CONTENTS

5.1 INTRODUCTION

5.1.1 This chapter of the ES assesses the likely significant effects of the Proposed Development in terms of traffic, public transport, cycling and pedestrians. The data and analysis discussed in this chapter is taken from the Transport Assessment (TA) (**appendix 5.1**) and Travel Plan (**appendix 5.2**) which have been submitted as supporting documents with this planning application.

5.1.2 This chapter also describes the methods used to assess the effects, the baseline conditions currently existing at the Site and surroundings, the mitigation methods required to prevent, reduce or offset any significant adverse effects, and the residual effects after these measures have been employed.

5.1.3 This chapter has been prepared by Jubb Ltd.

5.2 ASSESSMENT METHODOLOGY

Scope

5.2.1 For the purposes of this assessment, the Study Area corresponds to that used in the Transport Assessment. This is defined by the geographical extent of the traffic model being used to assess the highway impacts and primarily includes the highway corridors of the A361, the A4260 and the B4100.

Data sources

5.2.2 The necessary assessment methodology has been informed by discussions with Oxfordshire County Council (OCC). The data sources are set out below.

Assessment approach

5.2.3 The TA has been produced in line with guidance contained within Guidance on Transport Assessment published by the Department for Transport (DfT) in March 2007 which widened the assessment criteria to address the assessment of the potential implications of development proposals on the entire transport system, including the public transport system (buses, rail and trams) the Strategic Road Network (SRN), local highways, cycleways and footways.

5.2.4 The TP has been prepared in line with the DfT guidance on origin destination travel plans – Delivering Travel Plans through the Planning Process, April 2009.

5.2.5 In summary, the scope of the TA includes:

- An assessment of the transport planning policies related to the Proposed Development;
- An assessment of the existing transport conditions in the area including public transport, the pedestrian network, the cycle network and the highway network;
- An assessment of the predicted trip generation of the Proposed Development (the TA is based upon a maximum figure of 1000 new dwellings and associated community uses);
- An assessment of the transport network's ability to cope with the predicted trips and

- A proposed transport strategy to reduce the need to travel, maximise accessibility and encourage trips to and from the Proposed Development by modes other than the private car.

5.2.6 Traffic data submitted in the Transport Assessment supporting a submitted planning application at OS Parcel 5700 South of Salt Way at Crouch Farm Bloxham Road Banbury Oxfordshire (planning application reference 14/00080/OUT) has been used. These surveys were carried out by PCC Traffic Information Consultancy on Thursday 6th October 2011 at the following junctions:

- Bloxham Road / Springfield Avenue
- Bloxham Road / Queensway
- Bloxham Road / Oxford Road
- Oxford Road / Upper Windsor Street
- Oxford Road / Horton View / Hightown Road
- Oxford Road / Farmfield Road
- Oxford Road / Grange Road

5.2.7 A traffic survey of the Bloxham Road / Wykham Lane junction was carried out by Axiom Traffic Limited on Thursday 20th September 2012.

5.2.8 Amended local growth rates, using TEMPRO and NRTF factors have been applied to assess the impact of the Proposed Development in 2014 and 2027. The growth factors are calculated using future local population, dwelling and employment forecasts for the local area and are therefore deemed to take into account committed development within the impact area.

5.2.9 Total person trip generation rates for the residential development have been derived from the TRICS database and vehicle trips allocated by applying the modal split for the Banbury Easington Ward as recorded in the 2011 Method of Journey to Work Census Data.

5.2.10 The primary school and local centre trips are likely to be wholly internal or part of a linked trip which will have been counted within the housing trip rate calculation.

5.2.11 To provide a representation of likely trip distribution, a combination of a zonal method, existing junction turning movements and route choice/availability has been used based on the 2014 baseline traffic flows.

5.2.12 Following these calculations the local transport network was tested in order to assess the impact of the Proposed Development.

Significance criteria

5.2.13 The table below sets out the criteria for determining the magnitude of changes, the sensitivity of receptors and the significance of effects, with these being based on the IEMA Guidance.

Table 5.1: Magnitude

Magnitude	Criteria
Large	Changes in total traffic or HGV flows over 90%
Moderate	Changes in total traffic or HGV flows of 60% - 90%
Small	Changes in total traffic or HGV flows of 30% - 60%
Negligible	Changes in total traffic or HGV flows less than 30%

Table 5.2: Sensitivity

Sensitivity	Criteria
High	where the Proposed Development could be expected to have a very significant environmental effect (either adverse or beneficial) on severance, driver stress and delay, pedestrian and cyclist amenity, fear and intimidation, and accidents and safety during the construction and operational phases
Medium	where the Proposed Development could be expected to have a noticeable environmental effect (either adverse or beneficial) on severance, driver stress and delay, pedestrian and cyclist amenity, fear and intimidation, and accidents and safety during the construction and operational phases
Low	where the Proposed Development could be expected to result in a small, barely noticeable environmental effect (either adverse or beneficial) on severance, driver stress and delay, pedestrian and cyclist amenity, fear and intimidation, and accidents and safety during the construction and operational phases
Negligible	where no discernible environmental effect is expected (less than 30%, or 10% in sensitive areas) as a result of the Proposed Development on severance, driver stress and delay, pedestrian and cyclist amenity, fear and intimidation, and accidents and safety during the construction and operational phases

Table 5.3: Significance

MAGNITUDE	SENSITIVITY			
	High	**Medium**	**Low**	**Negligible**
Large	Major	Major	Moderate	Minor
Moderate	Major	Moderate	Minor	Negligible
Small	Moderate	Minor	Minor	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

5.3 RELEVANT POLICY

National Policy

5.3.1 The key documents in terms of national policy are NPPF White Paper: Creating Growth, Cutting Carbon – Making Sustainable Local Transport Happen and the National Planning Policy Framework.

White Paper: Creating Growth, Cutting Carbon – Making Sustainable Local Transport Happen

5.3.2 The White Paper: Creating Growth, Cutting Carbon – Making Sustainable Local Transport Happen was published by the Department for Transport in January 2011. It forms part of the overall strategy to tackle carbon emission and sets out the Government's vision for a transport system that is not only an engine for economic growth but also a force to provide a greener, safer and improved quality of life in our communities. The paper informed the development of the latest Local Transport Plans (LTP3 2011-2026) and documented the change in emphasis from the Coalition Government to make decision making both localised and schemes cost effective.

