Road Newbury (West of Newtown Road) | Substantial |
| 13 | Essex Street, Newbury | Moderate |
| 14 | A343 Andover Road, Newbury | Substantial |
| 15 | Monks Lane, West of Access | Minor |
| 16 | Pinchington Lane Newbury | Minor |
| 17 | Greenham Road, Newbury | Minor |
| 22 | B3421 Kings Road, Newbury | Minor |
| 263 | A339, East of Swan Roundabout | Minor |
| 23 | A343, South of A34 | Minor |
| 24 | Monks Lane, East of Access | Substantial |

13.6.2 *Impact Assessment*

Construction Phase

The Proposed Development is anticipated to be constructed over an approximate 14-year period up to 2033, during which time the level of construction traffic will vary and there will be a mix of construction and development generated traffic. However, for the purposes of this assessment, the effects of the construction phase have only been considered once. It is considered that this approach provides a robust assessment of the proposed construction phase.

Construction traffic will include the movement of workers and construction vehicles associated with the construction of individual plots, as well as construction of the associated infrastructure.

It should be noted that construction traffic will make up a progressively lower proportion of the overall traffic volume as the site is developed, with overall traffic volumes anticipated to be highest on completion.

Traffic Activity

The construction process will require a range of skills from general labourers and skilled operatives through to professionals and management. It is envisaged that workers will originate from a variety of sources, with the core coming from within Newbury and more skilled employees originating from a wider catchment, including the rest of West Berkshire. Based on experience, it is anticipated that workers would arrive onsite during the morning, from around 06:00 through to 10:00 and would leave between 14:00 and 18:00 at the end of their shift.

The quantum of workers onsite at any one time will primarily depend on factors such as the timing of the primary infrastructure along with the demand for housing. The provision of infrastructure will include the construction of the internal highway network, the new accesses onto Monks Lane, drainage and the installation of utilities such as electricity cables.

It is estimated that the volume of construction workers traffic (light vehicles) will be considerably less than the light vehicle traffic generated by the completed development.

The volume of construction HDVs will also depend on the construction programme and phasing of development, which at this stage is not fixed.

The site is located on Monks Lane and the A339. The A339 provides a strategic route to the M4 and the A34 via the B4640. Contractors will be required to adhere to routing agreements along with measures included within the Construction Traffic Management Plan (CTMP), which will avoid nearby rural and residential roads. Therefore, HDVs will only affect the main road network.

Effect on Road Users

As a result of the construction phase of the Proposed Development, there would be increased volumes of traffic on the local highway network, associated with workers travelling to and from the site, and from the movement of material using HDVs.

Given the proximity of the site to key distributor roads, the effect of construction traffic will be relatively low in comparison to existing traffic flows. HDVs will be required to adhere to routing agreements in order to avoid inappropriate routes through residential areas. It is possible that

traffic flow may be slightly affected on Monks Lane, and subsequently at the junction with Monks Lane/Newtown Road/A339 when the site accesses are being constructed. The magnitude of the effect is likely to be moderate. However, given that construction traffic will be less than that generated by the Proposed Development and is likely to be spread across longer morning and evening peak hours; it is considered that the significance of the effect will be temporary **Minor Adverse**.

Effect on Pedestrians and Cyclists

As described previously, the construction phase of the Proposed Development will result in an increase in the volume of traffic on the local highway network, associated both with workers travelling to/from the site and from the movement of material using HDVs.

HDVs will be required to adhere to specific routing agreements via strategic routes, thereby avoiding inappropriate routes. These routes will be unlikely to be used by a large number of pedestrians/cyclists and controlled crossing points are provided where there is demand. It is therefore considered that the effect of construction traffic on pedestrians and cyclists will be a temporary (long term) **Minor Adverse**.

In order to mitigate the potential effects of construction traffic the developer will ensure that a CTMP will be implemented by the contractor(s).

Occupation Phase

Screening

The occupation-phase assessment has been undertaken for 2031 which corresponds to the anticipated end of construction of the development.

This section presents a comparison of the daily (24-hour AADT) and peak hour flows for the 2031 Future Baseline and 2031 Future Baseline Plus Development (without mitigation) scenarios for all vehicles and HDVs.

