6 Transport and Travel

6.1 Introduction

6.1.1 This Chapter reports the outcome of the assessment of likely significant environmental effects arising from the Project in relation to Transport and Travel. It is supported by the Transport Assessment ('TA') submitted with the Application.

6.1.2 The Chapter describes the technical consultation that has been undertaken during the EIA, the scope of the assessment and assessment methodology, a summary of the baseline information existing at the Site and in the surrounding area that has informed the assessment, the likely significant environmental effects, the mitigation measures required to prevent, reduce or offset any significant adverse effects, the likely residual effects after these mitigation measures have been employed and the cumulative effects associated with the Proposed Development in combination with other developments in the vicinity of the Site as more particularly explained below.

6.1.3 This chapter should be read in conjunction with the following transport reports:

- Transport Assessment – Appendix 6.1
- Travel Plan – Appendix 6.2

6.2 Legislation, Policy and Guidance

Legislative Context

6.2.1 The assessment is undertaken in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended). There is no specific legislation in regard to the assessment of transport and travel matters.

Planning Policy and Guidance

6.2.2 The following national, regional and local planning policy and guidance is relevant to the Proposed Development. A detailed summary of these policy documents is provided within Chapter 2 of the Transport Assessment (Appendix 6.1).

National Planning Policy Framework

6.2.3 The NPPF (adopted in 2024 and updated in February 2025), sets out the Government's planning policies for England and how these are expected to be applied. It also constitutes guidance for local planning authorities and decision makers both in drawing up plans and as material consideration in determining applications.

6.2.4 Paragraph 109 states that transport issues should be considered from the earliest stages of development proposals, using a *"vision-led approach to identify transport solutions that deliver well-designed, sustainable and popular places"*.

6.2.5 The transport objectives include promoting walking, cycling and public transport and addressing the potential impacts of development on the transport network. These objectives should be managed with development *"focused on locations which are or can be made sustainable … offering a genuine choice of transport modes"* (paragraph 110). Whilst acknowledging that

"opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making" (paragraph 110).

6.2.6 Paragraph 116 states:

"Development should only be prevented or refuse on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe, taking into account all reasonable future scenarios"

6.2.7 Within the above context, Paragraph 117 states that planning applications should:

a) *"give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*

b) *address the needs of people with disabilities and reduced mobility in relation all modes of transport;*

c) *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards; and*

d) *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*

e) *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

National Policies

- Department for Transport Circular 01/2022: Strategic Road Network and the Delivery of Sustainable Development (2022)
- Planning Practice Guidance (PPG) on Travel Plans, Transport Assessments and Statements (2014)
- Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement (2023) ("the IEMA Guidelines")
- Environmental Impact Assessment: A Guide to Good Practice and Procedures June 2006

Local Policies

- Oxfordshire Local Transport and Connectivity Plan (2022-2050) (2022)
- Adopted Cherwell Local Plan (Part 1) 2011-2031 (adopted 2015)
- Adopted Cherwell Local Plan (Part 1) Partial Review (adopted 2020)
- Saved Policies of the Cherwell Local Plan (1996)
- Cherwell Local Plan Review 2042 (submitted for examination in August 2025)

Guidance

- DMRB, LA 104 Environmental Assessment and Monitoring (2020)

- Department for Communities and Local Government / Department for Transport: The Manual for Streets (2007)
- Department for Communities and Local Government / Department for Transport: The Manual for Streets 2 (2010)

6.3 Assessment Methodology

Consultation

6.3.1 Table 6.1 summarises the consultation that has been undertaken by Steer to date with key transport stakeholders.

Table 6.1 Consultation to Date

Consultee	Meeting Date	Purpose of Meeting / Event
National Highways	April 2024	Introduction of the Proposed Development and proposed technical assessment
Oxfordshire County Council	April 2024	Introduction of the Proposed Development and proposed technical assessment
Cherwell District Council	April 2024	Introduction of the Proposed Development and proposed technical assessment
Public Consultation Event (Bucknell)	July 2024	Public Consultation
Public Consultation Event (Bicester)	July 2024	Public Consultation
Public Consultation Event (Oxford)	July 2024	Public Consultation
Bicester Bug Cycle Group	July 2024	Introduction of the Proposed Development and discussion on potential cycle improvements
Oxford Bus	September 2024	Introduction of the Proposed Development and discussion around local bus services and future opportunities
Chiltern Railways	September 2024	Introduction of the Proposed Development and discussion around rail services and future patronage
Oxfordshire County Council – Public Rights of Way	September 2024	Introduction of the Proposed Development and discussion on local PRoW routes
Oxfordshire County Council – Public Transport	September 2024	Introduction of the Proposed Development and discussion on local bus and rail services
Oxfordshire County Council and National Highways – Traffic Modelling	September 2024	Technical Assessment meeting

East West Rail	October 2024	Introduction of the Proposed Development and discussion around rail services and future patronage
Stagecoach	October 2024	Meeting
Chiltern Railways	November 2025	Meeting
National Highways	December 2024	Meeting
National Highways	January 2025	Meeting
Oxford Bus	January 2025	Meeting
National Highways	February 2025	Meeting
Chiltern Railways	February 2025	Meeting
Public Consultation Event (Bicester)	February 2025	Public Consultation
Public Consultation Event (Banbury)	February 2025	Public Consultation
Public Consultation Event (Bucknell)	February 2025	Public Consultation
Bicester Bug Cycle Group	February 2025	Meeting, as well as off-site walkover to discuss potential improvements within Bicester
National Highways	March 2025 (X2)	Meeting
Oxford Bus	March 2025	Meeting
Chiltern Railways	March 2025	Meeting
East West Rail	April 2025	Meeting
Oxford Bus	April 2025 (X2)	Meeting
Chiltern Railways	April 2025 (X2)	Meeting
Oxford Bus	May 2025	Meeting
National Highways	June 2025	Meeting
Chiltern Railways	June 2025 (X3)	Meeting

6.3.2 In addition, the Applicant has met with a number of organisations and, where appropriate, their transport consultants. These included Bicester Village, Bicester Motion, and Oxfordshire Strategic Rail Freight Interchange ('OxSRFI').

EIA Scoping Opinion

6.3.3 CDC issued its Scoping Opinion on 7 February 2025 (see Appendix 4.2). During the EIA Scoping process, the Council formally consulted statutory and non-statutory consultees, and made the request available online for general public and local community comments. The comments received are summarised below.

Response to Publicity

6.3.4 A summary of the comments relating to highways and transport from the general public and local community groups are summarised below:

- Matters regarding the number of car users attracted to the Proposed Development, and the resultant traffic issues on the local road network, particularly around the Site entrances and the B4100.

- Increase in road safety incidents if there is an increase in car drivers.
- Consideration as to whether the Chiltern railway line which serves Bicester would have the capacity to accommodate the number of visitors.
- Request for a robust EIA which includes comprehensive road traffic survey and detailed modelling of the entire local and wider area, along with all key infrastructure routes.
- Bicester North Station has a very tight forecourt, therefore may be difficult to accommodate a frequent and regular shuttle bus service.

Response to Consultation

6.3.5 OCC Highways comments are summarised below:

- No details are included on the proposed accesses. Comments regarding suitability of the accesses are therefore reserved.
- The ES Chapter should provide information on how the effect of severance would be assessed.
- The TA and the transport modelling that underlies it will be a key part of the evidence for the ES.
- The TA should consider the impact of traffic generated by the Proposed Development during the agreed peak periods, whereas the EIA is obliged to assess the impacts of total traffic across the day.
- The list of cumulative schemes reflects what has been agreed with CDC and OCC, which is welcomed. CDC will expect the list to be updated, in the event that any development proposals, not yet known, emerge.
- The EIA should include PRoW, publicly accessible routes and greenspace as part of the traffic and transport assessment.
- Roads with sub-standard footpaths, particularly in relation to HGV traffic should be considered high sensitivity.
- PRoW should be included as receptors as traffic impact can affect people's enjoyment of them and can scare horses.

6.3.6 National Highways comments are summarised below:

- Any committed development and their cumulative impact within the study area should be outlined within the ES and TA.
- The inclusion of the Strategic Road Network ('SRN') junctions within the study area are agreed.
- The Applicant should provide information on the trip distribution, providing flow diagrams which include the junctions with the SRN in the vicinity of the Proposed Development.
- If the Proposed Development proposes to generate an increase of 30 two-way movements or more on any junctions on the SRN within a peak period (AM or PM), a capacity assessment should be undertaken to assess the impact of the proposed trips on the affected junctions and provide mitigations, if required.