5.3.3 The White Paper highlights the importance of a sustainable local transport system in the nation's economy and people's day to day life. It points out "effective sustainable local transport is delivered through solutions developed for the places they serve, tailored for the specific needs and behaviour patterns of individual community".

National Planning Policy Framework

5.3.4 The National Planning Policy Framework (NPPF) was published on 27 March 2012 and sets out the Government's planning policies for England. It is focused on economic growth and sustainable development. The NPPF states that there is "a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan making and decision-taking".

5.3.5 With specific regard to the integration of transport and land-use planning, the overarching principles promoted within the NPPF are consistent with those previously promoted within PPG13. The NPPF states that planning should "actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable".

5.3.6 The NPPF also states "Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe".

Planning Practice Guidance – Travel Plans, Transport Assessment and Statement in decision-taking (2014)

5.3.7 The "Planning Practice Guidance – Travel Plans, Transport Assessment and Statement in decision-taking" was published in March 2014. It sets out the overarching principles on Travel Plans, Transport Assessments and Statements in the planning process and emphasises their importance in promoting and delivering sustainable development.

5.3.8 The document states that Travel Plans, Transport Assessments or Statements are required for all development that will have a material impact on the local and strategic highway network. The development of these documents is an iterative process as each may influence the other and should be:

- commensurate with the size and scope of the proposed development to which they relate and build on existing information wherever possible;
- established at the earliest practicable possible stage of a development proposal;
- tailored to particular local circumstances and developed in close consultation with the Local Planning Authority/ Highway Authority, transport operators, Rail Network Operators, Highways Agency where there may be implications for the strategic road network and other relevant bodies.

5.3.9 The provision of high quality pedestrian and cycling facilities within the site, along with the provision of a new pedestrian / cycle link along Bloxham Road will connect directly to the existing pedestrian and cycling network and will encourage residents to undertake journeys on foot and by bicycle whenever possible. The signalisation of the existing Bloxham Road / Queensway junction will enhance pedestrian crossing facilities of Bloxham Road and Queensway.

5.3.10 The proximity of the Proposed Development to Banbury's Town Centre and facilities and services provided within the proximity of the site, which are all within 5km of the site, ensures walking and cycling provides a realistic modal choice for future residents travelling to and from the site.

5.3.11 The diversion of a local bus service into the site ensures that the majority of future residents will be within approximately 400 metres of a bus service.

5.3.12 Banbury railway station is within 5km of the site enabling future residents' access to rail services by a linked trip undertaken by bicycle or by bus.

Local Policy

Oxfordshire County Council Local Transport Plan III – 2011-2030

5.3.13 The current Local Transport Plan was published in April 2011 and will run until 2030. The third edition of the plan runs for a longer period and supersedes the earlier versions, LTP I – (2001-2006) and LTP II – (2006-2011).

5.3.14 LTP III sets out the following Local Transport Goals:

- ensure new developments are designed to promote permeability on foot both within the site and to link with the existing settlement;
- ensure new developments are designed to promote permeability by bike both within new sites and to link them with the existing settlement;
- ensure that new developments are located and designed to encourage the use of the bus, with particular attention to minimising walking distances to bus stops on the strategic routes;
- ensure developers of new sites in Banbury undertake detailed Transport Assessments and implement travel plans for the residents, employees and users of their sites;
- to make the best use of existing road space through appropriate traffic management measures, vehicle routing and use of technology;
- to make local improvements to junctions and roads within the town to help reduce delays and traffic congestion.

5.3.15 The LTP also covers the main emerging infrastructure schemes and strategic transport schemes that are required in Oxfordshire during the LTP 3 period up to 2030. The following scheme is of relevance to the proposed site:

- highway improvements to increase capacity in Banbury on the A4260 Windsor Street and Oxford Road north/south route, in conjunction with improvement on the A361 South Bar route.

5.3.16 The Proposed Development provides pedestrian and cycle facilities within the site and links with Banbury's existing pedestrian and cycling network and will provide future residents to use these modes of transport.

5.3.17 The diversion of a local bus service into the site ensures that future residents will be within walking distance of bus services and encourage the use of public transport.

5.3.18 A detailed TA and TP have been submitted in support of the planning application.

5.3.19 Local improvements to the Oxford Road network and the Bloxham Road / Queensway junction will help to effectively mitigate the likely impacts of the Proposed Development.

Cherwell District Council Non-Statutory Cherwell Local Plan 2011 (NSCLP)

5.3.20 The NSCLP was approved in 2011 as interim planning policy for development control purposes until its replacement by a new up to date adopted Plan.

5.3.21 Relevant transport policies in the NSCLP include:

- TR3 – A Transport Assessment and Travel Plan must accompany development proposals likely to generate significant levels of traffic;
- TR4 – Before proposals for development are permitted the Council will need to be satisfied that all appropriate mitigation measures required to support that development are identified within an implementation programme. Such measures will include highway improvements, traffic management measures, improved public transport and / or facilities, and measures to improve pedestrian and cycle accessibility;
- TR9 – All new development shall provide cycle parking to Oxfordshire County Council standards;
- TR11 – Development likely to attract vehicular traffic will be required to:
  (i) Accommodate within the site the necessary highway safety requirements relating to access, turning and servicing;
  (ii) Include appropriate measures to minimise the visual impact of vehicles and parking areas;
  (iii) Comply with maximum standards for car parking;
  (iv) Provide parking for people with disabilities in accordance with the Council's standards;
  (v) Provide cycle parking in accordance with the Council's standards.

5.3.22 The Proposed Development meets the requirements of the NSCLP.

Draft Cherwell Local Plan (2014)

5.3.23 Cherwell Local Plan is currently the subject of examination, a process which has now been formally suspended to allow the Council to suggest Main Modifications to the Plan so as to better meet the objectively assessed housing needs for the district.