A detailed traffic generation methodology and distribution exercise is included within the TA. *Table 13.15 (Appendix M1)* provides a comparison of the total vehicle flows by link with and without the development in 2031 based on the trip distribution detailed within the TA.

24 Hour Period

As can be seen, over a 24-hour period, the greatest proportional increase in traffic volume can be seen on Link 23 (A343), which experiences an increase of 22%. It should be noted that none of the links experience an estimated increase in traffic above 30% and are therefore not above the threshold for undertaking more detailed assessment (Rule 1 in *Section 13.3.6*).

In addition, Rule 2 in *Section 13.3.6* refers to a threshold of a 10% increase on sensitive links. For the purposes of this assessment, links with a sensitivity of 'Moderate' or higher will be classed as sensitive. Therefore Link 14 (A343 Andover Road) and Link 24 (Monks Lane) have undergone a more detailed assessment.

Table 13.16 (Appendix M1) provides a comparison of the total HDV flows by link with and without the development in 2031 based on the trip distribution detailed within the TA.

With regards to HDVs, the most significant percentage increases in flows are on Link 11, which experiences an increase of 7.1%. It should be noted that none of the links experience an estimated increase in HDV traffic above 30% or 10% on sensitive links. Therefore, there are no links above the threshold for undertaking more detailed assessment.

AM Peak

Table 13.17 and Table 13.18 (Appendix M1) provide a comparison of the total traffic flows and total HDV flows by link for the AM Peak period with and without the development in 2031 based on the trip distribution detailed within the TA.

The greatest proportional increase in traffic volume during the AM peak can be seen on Link 14 (A343 Andover Road) which experiences an increase in total vehicle flow of 15.6%. In line with Rule 2, Link 14 (A343 Andover Road) will be assessed further.

It should be noted that none of the links experience an estimated increase in traffic above 30% and are therefore not above the threshold for undertaking more detailed assessment (Rule 1).

The greatest proportional increase in HDV volume during the AM Peak can be seen on Link 11 (A343 Andover Road) which experiences an increase of 18%. In line with Rule 2, Link 11 (A343 Andover Road) will be assessed further.

PM Peak

Table 13.19 and Table 13.20 (Appendix M1) provide a comparison of the total traffic flows and total HDV flows by link for the PM Peak period with and without the development in 2031 based on the trip distribution detailed within the TA.

The greatest proportional increase in traffic volume during the PM Peak can be seen on Link 23 (A343, south of A34), which experiences an increase of 17.1%. It should be noted that none of the links experience an estimated increase in traffic above 30%, and are therefore, not above the threshold for undertaking more detailed assessment (Rule 1).

In addition, Rule 2 refers to a threshold of a 10% increase on sensitive links. Therefore Link 14 (A343 Andover Road) and Link 24 (Monks Lane) have undergone a more detailed assessment.

The greatest proportional increase in HDV volume during the PM Peak can be seen on Link 24 (Monks Lane) which experiences an increase of 14.7%.

In summary, the following links have an impact greater than the thresholds given under Rule 1 and 2 and have therefore, been considered within the assessment of effects in the following sections.

| Link Reference | Link Location | Link Sensitivity |
|-----------------------|--------------------------------------------------|-------------------------|
| 11 | A343 Andover Road Newbury (West of Newtown Road) | Substantial |
| 14 | A343 Andover Road, Newbury | Substantial |
| 24 | Monks Lane, East of Access | Substantial |

Severance

Examining the daily, AM and PM peak flow presented within the tables above, Links 11, 14 and 24 all experience an increase in traffic/HDV flows of less than 30%.

As links 11, 14 and 24 are classed as substantial in terms of sensitivity of receptor, the increase in traffic will result in a **Minor Adverse** effect on the link.

Driver Delay

The traffic associated with the Proposed Development will result in increased traffic flows on the majority of the roads in the vicinity of the Site. This increase in traffic flows would result in increased driver delay specifically at the Pinchington Lane/A339/Newbury College junctions, St Johns Road roundabout and the Monks Lane/Andover Road junction.

The proposals will result in a **Substantial Adverse** effect at these junctions.

Pedestrian Delay

Pedestrian delay is in some ways similar to severance and is a measure of the increase in delay to pedestrians crossing a road subject to the increased traffic flows. As per *Table 13.3*, pedestrian delay only becomes an issue where vehicle flows in a peak hour are greater than 1,400 vehicles per hour.