- National Highways consider AIL's would need to be scoped in and considered at EIA stage.
- National Highways would require the following information to be included with the ES:
    - A vision as per the Circular 01/2022;
    - Outline relevant national and local policies;
    - Summarise the existing baseline conditions;
    - Provide details of the Proposed Development;
    - Set out the distribution of the construction and operational traffic;
    - Detail the construction and operational trip generation;
    - Identify any necessary mitigation;
    - Assesses the impact of local committed developments;
    - Carry out a cumulative assessment for the other Nationally Significant Infrastructure Projects (NSIPs) and committed developments that are coming through around the study area; and
    - Summary of the findings and an overall conclusion.

6.3.7 OCC Public Rights of Way team raised the following comments:

- Bridleways carry PRoW for cyclists (as well as walkers and horse-riders) so this should be taken account in the EIA.
- The scope doesn't include horse riders being impacted by increased vehicle traffic.
- The impact of the Proposed Development on PRoW and users should be considered as a key issue if the proposal is to stop up/divert existing PRoWs across the Site.
- PRoW and other accessible route data/information should be obtained.
- The EIA study area should be extended to a 2km radius (from the Site) for PRoW and users to be able to properly assess access and user issues and opportunities.
- Any assessment of non-motorised user delay (and subsequent amenity, fear and safety sections) should take equestrian users into account
- Proposed avoidance and mitigation measures should include equestrian users for improvements, safety and severance measures.
- The EIA should have four areas of focus for assessing impacts on PRoW:

    1) the public rights of way itself inside and outside the site;

    2) current and future users of the public rights of way;

    3) the amenity of the rights of way including views, tranquillity and nature conservation inside and outside of the site; and

    4) mitigation measures inside and outside of the site.

Summary of Assessment Scope

6.3.8 The transport and travel aspects assessed in this chapter were set out in the EIA Scoping request (see Appendix 4.1) and agreed via the Scoping Opinion. The assessment criteria and corresponding sections within this ES chapter are set out below:

- Severance of communities (6.3.26 – 6.3.30);
- Road vehicle driver and passenger delay (6.7.14 – 6.7.17);
- Non-motorised user delay (6.3.31 – 6.3.33);
- Non-motorised amenity (6.3.34 – 6.3.37);
- Fear and intimidation on and by road users (6.3.38 – 6.3.40);
- Road user and pedestrian safety (6.3.41 – 6.3.42); and
- Hazardous/large loads (6.3.43 – 6.3.45).

6.3.9 The above aspects are consistent with those defined by the IEMA Guidelines.

6.3.10 The key mechanisms through which the Proposed Development could lead to potential effects during the operational phase which are considered in the assessment include:

- Additional traffic, generated by the Proposed Development, which could impact upon congestion, delay and amenity for active travel.
- Three new access points into the Site are proposed from the B4100;
- Increased propensity for road traffic collisions or other accident and safety concerns for pedestrians and cyclists, as a result of the new vehicle trip attraction;
- The Proposed Development is accompanied by mitigation including:
    - New walking and cycling facilities, and crossings, including:
        - Equestrian crossing connecting bridleways over the B4100 to the north of the primary Site access;
        - Refuge island crossing for footpath over the B4100 south of the Site to connect into the PRoW Network;
        - Construction of a cycle route adjacent to the B4100 between the Site and Bicester;
        - Upgrade a section of existing footway (circa 100m) to a footway / cycleway within Bicester and provision of a new crossing as part of the cycle route from Bicester North to the Site; and
        - Contributions / work towards other pedestrian and cycling infrastructure improvements, including enhancements to the Site boundary bridleway to Ardley Road, upgrading the southern footpath to a Bridleway, and improvements along Bainton Road.
    - Highways improvements, to include:
        - A43 / B4100 Baynards Green Roundabout: Enhancement, widening and signalisation
        - Improvements to M40 Junction 10, including Ardley Roundabout

- M40 junction 9: Improvements to signal operations
- TRO to restrict vehicles along Bainton Road

Cumulative Assessment

6.3.11 Due to the nature of the traffic modelling, planned development in the form of the adopted Cherwell Local Plan as well as that in the emerging 2042 Local Plan and committed developments have been taken into account in the assessment and are included in both future baseline scenarios:

- Future Baseline 2042 (with Local Plan mitigation) without the Proposed Development
- Future Baseline 2042 (with Local Plan mitigation) + Proposed Development - this represents the impacts of the Future Baseline plus the Proposed Operational Development

6.3.12 The effects of the Proposed Development reported in the ES are therefore inherent of the traffic effects from other planned and committed schemes.

Study Area

6.3.13 The EIA study area will be in line with the IEMA Guidelines which recommend the following rules are considered when assessing the impact of development traffic on a highway link:

- Rule 1: Include highways links where total traffic flows will increase by more than 30% (or the number of Heavy Goods Vehicles ('HGVs') will increase by more than 30%).
- Rule 2: Include any other specifically sensitive areas where traffic flows will increase by 10% or more.

6.3.14 OCC's PRoW team have requested that the study area for PRoW user impact should be extended to a 2km radius from the Site, to enable assessment of access and user issues and opportunities. Where applicable, the PRoW network has been assessed, based upon the likelihood of users associated with the Proposed Development accessing the network, within a suitable radius of the scheme.

6.3.15 The IEMA Guidelines also identifies impacts that should be considered once these rules have been applied, as set in the assessment criteria later in the report. These criteria follow general subject areas which are also covered within the TA, however there is some variation. On occasion, there may be locations which the highway authority or other stakeholders request an assessment of impacts in a location which does not fit within the IEMA assessment rules or criteria. As such, given the different criteria between the assessments, it is likely that the EIA study area and the TA study area will vary slightly.

6.3.16 The study area for the assessment is based on the areas in which data has been collected which covers the key routes into and out of the Site (see Table 6.2 supported by Figure 6.1).

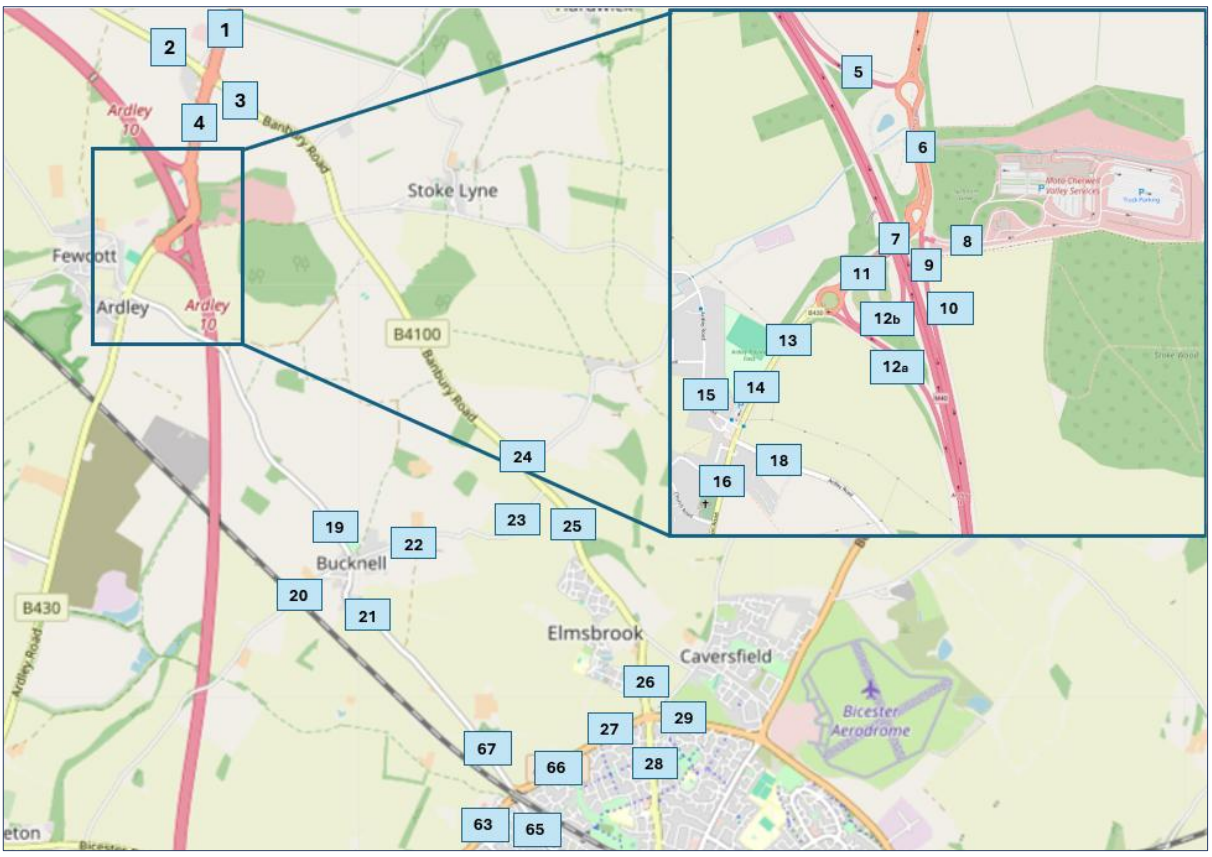
6.3.17 Data has been sourced from the Bicester Traffic Model ('BTM'), which is a strategic model that simulates and analyses traffic patterns and future changes in traffic flows in and around Bicester. The BTM is commonly used by developers to test development impacts on the local highway network, and is the tool agreed with OCC and National Highways to assess the impacts of the development.