5.3.24 A relevant Strategic Objective of the draft Local Plan is:

> '*SO12 – To reduce the dependency on the private car as a model of travel, increase the attraction of and opportunities for travelling by public transport, cycle and on foot, and to ensure high standards of accessibility for people with impaired mobility.*'

5.3.25 The proposed development site is identified within the main modifications to the Cherwell Local Plan. Additional and adjacent sites are also identified to the south west of Banbury.

5.3.26 The Proposed Development through the provision of footways / cycleways linked to the existing network and the diversion of a local bus service along with a TP increases the opportunities for future residents to undertake journeys by alternative modes to the private car.

5.3.27 The recent publication of proposed modifications includes for the allocation of this site under Policy Banbury 17 – South of Salt Way – East for the development of 68 hectares for a new neighbourhood of up to 1,345 dwellings with associated facilities and infrastructure. Provision is sought for:

Infrastructure Needs

- Education – land for a primary school.
- Open Space – to include general greenspace, play space, allotments and sports provision
- Community – on-site provision including community and/or local retail facilities;
- Access and movement – Principal access to be created off the Bloxham Road (A361). The layout should also allow for a route for any future east-west link to join White Post Road for local traffic should that may be identified in the movement strategy of the Banbury Master Plan.
- A transport assessment and travel plan will be required to assess the transportation implications of the proposed development and to identify appropriate mitigation measures.

5.3.28 Furthermore the scheme has to consider the following highway/access related items:

- A layout that maximises the potential for walkable neighbourhoods and allows for integration with land that comprises the South West Banbury area and existing communities in Banbury
- A linked network of cycle and footways to provide access into Banbury;
- Layout of development that enables a high degree of integration and connectivity with existing development
- A layout that maximises the potential for walkable neighbourhoods and enables a high degree of integration and connectivity between new and existing communities,
- New footpaths and cycleways should be provided that link with existing networks, the wider urban area and community facilities with a legible hierarchy of routes to encourage sustainable modes of travel
- A new footpath bridleway to be provided running from east to west along the southern boundary of the development area, incorporating links with existing footpaths to form a new circular route around the development linking back to Salt Way
- Good accessibility to public transport services should be provided for with effective footpaths and cycle routes to bus stops including the provision of a bus route through the site and new bus stops on the site.
- Provision of a transport assessment and Travel Plan including to maximise connectivity with existing development, including linkages with and improvements to existing public transport
- Retention of Public Rights of Way and a layout that affords good access to the countryside

5.4 BASELINE CONDITIONS

Highway Network

5.4.1 Bloxham Road (A361) is approximately 7.0 metres wide in the proximity of the site and is a single carriageway subject to a 60mph speed limit. Further north, on entry to Banbury's built-up area the speed limit changes to 30mph. Bloxham Road is a key strategic link from Banbury to Bloxham 2.5km to the south-west and Chipping Norton 17km to the south-west.

5.4.2 Queensway is an urban dual carriageway subject to a 30mph speed limit which provides access to the north-west of Banbury and also to the M40 via Ruscote Avenue and Hennef Way.

5.4.3 Oxford Road (A4260) provides a key strategic link into the centre of Banbury for the south eastern housing areas and villages to the south of Banbury.

5.4.4 South Bar Street (A361) is a continuation of Oxford Road and heads towards the main centre. Continuing along Horsefair and Southam Road provides access to Hennef Way and the M40.

5.4.5 Upper Windsor Street (A4260) provides an alternative access to the main centre, skirting Banbury's eastern side, and also the railway station and the M40.

5.4.6 Wykham Lane is rural in nature. Wykham Lane links Bloxham Road and Oxford Road.

5.4.7 The Bloxham Road / Wykham Lane junction takes the form of a priority crossroads with Bloxham Road forming the major through road.

5.4.8 The Bloxham Road / Queensway junction takes the form of a priority junction with right-turners from Bloxham Road provided with a large ghost right turn lane.

5.4.9 The Bloxham Road / Springfield Avenue junction takes the form of a priority junction with right-turners from Bloxham Road provided with a large ghost right turn lane.

5.4.10 The South Bar Street / Oxford Road / Bloxham Road junction is a signalised junction with pedestrian facilities operating on the northern arm (South Bar Street). From the north South Bar Street flares from a single lane to two allowing a separate straight ahead, to Oxford Road, and a right turn movement to Bloxham Road. Bloxham Road from the south is a single lane approach. The final arm, Bloxham Road, approaching from the west, flares from a single lane to two lanes with a separate right turn onto Oxford Road and a left filter onto South Bar Street.

5.4.11 The Oxford Road / Upper Windsor Street junction is a three arm signalised junction with Oxford Road making up the north and south approaches and Upper Windsor Street approaching from the east. The Oxford Road North arm has a two lane approach which flares from a single lane from the junction of Old Par Road (approximately 100m north) to provide separate lanes for left and straight ahead movements. The Oxford Road South arm also has a two lane approach which flares from a single lane to provide a straight ahead and right turn movement. Finally, the Upper Windsor Street arm also flares from a single lane to provide a two lane approach with separate allocation for left and right turners.

5.4.12 The Horton View / Oxford Road / Hospital Access junction takes the form of a four arm signalised junction with Horton View making up the west arm and the hospital access the eastern arm. The Oxford Road North arm flares from one lane to two with the inside lane for left turn and straight ahead movements and the outside lane for right turn and straight ahead movements. The Oxford Road South arm is a two lane approach with the inside lane for left turn and straight ahead movements and the outside lane for right turn and straight ahead movements. Horton view has a single lane approach which allows for all movements and the hospital access is a single lane exit only arm.

5.4.13 The Hightown Road / Oxford Road junction is a three arm signalised junction with Oxford Road making up the north and south arms and Hightown Road approaching from the east. From the north Oxford Road has a two lane approach with both lanes allowing straight ahead movements and the inside lane also providing for left turners. The Oxford Road South arm flares from a wide single lane to a two lane approach with both lanes allowing straight ahead movements and the outside lane also

providing for right turners. Finally the Hightown Road has a single lane approach which allows all movements.