The analysis shows that out of the links considered for further assessment, none of them have two-way traffic flow exceeding 1,400 vehicles per hour in either the AM or PM Peak. In light of this, the development proposals will result in a **Negligible** effect on pedestrian delay.

Pedestrian Amenity

Based on the IEMA Guidelines, the change in flows at which pedestrian amenity changes should be considered in detail are a 100% increase or a 50% decrease in the flow of all traffic or HDVs. However, it also states that links should be assessed in the context of their individual characteristics.

The greatest proportional increase in traffic volume can be seen on Link 11 (A343 Andover Road), which experiences an increase of 18%. All the other links will experience increases smaller than 18%. Considering this, it is considered that the effect of the proposals on pedestrian amenity is likely to be **Negligible**.

Accidents & Safety

An assessment of accident data has been undertaken to evaluate the likely fluctuations in accidents at the key junctions and links within the Study Area.

The accident data identified four accidents occurring on Monks Lane within the study period. Three of these accidents resulted in slight injuries whilst one accident resulted in serious injuries. The 'serious' collision involved a driver travelling eastbound along Monks Lane. The driver of the vehicle was putting their seat belt on when they crossed onto the opposite carriageway colliding with a vehicle travelling westbound. Link 24 (Monks Lane) has been assigned a sensitivity of 'substantial'. The increase in traffic on this link is also considered to

be negligible. Given the minimal number of accidents that have occurred within the 5-year study period, it is considered that the proposed development would have a **Negligible** effect on Link 24.

A total of six accidents were recorded on Link 14 (Andover Road) within the study period. Whilst Link 14 has been assigned a sensitivity of 'substantial' and the increase in traffic on this link is considered to be negligible.

Given that only six accidents have occurred within the 5-year study period, it is considered that the proposed development would have a **Negligible** effect on Link 14.

Summary of Effects during Occupation Phase

A summary of the predicted operational effects of the proposed development in relation to transport is presented in *Table 13.28*.

| Nature of Impact | Receptor | Environmental Effect |
|--------------------|----------------------------------------------------------------------------------------|----------------------|
| Severance | Pedestrians on Link 11 (Andover Road), Link 14 (Andover Road) and Link 24 (Monks Lane) | Minor Adverse |
| Driver Delay | Drivers at the A339/Pinchington Lane/Newbury College/Monks Lane junctions | Substantial Adverse |
| | Drivers at the Monks Lane/Andover Road junction | Substantial Adverse |
| | Drivers at the St Johns Road roundabout | Substantial Adverse |
| Pedestrian Delay | Pedestrians on Link 11 (Andover Road), Link 14 (Andover Road) and Link 24 (Monks Lane) | Negligible |
| Pedestrian Amenity | Pedestrians on Link 11 (Andover Road), Link 14 (Andover Road) and Link 24 (Monks Lane) | Negligible |
| Accidents & Safety | Drivers on Link 14 (Andover Road), Link 24 (Monks Lane) | Negligible |

13.6.3 Residual Impact Assessment

As noted above, a series of mitigation measures are proposed to encourage sustainable travel and reduced traffic within the vicinity of the site. A reduction in traffic in the vicinity of the site could have a beneficial impact on driver delay, pedestrian amenity/delay, severance as well as accident rates and road safety.

As part of the assessment to understand the likely significant effects of the proposed development, an assessment of the proposed site with the proposed highway mitigation has been undertaken. This section sets out the assessment of impacts assuming that inherent, standard and actionable mitigation measures are implemented.

Links identified to have an adverse environmental impact as a result of the proposed development have been considered further in this section. Furthermore, an assessment has been undertaken to identify if any other links require a more detailed assessment.

24 Hour Period

As can be seen, over a 24-hour period, the greatest proportional increase in traffic volume can be seen on Link 17 (Greenham Road), which experiences an increase of 16.5%. It should be noted that none of the links experience an estimated increase in traffic above 30% and are therefore not above the threshold for undertaking more detailed assessment (Rule 1 in *Section 13.3.6*).

In addition, Rule 2 in *Section 13.3.6* refers to a threshold of a 10% increase on sensitive links. For the purposes of this assessment, links with a sensitivity of 'Moderate' or higher will be classed as sensitive. Only Link 11 (A343 Andover Road) requires a more detailed assessment.