6.3.18 It is anticipated that the impacts and therefore the level of assessment will be greater closer to the Site, with impacts dissipating as traffic disperses across the network.

Table 6.2 Traffic Survey Source Data and Locations

Source	Location	
Bicester Traffic Model (BTM)	1	A43 North of B4100
Bicester Traffic Model (BTM)	2	B4100 West of A43
Bicester Traffic Model (BTM)	3	B4100 East of A43
Bicester Traffic Model (BTM)	4	A43 South of B4100
Bicester Traffic Model (BTM)	5	M40 J10 Southbound Off-Slip
Bicester Traffic Model (BTM)	6	A43 Between M40 Southbound Off-Slip and Cherwell Roundabout
Bicester Traffic Model (BTM)	7	A43 Between Cherwell Roundabout and Ardley Roundabout
Bicester Traffic Model (BTM)	8	Cherwell Valley Services Access Road
Bicester Traffic Model (BTM)	9	M40 J10 Southbound On-Slip (N)
Bicester Traffic Model (BTM)	10	M40 J10 Southbound On-Slip (S)
Bicester Traffic Model (BTM)	11	A43 Between Cherwell Roundabout and Ardley Roundabout (W)
Bicester Traffic Model (BTM)	12a	M40 J10 Northbound Off-Slip
Bicester Traffic Model (BTM)	12b	M40 J10 Northbound On-Slip
Bicester Traffic Model (BTM)	13	B430 East of Ardley Roundabout
Bicester Traffic Model (BTM)	14	B430 North of Ardley Road
Bicester Traffic Model (BTM)	15	Ardley Road West of B430
Bicester Traffic Model (BTM)	16	B430 South of Ardley Road
Bicester Traffic Model (BTM)	18	Ardley Road East of B430
Bicester Traffic Model (BTM)	19	Ardley Road North of Bainton Road
Bicester Traffic Model (BTM)	20	Middleton Road West of Ardley Road
Bicester Traffic Model (BTM)	21	Bicester Road South of Bainton Road
Bicester Traffic Model (BTM)	22	Bainton Road East of Ardley Road
Bicester Traffic Model (BTM)	23	Bainton Road West of B4100
Bicester Traffic Model (BTM)	24	B4100 North of Bainton Road
Bicester Traffic Model (BTM)	25	B4100 South of Bainton Road
Bicester Traffic Model (BTM)	26	B4100 North of A4095
Bicester Traffic Model (BTM)	27	A4095 West of B4100
Bicester Traffic Model (BTM)	28	B4100 South of A4095
Bicester Traffic Model (BTM)	29	A4095 East of B4100
Bicester Traffic Model (BTM)	63	Howes Lane West of A4095
Bicester Traffic Model (BTM)	65	Bucknell Road South of A4095
Bicester Traffic Model (BTM)	66	A4095 East of Bucknell Road
Bicester Traffic Model (BTM)	67	Bucknell Road North of A4095

Figure 6.1 Traffic Survey Locations



6.3.19 In addition to the data from the BTM, traffic counts have been undertaken at the following locations for the purposes of this assessment.

- A43/ A3100 Baynards Green
- A41/ B4030 Vendee Drive/ Bicester Park and Ride
- B4030/ A4095 Middleton Stoney Road/ Vendee Drive/ Howles Lane
- Bucknell Road/ A4095/ Bucknell Road roundabout
- Howes Lane/ Bucknell Road
- A34/ M40/ A41 junction
- M40 junctions
- A43/ B4100 junction

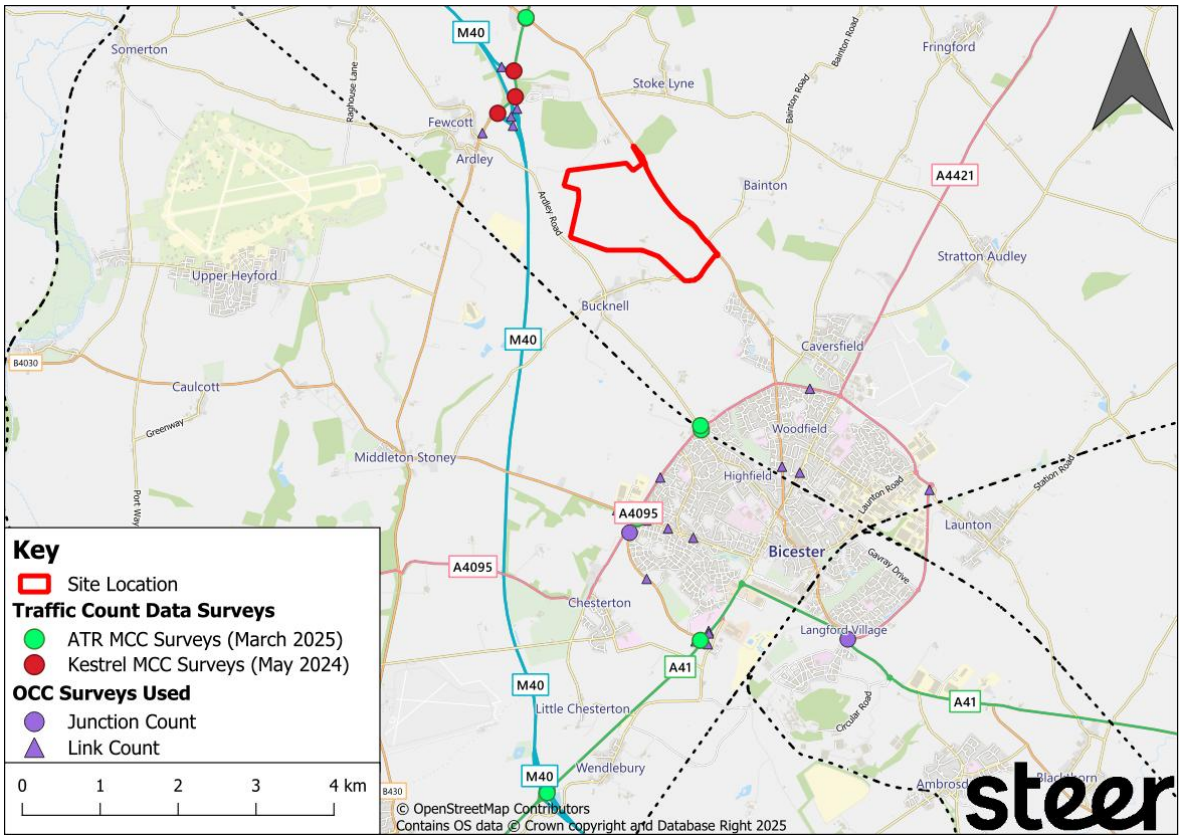
6.3.20 Traffic data has also been purchased from OCC for the following locations:

- A4095 Howes Lane: Shakespeare Drive (N) to Middleton Stoney Road (S), Surveyed 09/01/23
- A4095: From Heather Road (W) to Hornbeam Road (E), Surveyed 09/01/23
- A41 Oxford Road: From B4030 Vendee Drive (S) to Pioneer Way (N), Surveyed 26/09/22

- A41: From B4030 Vendee Drive (SW) to Wendlebury Road (NE), Surveyed 09/01/23
- A41: From Wendlebury Road (NE) to B4030 Vendee Drive (SW), Surveyed 09/01/23
- Access Road: From B4030 Vendee Drive (NE) to Bicester Park & Ride (SW), Surveyed 28/11/22
- Access Road: From Bicester Park & Ride (SW) to B4030 Vendee Drive (NE), Surveyed 28/11/22
- B4030 Vendee Drive: From Heaton Road (NW) to Whitelands Farm (SE), Surveyed 09/01/23
- B4030: From Empire Road (E) to Middleton Road (W), Surveyed 09/01/23
- B4100 Banbury Road: From Rowan Road (S) to Stable Road (N), Surveyed 02/10/23
- B430: From A43 (N) to Ardley Road (S), Surveyed 10/07/23
- Buckingham Road: From Cedar Drive (N) to Woodfield Road (S), Surveyed 02/10/23
- Charbridge Lane: From Bicester Road (N) to Gavray Drive (S), Surveyed 05/07/22
- Charles Shouler Way: From A41 Oxford Road (W) to Wendlebury Road (E), Surveyed 26/09/22
- Middleton Stoney Road: From A4095 Howes Lane (W) to Ludlow Road (E), Surveyed 30/10/23
- Middleton Stoney Road: From Goodwood Close (E) to Whitelands Way (W), Surveyed 30/10/23
- Middleton Stoney Road: From Ludlow Road (W) to Shakespeare Drive (E), Surveyed 30/10/23
- M40: From Off Sliproads to A43/B430
- M40: From A43/B430 to On Sliproads
- A43: From B430 to M40
- A43: From M40 to B430

6.3.21 The survey locations are provided on Figure 6.2.

Figure 6.2 Survey Locations



Receptors

6.3.22 The IEMA Guidelines identifies groups and special interests which should be considered within the assessment. However, it is proposed that the following apply to this traffic, accessibility and movement assessment to establish how the Proposed Development might affect daily lives, including access to amenities, noise levels, visual impacts and overall environmental quality:

- People at home;
- People at work;
- People using affected PRoW (including pedestrians, cyclists and horse riders);
- People using affected local roads within a defined study area;
- Sensitive and/ or vulnerable groups (including young age; older age; income; health status; social disadvantage; and access and geographic factors);
- Recreational areas;
- Local schools;
- Care homes;
- Tourist attractions;
- Collision clusters and routes with road safety concerns; and
- Junctions and highway links at (or over) capacity.