5.4.14 The Farmfield Road / Oxford Road junction is a four arm signalised junction with Farmfield Road making up the east and west approaches. The Oxford Road North arm has a two lane approach with the inside lane allowing for left turners and the outside lane providing for right turn and ahead movements. The Oxford Road South arm flares from one lane to two with the outside lane allowing for right turners and the inside lane providing for left turn and straight ahead movements. To the east the Farmfield Road approach flares from a single lane to two with the outside lane allowing for right turns and straight ahead movements and the inside lane set aside for left turners. Finally the Farmfield Road West arm has a single lane approach which allows all movements.The Grange Road / Oxford Road junction takes the form of a priority junction with right-turners from Oxford Road provided with a ghost right turn lane.

5.4.15 The initial assessment of highway capacity for the existing base in 2014 indicate that:

- Bloxham Road / Wykham Lane Priority Crossroads – No capacity issues during the AM and PM peak periods;
- Bloxham Road / Springfield Avenue Priority Junction – No capacity issues during the AM and PM peak periods;
- Bloxham Road / Queensway Priority Junction – The junction is operating over capacity in the AM and PM peak periods
- The Oxford Road network junctions – the network is operating with -6.5% practical reserve capacity in the AM peak and – 31.5% practical reserve capacity in the PM peak.

Public Transport

5.4.16 The nearest bus stops to the development give access to Services 488/489 which runs along Bloxham Road and Service B1 which runs along Springfield Avenue and Timms Road within the residential estate to the north-east of the development site. Details of the services are shown in Table 5.4.

Table 5.4 Services and Frequencies

Service	Route	Frequency		
		Mon - Fri	**Sat**	**Sun**
488 / 489	Banbury – Chipping Norton	Hourly	Hourly	-
B1	Banbury – Easington	Half hourly	Half Hourly	Bi-Hourly

5.4.17 In addition to these services, there are a number of services which run from Banbury Centre to the following destinations – Stratford-upon-Avon, Shipston-on-Stour, Chipping Norton, Oxford, Brackley and Eydon enabling commuting and leisure journeys to be undertaken by bus.

5.4.18 National Express run coaches from Banbury to Gatwick, Heathrow, Birmingham, Wolverhampton and Oxford.

5.4.19 Banbury railway station lies on the Chiltern Mainline with frequent services to / from Birmingham Snowhill, Stratford-upon-Avon, Kidderminster, London Marylebone, London Paddington, Oxford, Manchester and Reading.

5.4.20 The railway station is located within cycling distance at 3.4km from the site and cycle parking is provided at the station enabling future residents of the site to undertake a multi-modal journey to work and leisure locations.

Walking and Cycling

5.4.21 Between the site access and the built up area a one metre footway is present on the western side of Bloxham Road (recorded as Public Right of Way (PRoW) 120/33); thereafter the footpath widens to a standard two metres with street lighting present.

5.4.22 Also at this location, the footway meets the Salt Way Cycle Route (PRoW 120/26/39/41/42) which provides an east / west route. To the east PRoW 120/45 provides a route to Oxford Road (A4260) to provide convenient access to Sainsbury's supermarket.

5.4.23 Dropped kerbs and a pedestrian refuge are provided on Bloxham Road in the vicinity of the Salt Way Cycle route and the Browning Road junction. A Zebra crossing facility with refuge is provided between Springfield Avenue and Queensway and a Pelican crossing is provided in the vicinity of the Harriers View junction.

5.4.24 Pedestrian phases are provided within the signalised junctions on Oxford Road at the Hightown Road, Horton View and South Bar Street junctions. Dropped kerbs and a pedestrian refuge are provided within the signalised junction of Oxford Road / Upper Windsor Street.

5.4.25 A number of local amenities are within 2km of the Site (measured from the centre of the site and assuming a walk speed of 1.4 metres/second), which include a pub, hairdressers, church, convenience store, post office, primary and secondary schools, community centre, pharmacy, supermarket and doctors surgery.

5.4.26 The Salt Way Cycle Route, a pedestrian, cycle and bridle route lies adjacent along the northern boundary of the site, and forms part of National Cycle Route 5. This route connects with villages such as Chipping Campden to the west, Bodicote to the east and Bloxham to the south.

5.4.27 To the east, a local on-road cycling route, is proposed to be provided by the Bankside development, giving access to the town centre and the railway station that would further serve the Site.

5.4.28 Cycling provides convenient access to a wider catchment area, and therefore widens the choice of key facilities and services available through sustainable modes of transport, such additional services include an optician, library, hospital, vets, dentist, leisure centre and swimming pool and a cinema.

Accident Review

5.4.29 Personal Injury Accident (PIA) records were sourced, pertaining to the surrounding road network (A361, A4260, B4100, Wykham Lane and Salt Way), occurring during a five year period up to the end of May 2014 (see appendix C of the TA).

5.4.30 A total of 59 casualties were reported in the identified study area, one accident resulted in a fatal injury, to a vehicle driver in a collision with another vehicle. A further 12 incidents resulted in serious injuries.

Table 5.4: Total number of PIAs by year and severity, with casualties

Year	Fatal	Serious	Slight	Total
2009 (6 months)			5	5
2010			8	8
2011		3	11	14
2012		3	9	12
2013	1	5	13	19
2014 (6 months)		1		1
Total	**1**	**12**	**46**	**59**

5.4.31 The location of the recorded incidents are reported in Table 5.6 below, as would be expected the most common location for accidents is at Junctions.

Table 5.5: Location of PIA's

Primary Road	Secondary Road (Junction with…)	Number of Accident
Bloxham Rd	Wykham Lane	6
Oxford Rd	Horton View	6
Oxford Rd	Farmfield Rd (Sainsbury's)	5
Wykham Lane		
Bloxham Rd	Springfield Ave	4
Bloxham Rd	Queensway	4
Bloxham Rd	Browning Rd	3
Bloxham Rd		3
Oxford Rd	Old Parr Rd	3
South Bar	Bloxham Rd	3

Location	Number of Accidents
Priority Junction	23
Signalised junction	18
Pedestrian Crossing	4
Link	13
Roundabout	1

5.4.32 Based upon the recorded causations and the categorisations used in Road Casualty Great Britain, the following shows the main causations involved with failing to give way upon entering a junction including shunts when queuing. These appear reflective of the locations and junction types and do not appear to be as a consequence of undue congestion, or sub-standard road geometry and are attributed to driver behaviour/error e.g. failing to judge other person's path or speed.