With regards to HDVs, it is noted that none of the links experience an estimated increase in HDV traffic above 30%.

AM Peak

Table 13.23 and *Table 13.24 (Appendix M1)* provide a comparison of the total traffic flows and total HDV flows by link for the AM Peak period with and without the development in 2031 based on the trip distribution detailed within the TA.

The greatest proportional increase in traffic volume during the AM peak can be seen on Link 11 (A343 Andover Road) which experiences an increase in total vehicle flow of 15.6%. In line with Rule 2, Link 11 (A343 Andover Road) will be assessed further.

It should be noted that none of the links experience an estimated increase in traffic above 30% and are therefore not above the threshold for undertaking more detailed assessment (Rule 1).

The greatest proportional increase in HDV volume during the AM Peak can be seen on Link 17 (Greenham Road) which experiences an increase of 12.7%. It is noted that none of the links experience an estimated increase in traffic above 30% and are therefore not above the threshold for undertaking more detailed assessment (Rule 1).

Link 11 (A343 Andover Road) experiences an increase in HDV flows of 12%. In line with Rule 2, Link 11 (A343 Andover Road) will be assessed further.

PM Peak

Table 13.25 and *Table 13.26 (Appendix M1)* provide a comparison of the total traffic flows and total HDV flows by link for the PM Peak period with and without the development in 2031 based on the trip distribution detailed within the TA.

The greatest proportional increase in traffic volume during the PM Peak can be seen on Link 15 (Monks Lane), which experiences an increase of 21.8%. It should be noted that none of the links experience an estimated increase in traffic above 30%, and are therefore, not above the threshold for undertaking more detailed assessment (Rule 1).

In addition, Rule 2 refers to a threshold of a 10% increase on sensitive links. Therefore Link 14 (A343 Andover Road) will undergo a more detailed assessment.

The greatest proportional increase in HDV volume during the PM Peak can be seen on Link 17 (Greenham Road) which experiences an increase of 35.9%. Although the percentage increase is significant, this only equates to an increase of 2 HDVs during the PM peak. The level of percentage increase is because the link currently experiences very low levels of HDV traffic. In line with Rule 1, Link 17 will undergo further analysis.

Link 24 (Monks Lane) experiences an increase in HDV flows of 11.5%. In line with Rule 2, Link 24 (Monks Lane) will be assessed further.

An assessment of the proposed development with highway mitigation identifies that Link 17 (Greenham Road) that hasn't been considered within the effects of the proposed development without mitigation and requires further assessment.

Severance

Minor adverse effects on severance have been identified on Links 11 (A343 Andover Road), 14 (A343 Andover Road) and 24 (Monks Lane).

As noted previously, it is proposed to upgrade the existing Pinchington Lane/Newbury College access junction. The proposals will fully signalise the junctions providing signalised pedestrian crossings on three arms. The proposals will result in a long-term **Moderate Beneficial** effect on severance on this Link 24.

As no actionable mitigation is proposed at links 11 and 14 due to the presence of existing pedestrian crossings, the effect of the increase in traffic on severance will remain as **Minor Adverse**.

The analysis indicates that Link 17 (Greenham Road) will experience a negligible increase in HDV flows. As no actionable mitigation is proposed on Link 17, the effect in traffic on severance will be **Negligible**.

Driver Delay

Substantial adverse effects on driver delay have been identified at the Pinchington Lane/Newbury College/A339 access junctions and St John Road roundabout. The implementation of highway improvement schemes at these junctions and the implementation of sustainable transport measures as part of the Proposed Development will help mitigate the effects. As a result, the effect on driver delay will be **Minor Adverse**.

Pedestrian Delay

Pedestrian delay is in some ways similar to severance and is a measure of the increase in delay to pedestrians crossing a road subject to the increased traffic flows. As per *Table 13.3*, pedestrian delay only becomes an issue where vehicle flows in a peak hour are greater than 1,400 vehicles per hour.

The analysis shows that out of the links considered for further assessment, none of them have two-way traffic flow exceeding 1,400 vehicles per hour in either the AM or PM Peak.

Considering this, the development proposals will result in a **Negligible** effect on pedestrian delay.