Baseline Data Collection

6.3.23 The extent of study area and identification of sensitive receptors is based on site visit observations, professional opinion/experience, traffic surveys, and the scoping and pre-application feedback from the relevant highway authorities. This is detailed further in the TA. Key information sources include:

- Baseline data collection including Manual Classified Counts and Automatic Traffic Counts;
- Survey data from other Puy du Fou Parks – including France and Spain;
- BTM;
- National Highways' M40 model outputs;
- Personal Injury Collision data for the latest 5-year period; and
- Public Right of Way information.

Assessment Criteria

6.3.24 Traffic impact assessments will be undertaken for the following scenarios within this chapter (and to inform the noise (chapter 9) and air quality (chapter 14) ES chapters):

- Future Baseline 2042 (with Local Plan mitigation) without the Proposed Development.
- Future Baseline 2042 + Proposed Development - this represents the impacts of the Future Baseline plus the Proposed Operational Development.

6.3.25 Following discussions with OCC Highways and National Highways, it was agreed that the most suitable tool for assessing the impacts of the development would be to use the BTM (representing the adopted Local Plan).

6.3.26 The TA includes additional assessments based on varying levels of operation, given that visitor number will build up over time.

Identifying Significant Effects

6.3.27 The following section sets out how impacts have been identified and assessed in accordance with the IEMA Guidelines. The following section sets out how impacts have been identified and assessed. These apply equally to the Proposed Development and the Cumulative Effects assessments.

Severance

6.3.28 Severance is defined by the IEMA Guidelines as (refer to paragraph 3.13):

"the perceived division that can occur within a community when it becomes separated by major transport infrastructure. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure."

6.3.29 The IEMA Guidelines acknowledge that the measurement and prediction of severance is extremely difficult. Factors which need to be considered when determining whether severance is likely to be an important issue at the sensitive receptors include: road width, traffic flow and composition, traffic speeds, the availability of crossing facilities, and the number of movements that are likely to cross an affected route.

6.3.30 Three main indicators for the assessment of magnitude of severance have been formulated from studies of changes in traffic flow on observed links and are discussed in the IEMA Guidelines and applied to this assessment. These comprise:

- Change in flow of up to 30% - Negligible magnitude;
- Change in flow of over 30% and up to 60% - Slight magnitude;
- Change in flow of over 60% and up to 90% - Moderate magnitude; and
- Change in flow over 90% - Substantial magnitude.

6.3.31 Values for driver delay can be determined by the use of industry standard junction assessment packages (e.g. Junctions 10 and LinSig). Each package produces estimates of vehicle time and delay through the junction.

6.3.32 This assessment is carried out for the network peak periods, which are the times when the local highway network is at its busiest and so impacts of the Proposed Development on driver delay would be greatest.

Non-Motorised User Delay

6.3.33 The IEMA Guidelines refer to potential delays to pedestrians and users of other modes, such as cyclists and equestrian use.

6.3.34 Pedestrian delay and severance are closely related effects and can be grouped together. Changes in the volume, composition or speed of traffic may affect the ability of people to cross roads. In general, increases in traffic levels are likely to lead to greater increases in delay. Delays will also depend on the general level of pedestrian activity, visibility and general physical conditions of the Site.

6.3.35 Pedestrian and cycle delay will primarily be assessed by considering existing and proposed walking and cycling infrastructure. Given the nature of the Proposed Development, the additional external walking and cycling trips generated would be relatively low.

Non-Motorised Use Amenity

6.3.36 Pedestrian amenity, which can also be applied to cyclists and horse riders, is defined by the IEMA Guidelines as (refer to paragraph 3.29):

"relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic".

6.3.37 Changes in the volume, composition or speed of traffic may affect the ability of pedestrians, cyclists and horse riders to cross roads. In general terms, increases in traffic are likely to correspond to increased delay. Delay will also depend upon the level of user activity, visibility and physical conditions.

6.3.38 The IEMA Guidelines direct assessors to use their own judgement, based on experience, as to whether or not non-motorised user delay is a significant impact. The determination of what constitutes a material impact on delay and amenity is generally left to the judgement of the assessor and knowledge of local factors and conditions.

6.3.39 The IEMA Guidelines refer to DMRB Volume 11 Section 3 a Part 8 (now LA112) to determine how non-motorised users are delayed, and concludes 8 seconds at flows of 1,000 vehicles per hour and below 20 seconds at 2,000 vehicles per hour for various types of crossings. A two-

way flow of 1,400 vehicles per hour has therefore been adopted as a lower threshold for assessment - equating to a mean 10 second delay for a link with no pedestrian facilities. Where there are controlled crossings, the level of pedestrian delays are shorter.

Fear and Intimidation

6.3.40 Fear and intimidation refer to that created by moving objects and are assessed within the context of pedestrians. The extent of fear and intimation is described in the IEMA Guidance (refer to paragraph 3.32):

- *"The total volume of traffic*
- *The heavy vehicle composition*
- *The speed these vehicles are passing*
- *The proximity of traffic to people – and/or the feeling of the inherent lack of protection created by factors such as a narrow pavement median, a narrow path or a constraint (such as a wall or fence) preventing people from stepping further away from moving vehicles."*

6.3.41 The IEMA Guidelines provide a weighting system to provide assessors with an approximation of pedestrian fear and intimidation. It uses a calculated degree of hazard (see Table 6.3) score to determine the level of fear and intimidation (see Table 6.4). This is calculated for the existing development and future baselines, with the resulting difference used to approximate the magnitude of the impact (see Table 6.5).

Table 6.3 Fear and Intimidation Degree of Hazard

Average Traffic Flow Over 18-Hour Day – All Vehicles/Hour 2-Way (a)	Total 18-Hour Heavy **Vehicle Flow (b)**	**Average Vehicle Speed (c)**	**Degree Of Hazard Score**
+1,800	+3,000	->40	30
1,200 – 1,800	2,000 – 3,000	30-40	20
600 – 1,200	1,000 – 2,000	20-30	10
<600	<1,000	<20	0

Source: IEMA Guidelines, Table 3.1

Table 6.4 Levels of Fear and Intimidation

Level of Fear and Intimidation	**Total Hazzard Score (a) + (b) + (c)**
Extreme	71+
Great	41-70
Moderate	21-40
Small	0-20

Source: IEMA Guidelines, Table 3.2

Table 6.5 Levels of Fear and Intimidation Magnitude of Impact

Level of Fear and Intimidation	Total Hazzard Score (a) + (b) + (c)
High	Two-step changes in level
Medium	One step change in level, but with >400 vehicles increase in average 18hr all vehicle two-way all vehicle flow; and/or >500 Heavy Vehicle increase in total 18hr Heavy Vehicle flow
Low	One step change in level, with <400 vehicles increase in average 18hr all vehicle two-way all vehicle flow; and/or <500 Heavy Vehicle increase in total 18hr Heavy Vehicle flow
Negligible	No change in step changes

Source: IEMA Guidelines, Table 3.2

6.3.42 Levels of fear and intimidation are determined in the assessment by firstly assigning a degree of hazard score to each road link based on the criteria identified in Table 6.3. Should the Development change the road link's criteria, the total hazard score may increase or decrease in line with the criteria.

Road Safety

6.3.43 The key issue in assessing road safety is understanding the potential for change. For example, there can be some small changes in collision rates arising simply due to a greater number of journeys being made; hence, the more people that are travelling, the more people that are liable to become involved in a collision. However, the more important issue is how travel and the design of the transport networks interrelate to affect road safety.

6.3.44 The full results of the accident analysis are reported in the TA and are summarised in this ES chapter.

Hazardous Loads

6.3.45 Hazardous loads are considered in the IEMA Guidelines (refer to paragraph 3.49):

"Some developments may involve the transportation of dangerous or hazardous loads by road and this should be recognised within any Environmental Statement. Such movements should include specialist loads which might be involved in the construction or decommissioning phases of the development, in addition to the movement associated with the operation of the establishment".