Baseline Traffic Levels

5.4.33 In order to examine the current operational efficiency of the adjoining highway, traffic surveys, as used in the submitted planning application at OS Parcel 5700 South of Salt Way at Crouch Farm Bloxham Road Banbury Oxfordshire (planning application reference 12/00080/OUT), were used to establish a baseline, position. These surveys were carried out in traditional peak periods of 08:00-09:00 and 17:00-18:00 by PCC

Traffic Information Consultancy on Thursday 6th October 2011 at the following junctions:

- Bloxham Road / Springfield Avenue
- Bloxham Road / Queensway
- Bloxham Road / Oxford Road
- Oxford Road / Upper Windsor Street
- Oxford Road / Horton View / Hightown Road
- Oxford Road / Farmfield Road
- Oxford Road / Grange Road

5.4.34 An additional traffic survey of the Bloxham Road / Wykham Lane junction was carried out by Axiom Traffic Limited on Thursday 20th September 2012, carried out within the same peak periods. TEMPRO database ver6.2 has been employed as an initial tool to estimate the primary growth factors and thus establish a baseline condition for a abase year 2014.

Period	Growth Factor	
	AM Peak	PM Peak
Year 2011 to 2014	1.0211	1.0217
Year 2012 to 2014	1.0139	1.0143