Pedestrian Amenity

Based on the IEMA Guidelines, the change in flows at which pedestrian amenity changes should be considered in detail are a 100% increase or a 50% decrease in the flow of all traffic or HDVs. However, it also states that links should be assessed in the context of their individual characteristics.

The greatest proportional increase in traffic volume can be seen on Link 17 (Greenham Road), which experiences an increase of 35.9%. In light of this, it is considered that the effect of the proposals on pedestrian amenity is likely to be **Negligible**.

Accident & Safety

The increase in traffic on Link 24 (Monks Lane), Link 11 (Andover Road) and Link 14 (Andover Road) are consistent with those identified with the proposed development without highway mitigation. Considering this, it is considered that the proposed development would have a **Negligible** effect on Link 11, Link 14 and Link 24.

The analysis indicates that Link 17 (Greenham Road) will experience an increase of 2 HDV as a result of the proposed development. In light of this, it is considered that the proposed development would have a **Negligible** effect on Link 17.

13.7 Cumulative Impact Assessment

13.7.1 Sandleford Park West

As part of the assessment to understand the likely significant effects of the proposed development, an assessment of the strategic site (1,500 units) has been undertaken.

Table 13.27 and *Table 13.28 (Appendix M1)* provide a comparison of the total traffic flows and total HDV flows by link for a 24-hour period with and without the strategic development in 2031 based on the trip distribution detailed within the TA.

24-Hour Period

As can be seen, over a 24-hour period, the greatest proportional increase in traffic volume can be seen on Link 23 (A343, south of A34) which experiences an increase in total vehicle flow over the 24-hour period of 32.1%. Given that Link 23 experiences an increase in traffic above 30%, a more detailed assessment is required (Rule 1 in *Section 13.3.6*).

In addition, Rule 2 in *Section 13.3.6* refers to a threshold of a 10% increase on sensitive links. For the purposes of this assessment, links with a sensitivity of 'Moderate' or higher will be classed as sensitive. Therefore Link 24 (Monks Lane) has undergone a more detailed assessment.

Table 13.28 (Appendix M1) provides a comparison of the total HDV flows by link with and without the strategic development in 2031 based on the trip distribution detailed within the TA.

With regards to HDVs, the most significant percentage increases in flows are on Link 17, which experiences an increase of 34.9%. Although the percentage increase is significant, this only equates to an increase of 22 HDVs across the 24-hour period. The level of percentage increase is because the link currently experiences very low levels of HDV traffic.

It should be noted that none of the other links experience an estimated increase in traffic above the identified thresholds and are therefore, do not require more detailed assessment.

AM Peak

Table 13.29 and *Table 13.30 (Appendix M1)* provide a comparison of the total traffic flows and total HDV flows by link for the AM Peak period with and without the strategic development in 2031 based on the trip distribution detailed within the TA.

The greatest proportional increase in traffic volume during the AM peak can be seen on Link 23 (A343) which experiences an increase in total vehicle flow of 23.8%.

It should be noted that none of the other links experience an estimated increase in traffic above 30% and therefore, do not require more detailed assessment (Rule 1).

In addition, Rule 2 refers to a threshold of a 10% increase on sensitive links. Therefore Link 11 (A343 Andover Road) has undergone a more detailed assessment.

The greatest proportional increase in HDV volume during the AM Peak can be seen on Link 11 (A343) which experience an increase of 11.1%. It is noted that this percentage increase is the result of an additional 2 HDVs during the AM peak.

PM Peak

Table 13.31 and *Table 13.32 (Appendix M1)* provide a comparison of the total traffic flows and total HDV flows by link for the PM Peak period with and without the strategic development in 2031 based on the trip distribution detailed within the TA.

The greatest proportional increase in traffic volume during the PM Peak can be seen on Link 23 (Andover Road) which experiences an increase in total vehicle flow of 24.9%. In addition, Rule 2 refers to a threshold of a 10% increase on sensitive links. Therefore Link 24 (Monks Lane) has undergone a more detailed assessment.

It should be noted that none of the other links experience an estimated increase in traffic above the identified thresholds and therefore, do not require more detailed assessment (Rule 1 and Rule 2).