6.3.46 Hazardous loads could include, for example:

- Explosives
- Gases
- Flammable liquid
- Flammable solids
- Oxidising substances
- Toxic substances

- Radioactive material
- Corrosive substances.

6.3.47 The Proposed Development is not expected to generate or attract hazardous loads during construction or when operational. Therefore, potential impacts relating to hazardous loads have been scoped out of this assessment.

Construction

6.3.48 An assessment of the transport effects during the construction phase of the Proposed Development has been undertaken when there will be HGVs and the construction workforce entering / exiting the Site.

6.3.49 Four approaches have been considered to inform the level of estimated construction trips associated with the Proposed Development:

- Review of Construction Traffic Management plans for existing Puy du Fou Parks
- Review of Construction Traffic Management plans for existing comparable sites
- Review of Construction Traffic Management plans to create a database of different land uses and associated trips
- TRICS cost-based analysis

6.3.50 Given that there is no available data from the existing Parks in France and Spain and limited comparable information online for similar sites in the UK, it was concluded that a cost-based methodology is the most appropriate.

6.3.51 This methodology utilises volume and classification of traffic associated with construction phases, estimated on the 'ready reckoner' methodology provided within the TRICS 'Construction Traffic – Researcher Report' (TRICS, 2008).

6.3.52 The report identifies a 'Ready Reckoner', based on data collected by Constructing Excellence to record 'Commercial Vehicle Movements KPI' as part of the 2007 UK Construction Industry Key Performance Indicators. The research indicates that the total recorded movements onto a construction Site per £100,000 (at time of writing) of project value/capital expenditure equates to 29.4 one-way trips (58.8 two-way trips).

6.3.53 An estimated construction traffic program was calculated using the project value/capital expenditure per Proposed Development land use, and taking into consideration the indicative construction and build-out programme alongside the type of vehicles likely to be associated with constructing the Proposed Development. The full methodology to calculate the anticipated construction traffic is provided at Chapter 16 of the Transport Assessment (Appendix 6.1).

6.3.54 Given that the Project is at outline planning, this approach is considered to be a robust assessment of the likely impacts arising from construction traffic.

6.3.55 The construction traffic includes an allowance for peak workforce and construction activity at various phases of Proposed Development clearance and build. Due to the required level of flexibility in delivery and phasing of the construction activities, the assessment is based on average construction traffic flows during the peak of the construction period, ahead of the Park opening. It is acknowledged that there may be some construction continuing post opening, given the phased nature of the Proposed Development, however this is likely to occur during the closed or quite part of the season and as such the total traffic associated with the Proposed

Development is anticipated to be greater than any of the intervening years plus construction traffic.

6.3.56 The flows are assigned to the highway network on the basis that the majority of construction vehicles will enter and exit the Site via the B4100 and access the strategic road network via junction 10 of the M40. A small number of construction movements, associated with construction workers will also route via local roads from Bicester.

Operation

6.3.57 For the operational phase, the transport effects of the fully built-out Proposed Development have been assessed using data provided by the Applicant, alongside the mode share assumptions outlined in the TA.

6.3.58 As there are no precedents for existing trip generation figures for developments such as this, a first principles assessment has been undertaken to understand how visitor and staff trips to and from the Site may be generated. This is based on the existing Parks developed and operated by the Applicant (Puy du Fou France and Puy du Fou Espana), an understanding of the local environment, and Steer's experience.

6.3.59 It should be noted that the number of visitors visiting the Proposed Development will fluctuate throughout the year. Between November and April, most of the Park is closed. During this period, the only traffic associated with the Site is related to key administrative staff, maintenance, those attending to animals and some traffic associated with the conference centre, and dependant on demand, the associated hotel.

6.3.60 The Park will have a flexible calendar, e.g. even during the open period, the Proposed Development will not be open every day, and night shows will be frequent, but will not occur every night of opening.

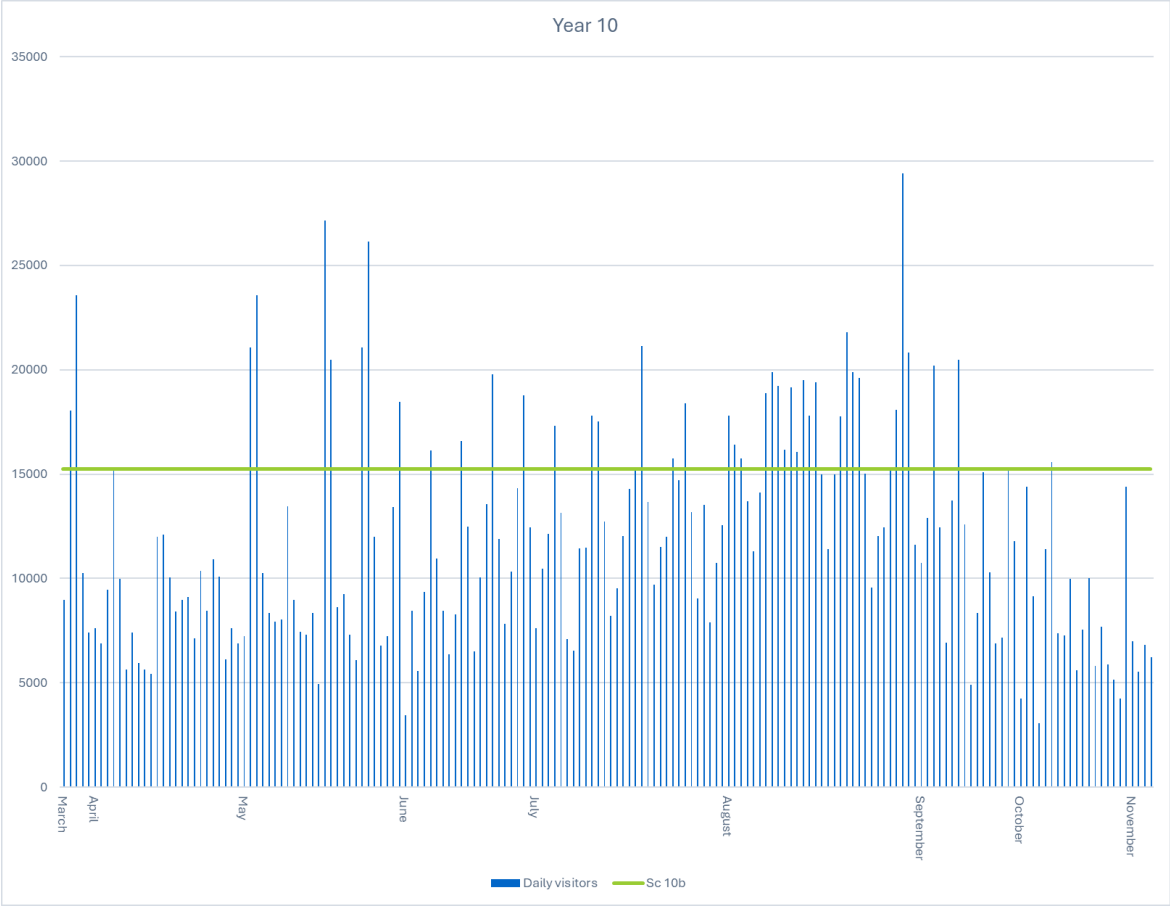
6.3.61 Typically, the Applicant's other Parks are busiest at the weekend and during school holidays or bank holidays. The greatest demand is likely to occur in the summer holidays, when traffic volumes in the peak periods are lower, given a reduction in education-oriented trips associated with the school run, and fewer commuter trips as a higher percentage of the population are on holiday.

6.3.62 The Proposed Development is currently expected to open at 10:00 on a typical weekday and 09:00 at the weekend with shows starting around 15 minutes after opening. The Park would close after the last show finishes, generally around 19:00 in the scenario where there is no night show. On evenings when there is a night show, which occur after dusk, the night show would finish at around 23:00. There is some flexibility around the finish times as this will depend on the programme on the day, however shows would end outside of the peak traffic periods. Therefore, the peak arrival and departure times are outside of typical morning and evening peaks.

6.3.63 It is anticipated that the Park would be open for circa 176 days of the calendar year, at other times while there would be traffic associated with the Proposed Development this would be at a much lower level.

6.3.64 A typical profile of visitor traffic for the period that the Park is open is shown in Figure 6.3.

Figure 6.3 Typical Visitor Profile (April to October)



6.3.65 Furthermore, Table 6.6, identifies the likely number of attendees on a daily basis, within set ranges. This identifies that on circa 162 days, the number of people attending will be below the 85th percentile.