Table 5.1 Base Year Prediction

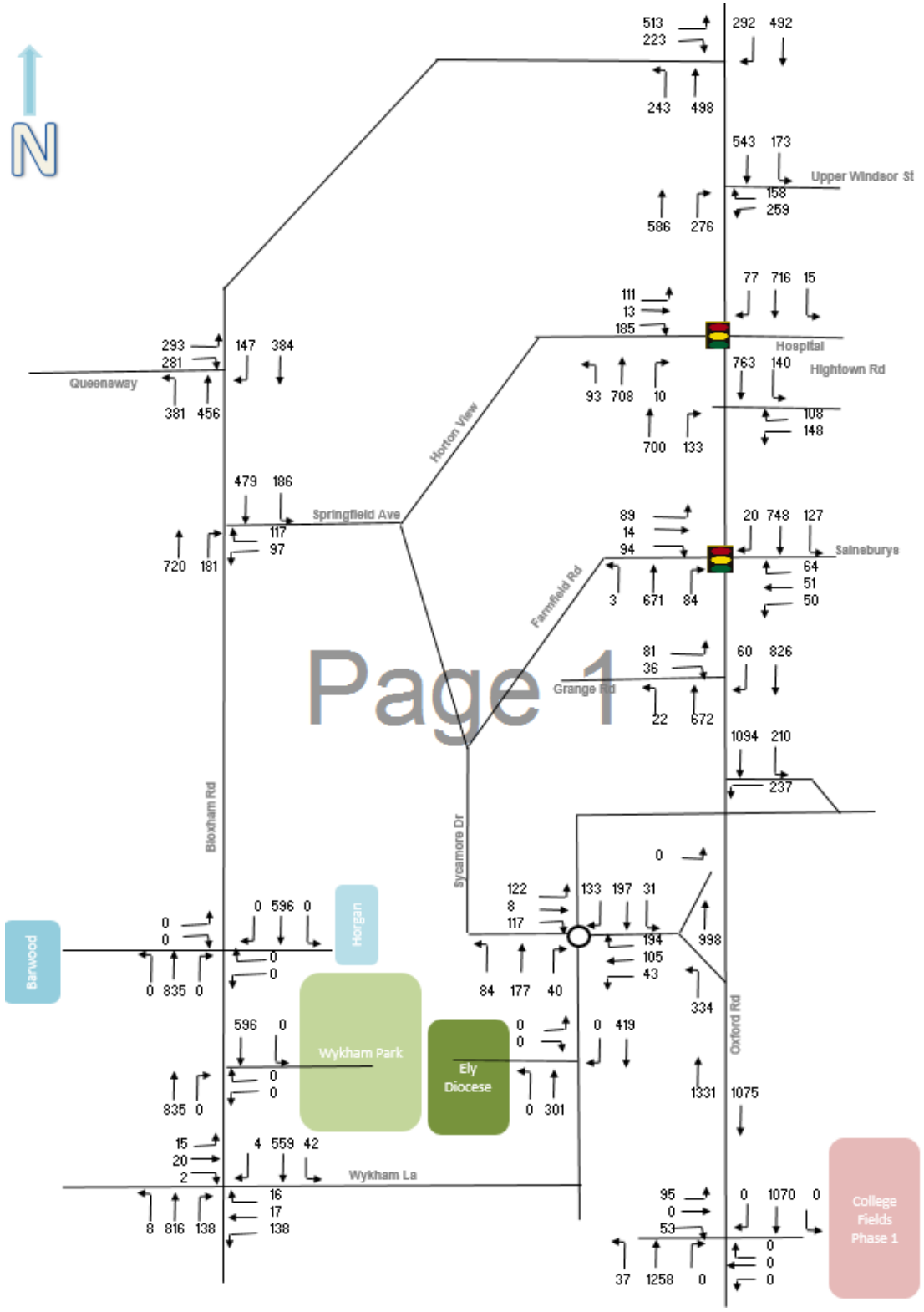

Figure 5.1 Year 2014 Base Flow AM Peak

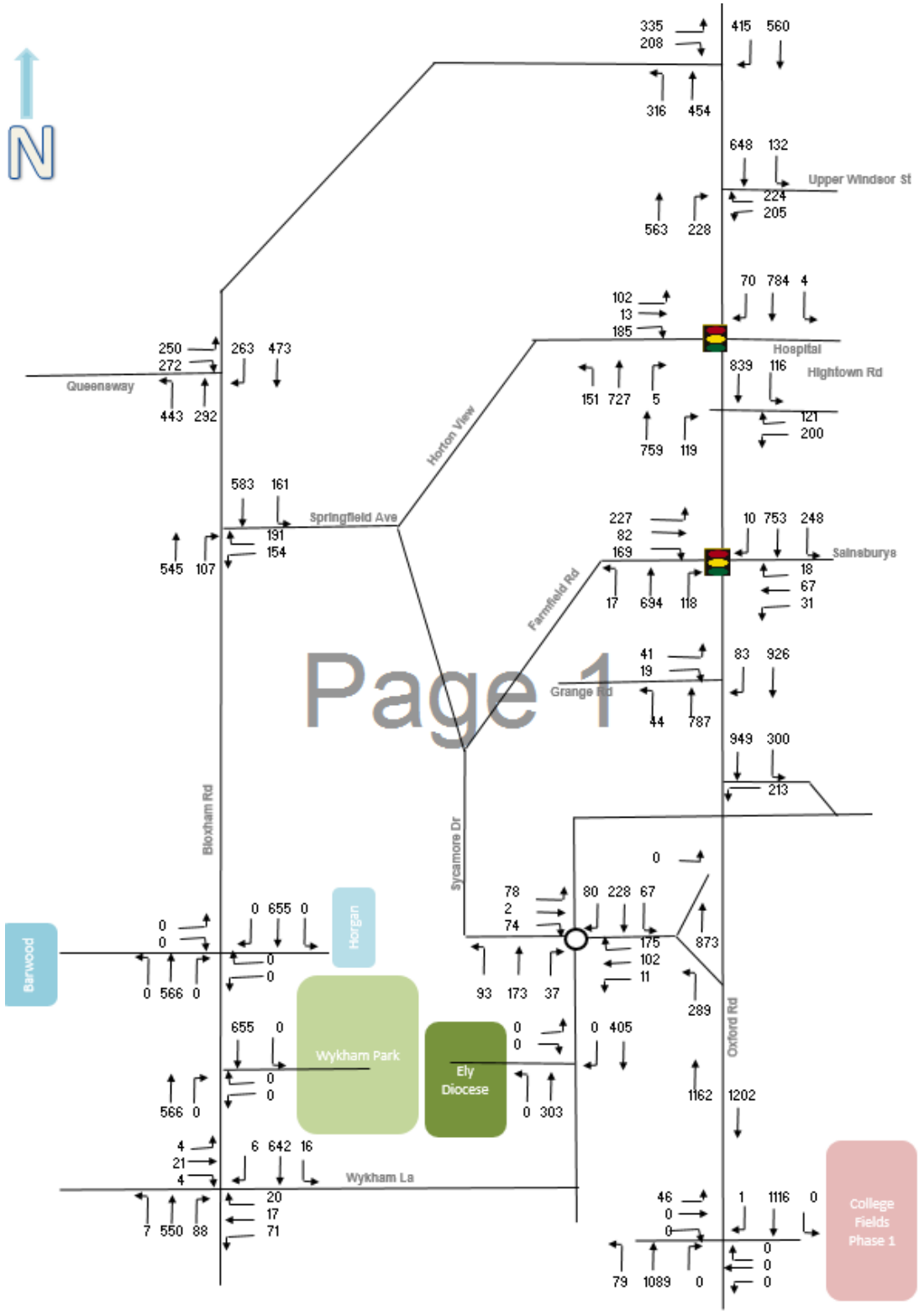

Figure 5.2 Year 2014 Base Flow PM Peak

Future Baseline Traffic Conditions

5.4.35 A design year of 2027, has been identified as an appropriate timeline for the build out of the site and accords with the principles of DfT Guidance on Transport Assessment.

5.4.36 The relevant Origin/Destination growth rates for Car Drivers have been derived using TEMPRO Dataset 6.2 for Banbury Urban Area. The factors have subsequently been adjusted in line with DfT Tempro User Guidance to account for National Transport Model (NTM 2009) using Rural Principal Roads to derive a local traffic growth from the 2014 base flow to a Design Year of 2027.

5.4.37 These growth factors have been adjusted to take into account the College Fields Scheme which permitted in 2007, and this included within the Tempro baseline, has not yet been constructed, and thus its growth has been allowed for by direct distribution of traffic as per the scheme's associated Transport Assessment (see committed developments below).

Period	Growth Rate	
	AM	PM
Year 2014 to 2027	1.1608	1.1680

Table 5.2 Growth Factors

Committed Developments

5.4.38 In compliance with the DfT Guidance on Transport Assessment, committed developments that will impose a significant impact upon the local highway network are to be considered. Land East of Bloxham Road (12/00080/OUT), a residential development for up to 145 dwellings, to the immediate north of the site, has been included within future baseline scenarios. Furthermore the approved development known as College Fields has been included within the Base 2027 scenario.

5.4.39 As a further sensitivity test, additional potential developments have been modelled including:

- ***Crouch Farm,*** Land West of Bloxham Road, to the immediate west of the proposed development site Planning permission is sought for up to 400 dwellings, however the proposed main modifications to the Cherwell Local Plan identify that site for only 150 dwellings.
- Land East of Bloxham Road, south of Salt Way (***Ely Diocese***). This is land within the proposed allocation to the east of the land which this TA is written in support of. Access for 200 units is taken from White Post Road.

- ***College Fields Phase 2*** – a further 600 homes to the east of Oxford Road using the approved point of access.

5.5 POTENTIAL EFFECTS

Construction Stage

5.4.40 It is anticipated that construction activities will be undertaken over a period of up to some 10 years and due to the complexity and length of the construction programme it is not possible to accurately predict volumes of traffic that will be generated over the course of a normal working day. However, a qualitative assessment can be carried out as described below.

5.4.41 If it is assumed that some 100 dwellings were constructed in a year then it is likely that this could result in circa 40-50 dwellings being constructed at any one time. This could result in around 50 tradesmen being on site at any one time which would lead to 100 two way trips per day. It is assumed that there would be in the region of up to 10 HGV movements per day from vehicles accessing the Site, which would lead to 20 two way trips per day.

5.4.42 All construction traffic would enter and exit the site from the A361. It is considered that the effect of construction traffic on the surrounding highway network will be of no greater than minor adverse significance as the HGV movements will be scheduled to avoid the peak times of travel demand and the traffic generated by the tradesman will not be discernible from general traffic. Furthermore, the effect of the construction traffic will be minimised as construction trips will not be routed along local roads and routes that are not designed to cater for such traffic.