The greatest proportional increase in HDV volume during the PM Peak can be seen on Link 17 (Greenham Road) which experiences an increase of 28.6%. The level of percentage increase is because the link currently experiences very low levels of HDV traffic. In addition, Link 24 (Monks Lane) exceeds the threshold for Rule 2 and therefore will undergo further analysis.

An assessment of the proposed strategic development with highway mitigation identifies one additional link, Link 23 (A343, south of A34), requires further assessment that hasn't been considered within the effects of the proposed development.

Severance

Examining the daily, AM and PM peak flows, Links 17 and 23 both experience an increase in traffic / HDV flows of over 30%. As these links are classed as minor in terms of sensitivity of receptor, the increase in traffic will result in a **Negligible** effect on the link.

Link 24 is classed as substantial in terms of sensitivity of receptor. Examining the daily, AM and PM peak flows, Link 24 experiences an increase in traffic/HDV flows below 30%. The link has been classed as sensitive due to the presence of Newbury College on Monks Lane. The increase in traffic on Link 24 (Monks Lane) will result in a **Minor Adverse** effect on the link.

As noted previously, it is proposed to upgrade the existing Pinchington Lane/Newbury College access junction. The proposals will fully signalise the junctions providing signalised pedestrian crossings on three arms. The proposals will result in a long-term **Moderate Beneficial** effect on severance on this Link 24.

Driver Delay

Substantial adverse effects on driver delay have been identified at the Pinchington Lane/Newbury College/A339 access junctions and St John Road roundabout. The implementation of highway improvement schemes at these junctions and the implementation of sustainable transport measures as part of the Proposed Strategic Development will help mitigate the effects. As a result, the effect on driver delay will be **Minor Adverse**.

Pedestrian Delay

Pedestrian delay is in some ways similar to severance and is a measure of the increase in delay to pedestrians crossing a road subject to the increased traffic flows. As per *Table 13.3*, pedestrian delay only becomes an issue where vehicle flows in a peak hour are greater than 1,400 vehicles per hour.

The analysis shows that out of the links considered for further assessment, none of them have two-way traffic flow exceeding 1,400 vehicles per hour in either the AM or PM Peak. In light of this, the development proposals will result in a **Negligible** effect on pedestrian delay.

Pedestrian Amenity

Based on the IEMA Guidelines, the change in flows at which pedestrian amenity changes should be considered in detail are a 100% increase or a 50% decrease in the flow of all traffic or HDVs. However, it also states that links should be assessed in the context of their individual characteristics.

The analysis shows that out of the links considered for further assessment, none of them will experience an increase in traffic flows exceeding 100% increase or a 50% decrease in the flow of all traffic or HDVs. Taking this into consideration, it is considered that the proposals will result in a **Negligible** effect on pedestrian amenity.

Accident & Safety

The increase in traffic on Link 24 (Monks Lane), Link 11 (Andover Road) and Link 17 (Greenham Road) are consistent with those identified with the proposed development without

highway mitigation. In light of this, it is considered that the proposed development would have a **Negligible** effect on Link 11, Link 17 and Link 24.

13.7.2 Cumulative Impact Assessment

The effects of the other cumulative developments described in *Chapter 4* have already been included in the assessment alongside the proposed development and Sandleford Park West.

13.8 Summary

The potential transport effects have been assessed using established methodologies set out in the IEMA Guidelines.

The level of construction traffic during the construction phase is significantly lower than the volume of traffic that will be generated by the proposals during the occupation phase. Given that construction traffic will be less than that generated by the Proposed Development and is likely to be spread across longer morning and evening peak hours; it is considered that the significance of the effect will be temporary **Minor Adverse**.

During the occupation phase of the development there is the potential for significant adverse effects. However, the mitigation measures proposed in this chapter will ensure that there are the following residual effects:

- **Moderate Beneficial** effects on severance (Link 24);
- **Minor Adverse** effects on severance (Links 11 and 14) and driver delay;
- **Negligible** effects on severance (Link 17), pedestrian delay, pedestrian amenity and accidents & safety.

The overall effects of the strategic development site (i.e. Sandleford Park and Sandleford Park West) upon the identified receptors are consistent with those identified with the occupation of the proposed development. As such, the mitigation measures proposed will also benefit the wider strategic site in terms of the potential for reducing the cumulative effects at junctions and links in the vicinity.