Table 6.6 Daily Attendees (85th percentile)

Attendees (Indicatively)	Count (Phase 8 – Year 10)
<5,000	6
5-10,000	68
10-15,000	55
15-20,000	34
20-25,000	10
25-30,000	3
Total Days Open	176

6.3.66 In terms of arrival and departures, it is expected that the peak vehicular trip generation will occur:

- In the hour preceding opening, between 09:00 and 10:00 on a weekday, and between 08:00 and 09:00 on a weekend. While approximately half of visitors will arrive in the preceding hour,

the remainder are split between the preceding and post opening hours. This would follow a typical 'bell' shape curve.

- In the hour post day only closing time e.g.19:00
- In the hour post night show e.g. between 22:00 and 23:00 (depending on the time of year)

6.3.67 Four scenarios were created which are considered in terms of their traffic generation, given that each scenario has a different profile in terms of trip generation and modal share:

- Day Only – Weekday – School Term
- Day and Night – Weekday – School Term
- Day Only – Weekend – School Term/ School Holiday
- Day and Night – Weekend – School Term/ School Holiday

6.3.68 Attendance figures are based on the size (area) of the Park, the number of shows running on any particular day and the estimated profile of attendance on any given day, based on the time of year. These figures are based on experience from other Puy du Fou Parks (i.e., in France and Spain). The Parameter Plans, included at Figures 3.2 to 3.5 , dictate the locations and sizes of the various built-forms across the Site. The proposed layout of the Park is provided illustratively on the masterplan (see Figure 3.1)

6.3.69 The attendance figures provided by the Applicant were assessed under each scenario using both the 100th percentile (representing absolute peak attendance), and the 85th percentile. The 85th percentile has been adopted as a proxy for a typical busy day. It captures the majority of expected attendance levels, and assesses a level of traffic which is higher than the average attendance while excluding extreme outliners. This offers a more realistic basis for assessing day-to-day operational impacts without inflating the effect of high-demand days which only occur on a handful of days throughout the year.

6.3.70 While it is useful to understand the visitor volumes during peak periods (those event days between 85-100th percentile), it is not appropriate to design off-site mitigation solely to accommodate these peaks. This is particularly relevant as the highest attendance days typically fall during school holidays and bank holidays, when background traffic levels on the wider network are generally lower. Designing infrastructure based on these infrequent peaks, using typical weekday traffic conditions, would significantly overestimate the operational impacts that occur during most of the operating season.

6.3.71 This approach is more onerous than using an average attendance figure, as it still captures high levels of activity while remaining realistic. The frequency with which various attendance thresholds are reached throughout the year, supporting the use of the 85th percentile assessment as robust. For event days where visitor numbers are anticipated to exceed the 85th percentile, specific operational interventions would be required.

6.3.72 The IEMA Guidelines recommend using AADT flows as the basis for identifying traffic flows on links within the study area. However, as the impacts of operation will fluctuate depending on season and weekdays, an 85th percentile daily traffic flow (DT traffic flow) will also be assessed. This DT assumes that the flow associated with the Park is not averaged across the year, due to it being closed for part of the year. It is therefore a more robust and representative assessment.

6.3.73 A summary of the anticipated vehicular development flows is presented in Table 6.7**.**

Table 6.7 Development Traffic Flows – Full Occupation (2042) 85th percentile

	Daily		
	Arrive	Depart	Total
PdF 2042	4,927	4,912	9,839

Cumulative Effects

6.3.74 As set out above, the cumulative developments are accounted for within the BTM outputs, therefore the cumulative schemes are included in the 2042 Future Baseline scenario and the 2042 Future Baseline + Proposed Development scenario.

Predicting Effects

Sensitivity of Receptor

6.3.75 In the context of this chapter, receptors are considered to be users of the transport networks to whom the transport effects of the Proposed Development from its construction and operation would be perceptible. These include non-motorised users using the highway network (including pedestrians, cyclists, and equestrians), and drivers / passengers of motorised vehicles using the highway network (private cars and public transport).

6.3.76 All receptors will exhibit a greater or lesser degree of sensitivity to the changes brought about by the Proposed Development. The sensitivity of a receptor is a function of its capacity to accommodate change.

6.3.77 The scale is described in Table 6.8.

Table 6.8 Sensitivity of Receptor

Sensitivity	Scale Description
High	The receptor has; little ability to absorb change without fundamentally altering its present character is of high strategic value, or national importance, e.g. routes with an existing high traffic flow (relatively) with little additional capacity.
Medium	The receptor has a moderate capacity to change, without significantly altering its state, e.g. routes with an existing moderate traffic flow (relatively) with some additional capacity.
Low	The receptor is tolerant to change without detriment to its existing state, e.g. routes with an existing low traffic flow (relatively) with additional capacity.
Negligible	The receptor is highly tolerant to change without detriment to its existing state, e.g. routes with an existing very low traffic flow (relatively) with excessive additional capacity.

Magnitude of Impact

6.3.78 The magnitude of change has been considered as the change experienced from the current baseline conditions at the sensitive receptor and has been considered on a scale of High, Medium, Low or Negligible.

6.3.79 The criteria used to assess the magnitude of change for Driver Delay, Non-Motorised User Delay, Non-Motorised User Amenity, Fear and Intimidation, and Road Safety are described in Table 6.9 while Severance is summarised in Table 6.10.

Table 6.9 Magnitude of Change Criteria – Driver Delay, Non-Motorised User Delay, Non-Motorised User Amenity, Fear and Intimidation, and Road Safety

Magnitude	Criteria
High	Changes which are likely to be perceptible and which would significantly change conditions which would otherwise prevail to the extent that it would significantly affect travel behaviour.
Medium	Changes which are likely to be perceptible and which would materially change conditions which would otherwise prevail to the extent that it may affect travel behaviour to a measurable degree.
Low	Changes which are likely to be perceptible but not the extent that it would materially change conditions which would otherwise prevail.
Negligible	Changes which are unlikely to be perceptible.

Table 6.10 Magnitude of change Criteria – Severance

Absolute Change in Flow (or HGV)	Percentage Change in Flow (or HGV)	Absolute Change in Flow (or HGV)	Percentage Change in Flow (or HGV)	Absolute Change in Flow (or HGV)
	<30%	<60%	<90%	>90%
<30 vehicles	Negligible	Negligible	Negligible	Negligible
<60 vehicles	Negligible	Low	Low	Low
<90 vehicles	Negligible	Low	Medium	Medium
>90 vehicles	Negligible	Low	Medium	High

6.3.80 The inclusion of the absolute change criteria in the leftmost column of Table 6.10 reflects the fact that the percentage change criteria are derived from studies of major changes in traffic flow. This aims to prevent counterintuitive ‘default’ results such as an increase of four vehicles on a road with an existing flow of three vehicles being classified as a ‘large’ change.

Determining the Level of Effect

6.3.81 The level of effect has been informed by the magnitude of change due to the Proposed Development (assessed against Table 6.9) and the evaluation of the sensitivity of the affected receptor (Table 6.15). The level of effect has been determined using professional judgement, assessed against the parameters provided at Table 6.11. The assessment also considers whether the impact is either beneficial or adverse.

Table 6.11 Determination of Significant Effects

		Sensitivity (or value / importance)			
		High	**Medium**	**Low**	**Negligible**
Magnitude	Major	Moderate to Major	Minor to Moderate	Negligible	Major
	Moderate to Major	Moderate	Minor	Negligible	Moderate to Major
	Minor to Moderate	Minor	Negligible to Minor	Negligible	Minor to Moderate
	Negligible	Negligible	Negligible	Negligible	Negligible

Assumptions and Limitations

6.3.82 The following assumptions have been made and are considered to give a conservative approach to the assessment:

- Several assumptions have been made in association with the operational trip generation, including:
    - Mid week / Friday.
    - A day show and an evening show.
    - During school term.
    - Attendance is 16,000 across the day.
    - Circa 1,200 visitors staying on site in the hotel or campervans
- As the impacts of operation will fluctuate depending on season and weekday, an 85th percentile day (traffic flow) has been assessed. This is considered a robust methodology and is expected to constitute a weekday during the school summer holidays. On this basis, on most days per year, traffic flows associated with the Proposed Development will be significantly lower.
- The IEMA guidelines recommend using AADT flows as the basis for identifying traffic flows on links within the study area. However, as the impacts of operation will fluctuate depending on season and weekdays, an 85th percentile daily traffic flow (DT traffic flow) will also be assessed. This DT assumes that the flow associated with the Park is not averaged across the year, due to it being closed for part of the year. It is therefore a more robust and representative assessment.
- OCC has requested that traffic data be informed by the BTM Local Plan version. As such the future year flows (for both with and without) the Proposed Development include future growth predictions and are as such cumulative assessments. Given that the addition of Proposed Development traffic has redistributing impacts the use of a traffic model is considered necessary. Furthermore, it is of note that most traffic related impacts arise as a result of increased traffic, i.e. severance, delay and safety, and as such the inclusion of greater levels of background traffic is a worst case scenario. As OCC requested the use of the BTM, which facilities the assessment of likely environmental effects based on a worst case scenario, it was determined by the Applicant that the preparation of a new model which does not include future growth predictions would have been a wholly disproportionate exercise, which would not provide any greater insight into the likely environmental effects of the Proposed Development than the use of the BTM.