5.4.43 The construction period will be short term and its overall significance is therefore reduced. Due to the nature of the construction process there is likely to be a temporary minor adverse effect.

Post-completion stage

Traffic Impact

5.4.44 Full details of the predicted traffic generation are contained within the TA. The assessment compares the predicted traffic generations for the Proposed Development with the 2027 AM and PM peak hours and includes further sensitivity testing which includes traffic generation arising from the Ely Diocese Land (200 units) Crouch Farm (400 units) and College Field Phase 2 (600 units) schemes.

5.4.45 The estimated number of vehicle trips generated by the Proposed Development is 124 arrivals and 406 departures in the AM peak hour and 332 arrivals and 151 departures in the PM peak hour.

5.4.46 In the Base 2027 " Do Nothing" scenario i.e. with committed development traffic and without mitigation, junction capacity analysis reveals:

- Bloxham Road / Wykham Lane Priority Crossroads – No capacity issues during the AM and PM peak periods;
- Bloxham Road / Springfield Avenue Priority Junction –Capacity issues during the PM peak period;
- Bloxham Road / Queensway Priority Junction – The Queensway junction is operating over capacity during the testing periods with a RFC value of 1.48 and 1.75 observed respectively for AM and PM Peak;
- The Oxford Road network junctions – the network is operating with
  -30.50% practical reserve capacity in the AM peak and
  –60.10% practical reserve capacity in the PM peak.

5.4.47 In the Forecast 2027 " Do Something" scenario i.e. with committed traffic + development traffic and with mitigation, junction capacity analysis reveals:

- Bloxham Road / Wykham Lane Priority Crossroads – No capacity issues during the AM and PM peak periods;
- Bloxham Road / Springfield Avenue Priority Junction (Road Widening) – the improved junction will operate with a reduced RFC and reduced queues when compared to the Base 2027 'do nothing' situation;
- Bloxham Road / Queensway Priority Junction (signalisation improvement) – The results with the improvements scheme indicate that there are no capacity issues during the AM and PM peak periods;
- The Oxford Road network junctions (with the College Fields scheme's improvements, Sainsbury's improvements and proposed Wykham Park Farm improvements at the Oxford Rd/Bloxham Rd junction) will operate with -0.9% spare capacity in the AM peak and -15.8% spare capacity in the PM peak, a significant improvement over the base situation.

5.4.48 In the Sensitivity Test scenario which assesses the impact of both the Crouch Farm and College Field Phase 2 development when added to the Forecast 2027 scenario junction capacity analysis reveals:

- Bloxham Road / Wykham Lane Priority Crossroads – No capacity issues during the AM and PM peak periods;
- Bloxham Road / Springfield Avenue Priority Junction – With the addition of Crouch Farm at draft allocation levels (150 dwellings) Springfield Avenue will operate at the same level of performance as the Base 2027 'do nothing' situation. If Crouch Farm is developed at 400 units then capacity and queues on the Springfield Road exceed these do nothing levels;
- Bloxham Road / Queensway Priority Junction (signalisation improvement) – With the addition of Crouch Farm at draft allocation levels (150 dwellings) the junction operates with adequate spare capacity. If Crouch Farm is developed at 400 units then the junction operates just over desirable levels of spare capacity but within theoretical capacity. MOVA has the potential to improve these results still further. The results are a considerable improvement over the situation that would occur if the junction is left as a priority junction in a base 2027 situation.

5.4.49 Overall there will be a minor beneficial effect in terms of delay and queueing on the assessed highway network within Banbury due to the proposed highway capacity improvements.

Accident Effects

5.4.50 In accordance with the IEMA Guidance, an assessment of road safety should be considered if the character of traffic flow alters through increases in volume. The Proposed Development is not predicted to generate significant volumes of HGV traffic and the TA demonstrates that traffic is not likely to increase significantly on any links that are not designed for the predicted levels. Therefore development traffic would have a minor impact upon the amount of accidents due to the fact that most accidents are not directly caused by the volume of traffic but the driver's error or irresponsible driving behaviour. The existing accident pattern will not be negatively affected by the proposed development.

5.6 MITIGATION MEASURES

Construction stage

5.6.1 It is considered that construction traffic will have no greater than a minor adverse impact. However this will be further mitigated through the production of a Construction Environmental Management Plan (CEMP). The purpose is to reduce the risk of adverse effects of construction on sensitive environmental resources and to minimise disturbance to local residents.

5.6.2 The objective is to demonstrate that appropriate checking, monitoring and audit processes will be implemented to ensure works are undertaken in an appropriate manner, together with measures to ensure that appropriate corrective actions or mitigation measures are taken.

5.6.3 The CEMP shall include:-

- Details of the approved construction traffic routes;
- The times within which traffic can enter and leave the Site;
- Specified on-site parking for vehicles associated with the construction works; and the provision made for access thereto.

Post-completion stage

Junction Improvements

5.6.4 As identified above, the delivery of any substantial residential development has the potential to increase traffic levels on the surrounding road network. An assessment of the potential impacts associated with the Proposed Development has indicated that there are several locations identified within the local road network that require junction interventions. These include:

- Signalisation of the Bloxham Road / Queensway junction giving improvements in capacity and pedestrian improvements;
- Localised widening of Springfield Avenue to increase capacity at the existing priority junction; and

- Bloxham Road / South Bar / Oxford Road – provision of a longer left turn lane on Bloxham Road and a left turn flare on Oxford Road north into Bloxham Road and signal staging improvements.

5.6.5 The other improvements on the Oxford Road Network will be delivered by committed developments at College Field and Sainsbury's.

Highway Improvements

5.6.6 The 30mph traffic limit on Bloxham Road will be extended to the south of the Bloxham Road / Wykham Lane junction.

Public Transport

5.6.7 The Proposed Development will secure the diversion of a local bus service into the site. The additional patronage that the Proposed Development will bring about on these services will help to increase their viability.

Walking and Cycling

5.6.8 The Proposed Development will result in a network of high quality streets for pedestrian and cyclists. The Proposed Development will provide additional pedestrian / cycle links to the existing Saltway Cycle Route and make provision for a circular movement link (bridle, cycle, foot) along the southern edge of the Site, linking pedestrians and cyclists with Banbury's existing pedestrian and cycle network along Salt Way and providing access to key facilities and services including the town centre, the railway station, employment areas and a foodstore.