6.3.83 At the time of writing, three planning applications have been submitted at Baynards Green, comprising logistics (Use Class B8) and ancillary Office (Use Class E(g)(i)). A summary of each planning application is provided at Table 6.12.

Table 6.12 Baynards Green Applications

Planning Reference	Location	Description	Status
21/03268/OUT	OS Parcel 2636 NW of Baynards House Ardley	Outline proposal for logistics and ancillary office use and associated infrastructure – linked to ref. 21/03267/OUT.	Approved in line with Officer recommendation, subject to S106 Legal Agreement
21/03267/OUT	OS Parcel 0006 South East of Baynards House adjoining A43 Baynards Green	Outline proposal for logistics and ancillary office use and associated infrastructure – linked to ref. 21/03268/OUT.	Approved in line with Officer recommendation, subject to S106 Legal Agreement
22/01340/OUT	OS Parcel 6124 East of Baynards Green Farm Street to Horwell Farm Baynards Green	Outline proposal for logistics and office use, energy centre, HGV parking and associated infrastructure.	Refused against Officer recommendation. Reason for refusal relates to visual impact.

6.3.84 The resolution to grant Baynards Green logistics applications (references: *21/03268/OUT & 21/03267/OUT*) were agreed at committee after the traffic modelling for the Proposed Development was substantially complete. The development at Baynards Green would increase traffic volumes, thus reducing the percentage impact arising from the Proposed Development. Furthermore, the Baynards Green developments would also bring forward mitigation aimed at reducing delays and improving provision for active travel modes and public transport interventions. The assessment is therefore considered to be suitably robust.

6.4 Baseline Conditions

Overview

6.4.1 This section provides a summary of the existing transport conditions surrounding the Site, including relevant baseline information on walking, cycling and public transport as well as a review of local personal injury accident data. Further information is provided within the TA.

Existing Site

6.4.2 The Site currently consists of predominantly undeveloped farmland, with small areas of woodland. The woodland areas are Great Copse, Nettle Copse, Twelve Acre Copse, and Kilby's Copse which only partly sits within the red line boundary. There are also two small farm-related areas within the red line boundary, consisting of barns and other various outbuildings.

6.4.3 The Site benefits from three existing access points for agricultural use as follows:

- From the south: Access extends from Bainton Road in Bucknell;
- From the north-west: Access extends from Ardley Road; and
- From the north-east: Access extends from the B4100.

6.4.4 A network of agricultural tracks is present within the Site providing access to all agricultural parcels that form the Site.

Existing Local Highway Network

6.4.5 The B4100 runs along the eastern boundary of the Site, roughly north to south between Bicester to the south and Twyford to the north. In the vicinity of the Site, the B4100 is a single-carriageway road operating under a de-restricted speed limit (60mph).

6.4.6 The B4100 was formally part of the A41, however it was downgraded to the B4100 when it was bypassed by the M40. It does however still exhibit traits of an A road, such as width and increased forward visibility.

6.4.7 At the southern end of the B4100 is the A4095 / B4100 junction. Earlier this year, this junction was recently converted from a roundabout into a signalised junction with traffic lights to improve traffic flow and encourage more walking and cycling.

6.4.8 To the west of the Site, Ardley Road is a minor single-carriageway road running between Bicester to the south and Ardley to the north. In the vicinity of the Site, Ardley Road operates under a de-restricted speed limit (60mph).

6.4.9 To the south of the Site, Bainton Road is a minor single-carriageway road running between Bucknell to the west and B4100 to the east. Through Bucknell Village, there is a 20mph speed limit (where the southern agricultural access connects). Upon exiting the village to the east, the speed limit becomes de-restricted.

Existing Strategic Highway Network

6.4.10 The M40 and its junctions are managed by National Highways. The M40 Junction 10 is situated under a kilometre north-west of the Site and provides an interchange between the M40, A43, and B430. Junction 9 is located less than 9km south of the Site and provides an interchange between the M40, A34 and A41.

6.4.11 The M40 motorway is a major route connecting London to Birmingham, facilitating north-south travel. The A43 provides a vital link between the M40 and the M1 motorway, serving as a key corridor for traffic between the East Midlands and the South of England. The convergence of these highways near Ardley makes the Cherwell Valley Services a crucial stopover for motorists navigating these routes.

Existing Public Transport Network

Bus

6.4.12 The Site has limited accessibility to public bus services, given its relatively rural location and the lack of other built form in the vicinity. The closest bus stop is at Braeburn Avenue. The 500 service run by Stagecoach runs between Banbury and Bicester via Brackley, with part of the route travelling on the B4100 in the vicinity of the Site. The nearest stops are at Braeburn Avenue located approx. 2km south of the Site. The service is generally hourly between 05:50 (leaving Banbury) and 18:40 (last bus into Bicester). The service runs between Banbury and Brackley until 23:30.

6.4.13 Bus stops in the village of Ardley to the northwest of the Site, are served by bus route 81 (which is a circular route between Bicester and Souldern). The bus stop (Crossroads) is located on Ardley Road and is approximately 3.4km from the Site. There are two services in the morning and three in the afternoon. Morning services route southbound towards Bucknell and afternoon services route northbound towards Souldern.

6.4.14 Other services are available from further afield, including a range of buses that serve Bicester.

6.4.15 Key services and routes are presented in Table 6.13.

Table 6.13 Bus Services and Routes

Service	Route	Typical Frequency		
		Mon – Fri	Sat	Sun
X5	Bedford – Oxford	Every 30 minutes	Every 1 hour	Every 1 hour
17	Aylesbury – Bicester	Every 2 hours	Every 2 hours	No service
18	Buckingham – Bicester	Every 2-3 hours	Every 2-3 hours	No service
24	Bicester – Oxford	Every 2-3 hours	Every 2-3 hours	No service
25	Lower Heyford – Bicester	Every 1 hour	Every 1 hour	No service
26	Kingsmere – Bicester	Every 30 minutes	Every 30 minutes	No service
107	Oddington – Bicester	1 per day (Fridays only)	No service	No service
108	Oxford – Bicester	2 per day	2 per day	No service
500	Banbury – Bicester	Every 1 hour	Every 1 hour	No service
S5	Oxford – Bicester	Every 30 minutes	Every 30 minutes	Every 30 minutes

Rail

6.4.16 The nearest stations are Bicester North Station (approx. 3.5km southeast) and Bicester Village Station (approx. 4.5km south). These can each be reached within an 8 - 11 minute drive, or a 14 to 18 minute cycle. Chiltern Railways operate services to both stations. Bicester Village is located on the London-Oxford branch and Bicester North is located on the London-Birmingham branch.

6.4.17 The main destinations accessible from Bicester North include Banbury, Birmingham and London Marylebone, and Bicester Village provides links to Oxford and London Marylebone.

6.4.18 The rail services for each station are summarised in Table 6.14.

Table 6.14 Rail Services

Destination	Duration	Typical Frequency		
		Mon – Fri	Sat	Sun
Bicester North				
London Marylebone	55 mins	2 per hour	1 per hour	1 per hour
Birmingham Moor Street	1hr 9mins	1 - 2 per hour	1 - 2 per hour	1 - 2 per hour

Banbury	12 mins	2 per hour	1 per hour	1 per hour
Birmingham Snow Hill	1hr 10mins	Every 2 hours	No direct services	No direct services
Bicester Village				
London Marylebone	1hr 10mins	2 per hour	2 per hour	2 per hour
Oxford	16 mins	2 per hour	2 per hour	2 per hour