5.6.9 The signalisation of the Bloxham Road / Queensway junction will improve pedestrian crossing facilities on Bloxham Road and Queensway.

Travel Plans

5.6.10 The travel plans for residents and other occupiers of the Proposed Development will play an important role in promoting the use of public transport, cycling and walking. The TP for the residential and employment components which accompanies the application includes specific measures and will be finalised and implemented at appropriate stages through the development. The TP for the primary school will be developed following occupation of the building.

5.6.11 The requirements for the travel plans will be secured by condition and will be monitored by travel plan co-ordinators of the residential, employment and educational elements and by OCC.

Proposed Development Design

5.6.12 A number of initiatives are proposed as part of the Proposed Development that will reduce reliance upon the private car and provide residents with a real choice of modes of travel.

5.6.13 The site access has been designed to provide a safe and convenient assess into the site and to cater in terms of capacity with the traffic generated by the Proposed Development and the expected traffic levels on Bloxham Road in 2027.

5.6.14 An existing bus service will be diverted into the site. Bus stops within the site will be provided with shelters, timetable displays and bus boarder kerbs if appropriate.

5.6.15 The Proposed Development will be designed to provide safe and convenient walking and cycling routes throughout the site, such as to the Primary School and Local Centre, and will link into walking and cycling facilities outside of the site.

5.6.16 All community facilities will be provided with high quality secure cycle parking facilities close to the main access to the buildings / facilities.

5.6.17 The street pattern within the Proposed Development will be designed at the detailed design stage to meet with the standards as set out within DfT's Manual for Streets and other best practice design documents.

5.6.18 The street pattern will be deigned on a legible and direct network of interconnected routes. Streets will be overlooked by properties and will act as functional community spaces. Streets will not be deigned on motor traffic criteria and will be interesting, varied and attractive, offering higher levels of pedestrian and cycle priority than 'estate' style street patterns; it will be safe and welcoming for pedestrians and cyclists and will be well specified and constructed.

5.6.19 Traffic speed will be carefully controlled by design so as to create a calm and safe environment for all. This will consider a range of common design options such as changes in horizontal alignment, reduced forward visibility, a number of converging streets, reduced street widths, the use of street trees, key buildings and changes in street materials.

5.7 RESIDUAL EFFECTS

Construction Stage

5.7.1 Taking account of the proposed CEMP, it is considered that potential minor adverse effects would be reduced to negligible level.

Post-completion stage

Junction Improvements

5.7.2 The modifications proposed at the Bloxham Road / Queensway and Bloxham Road/ South Bar Street / Oxford Road and Bloxham Road/Springfield Road junctions will ensure that the junctions are able to cater for the traffic generated by the Proposed Development and the expected level of background traffic in 2027 and will bring about a long term minor beneficial impact.

5.7.3 The modifications brought about by the Proposed Development and the committed development will have a long term minor beneficial impact on the Oxford Road network.

5.7.4 The proposed roundabout junction will cater for the traffic generated by the Proposed Development and for the expected vehicle movements along Bloxham Road in 2027 and the long term effect will be negligible.

Public Transport

5.7.5 The diversion of an existing bus route providing additional patronage arising from new residents and the provision appropriate facilities within the site will have a moderate long term beneficial effect on public transport.

Walking and Cycling

5.7.6 The construction of quality, safe and convenient walking and cycle routes within the site and links to the existing Banbury walking and cycle network will have a moderate long term beneficial effect on walking and cycling in the local area.

5.7.7 The provision of improved pedestrian crossing facilities at the Bloxham Road / Queensway junction will have a moderate long term beneficial effect on walking and cycling in the local area.

Travel Plans

5.7.8 The Travel Plans will promote travel by means other than single occupancy vehicles, thus lowering traffic generation from the Proposed Development and will have a substantial long term beneficial effect.

Statement of Effects

5.7.9 There will be an increase in traffic when compared to current traffic levels experienced on the local highway network. With the proposed junction improvements and other mitigation measures including junction improvements and the implementation of Travel Plans the anticipated traffic movements can be accommodated in capacity and safety terms on the surrounding highway network. The proposed junction improvements and other measures will improve the operation of the highway network in capacity and safety terms when compared with the Base Scenarios. The residual impact of the increase in vehicle movements on the local highway network brought about by the operation of the Proposed Development will be negligible.

5.7.10 The provision of a diverted local bus service providing additional patronage and the provision of appropriate facilities within the site will have a moderate beneficial residual effect on public transport.

5.7.11 The construction of high quality, safe and convenient pedestrian routes within the site linking into Banbury's existing pedestrian and cycling network along with pedestrian

improvements at the Bloxham Road / Queensway junction will have a moderate beneficial residual effect on walking and cycling.

5.7.12 Whilst measures have been designed to mitigate the effects of the Proposed Development there will be an inevitable overall increase in traffic levels compared with expected levels in 2027. It is concluded in the TA that with appropriate mitigation measures the local network would have the capacity to absorb this without causing any detrimental effect. The site is located in a sustainable location with access by public transport, walking and cycling to a wide range of local services and facilities and offers good opportunities for travel by sustainable modes of transport. The design of the Proposed Development, the measures introduced to encourage cycling, walking and the use of public transport and the proposed mitigation measures will mean that the Proposed Development will bring about a minor beneficial effect on the environment in terms of traffic and transport.

5.7.13 The effects identified are summarised in Table 5.2:

Table 5.2: Summary of Effects

Potential effect	Significance (pre-mitigation)	Mitigation measure	Significance of residual effect
Construction stage			
Construction traffic	**Minor adverse**	CEMP	**Negligible**
Post-completion stage			
Traffic	**Minor/Major adverse**	Junction mitigation as identified above	**Minor beneficial**
Pedestrian amenity	**Minor adverse**	Improved facilities within the Site and provision of appropriate linkages to the existing facilities within the area	**Minor beneficial**
Accidents and safety	**Minor**	Junction mitigation as identified above, introduction of 30mph speed limit	**Negligible**