Existing Walking Network

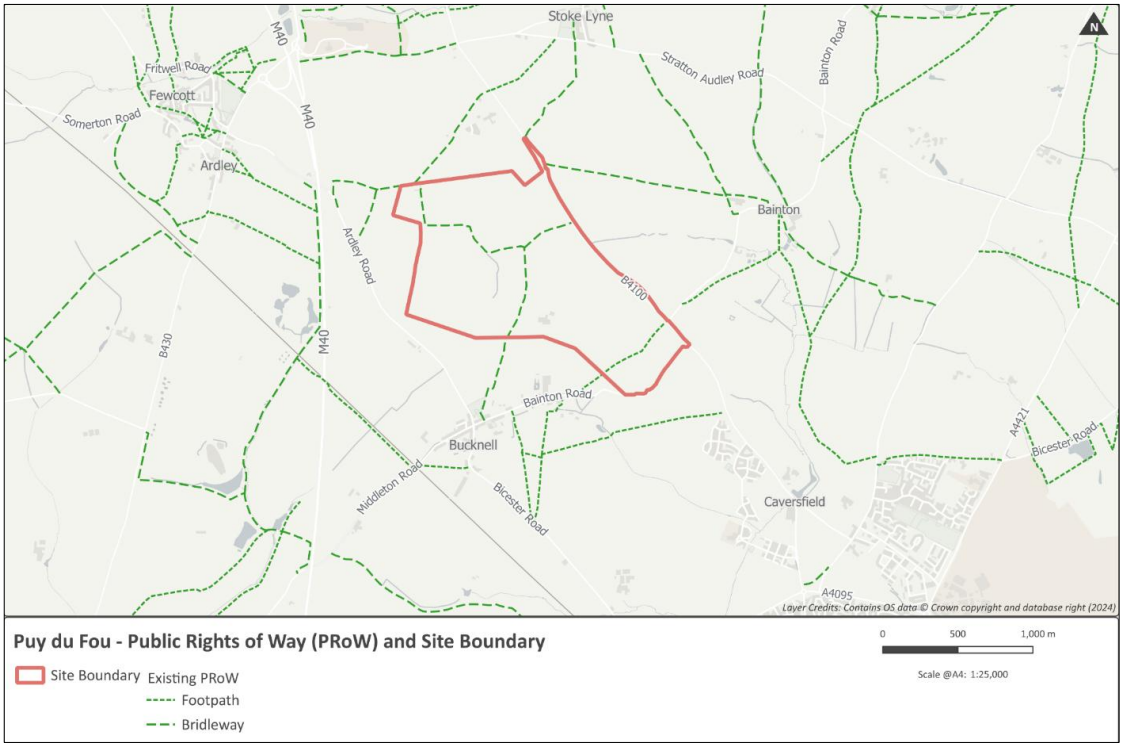
6.4.19 The roads directly surrounding the Site have limited pedestrian and cycle facilities. There are no footways on the B4100, Ardley Road and Bainton Road.

6.4.20 PRoW are present within the Site's boundary and connect to the surrounding PRoW network. All PRoW within the Site, which are to be diverted as part of the Proposed Development, are classified as bridleways therefore, pedestrians, cyclists and horse riders have right of way.

6.4.21 OCC's Countryside Access Map shows three PRoW that intersect the Site boundary (reproduced on Figure 6.4), including:

- Bridleway - Path Ref. 367/12/10 which enters the Site from the north at Kilby's Barn in a north-south direction for the first part and then travels east to connect to Path Ref. 367/11/10.
- Bridleway - Path Ref. 367/11/10 intersects the Site in an east-west direction connecting to the B4100.
- Bridleway - Path Ref. 148/1/20 intersects the Site's southern boundary, bypasses Great Copse, and connects centrally to Path Ref. 367/12/10 and Ref. 367/12/10.
- Footpath - Path Ref. 148/8/10 crosses the southern area of the of the Site in an east-west direction, linking the Bainton Road to the B4100.

Figure 6.4 Existing PRoW and Site Boundary



Existing Cycling Network

6.4.22 There are no dedicated cycle facilities in the immediate vicinity of the Site, with cyclists having to share the carriageway with other users, or use the PRoW network.

6.4.23 As set out above, the PRoW in the vicinity of the site are all bridleways therefore, cyclists have right of way across these routes.

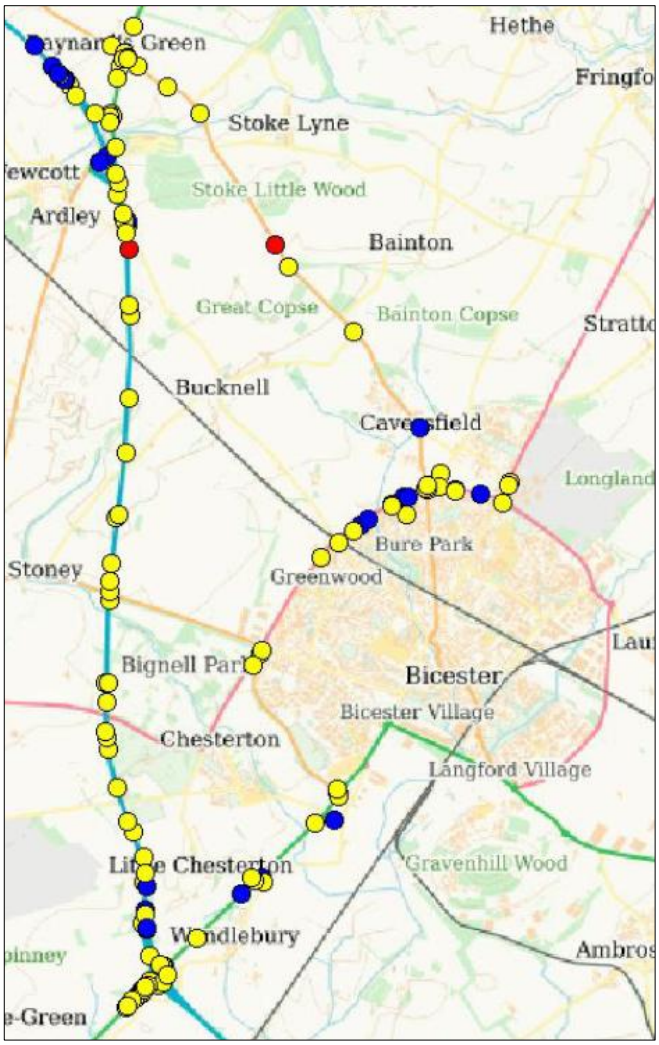
Road Safety

6.4.24 During pre-application discussions, Steer agreed a local study area with OCC, comprising of local roads most affected by the Proposed Development, to establish whether there any existing safety concerns associated with the local highway network. Steer has obtained Personal Injury Accident (PIA) data from Oxford City Council for this area. Data is taken from the most recent available 5-year period (at the time of writing); 1 January 2019 – 31 December 2024.

6.4.25 In total there were 159 PIA incidents which resulted in 238 casualties. There was a total of six fatalities, 32 serious injuries, and 200 slight injuries.

6.4.26 The study area and accident locations are provided at Figure 6.5, and the full analysis is included at Appendix 6.3.

Figure 6.5 PIA Locations



Traffic Conditions

6.4.27 The future traffic flows on the local highway network have been assessed using traffic surveys and the BTM. A summary of the AADT (Annual Average Daily Traffic) and AAWT (Annual Average Weekend Traffic) flows for the 2042 baseline is presented in Table 6.15.

Table 6.15 Summary of AADT and AAWT Flows (2042 Baseline)

Link		2042 Baseline (AADT)			2042 Baseline (18hr AAWT)		
		Total Veh	HDV	HDV%	Total Veh	HDV	HDV%
1	A43 North of B4100	46803	4477	9.6%	44119	4797	10.9%
2	B4100 West of A43	8728	175	2.0%	8228	188	2.3%
3	B4100 East of A43	19844	494	2.5%	18706	529	2.8%
4	A43 South of B4100	42709	4438	10.4%	40259	4755	11.8%
5	M40 J10 Southbound Off-Slip	11686	1059	9.1%	11353	1197	10.5%
6	A43 Between M40 Southbound Off-Slip	44440	4852	10.9%	41892	5199	12.4%

	and Cherwell Roundabout						
7	A43 Between Cherwell Roundabout and Ardley Roundabout	29502	2519	8.5%	27810	2699	9.7%
8	Cherwell Valley Services Access Road	12424	2192	17.6%	11711	2349	20.1%
9	M40 J10 Southbound On-Slip (N)	20658	2709	13.1%	19896	2927	14.7%
10	M40 J10 Southbound On-Slip (S)	20773	2830	13.6%	20007	3057	15.3%
11	A43 Between Cherwell Roundabout and Ardley Roundabout (W)	32262	2760	8.6%	30412	2957	9.7%
12a	M40 J10 Northbound Off-Slip	21340	2220	10.4%	21093	2524	12.0%
12b	M40 J10 Northbound On-Slip	8763	642	7.3%	8911	738	8.3%
13	B430 East of Ardley Roundabout	14021	34	0.2%	13217	36	0.3%
14	B430 North of Ardley Road	14029	34	0.2%	13224	36	0.3%
15	Ardley Road West of B430	3341	57	1.7%	3149	61	1.9%
16	B430 south of Ardley Road	12021	131	1.1%	11331	140	1.2%
18	Ardley Road East of B430	8616	85	1.0%	8121	91	1.1%
19	Ardley Road North of Bainton Road	8568	86	1.0%	8077	93	1.1%
20	Middleton Road West of Ardley Road	5596	0	0.0%	5275	0	0.0%
21	Bicester Road South of Bainton Road	3051	86	2.8%	2876	93	3.2%
22	Bainton Road East of Ardley Road	3600	0	0.0%	3393	0	0.0%
23	Bainton Road West of B4100	3599	0	0.0%	3393	0	0.0%
24	B4100 North of Bainton Road	18929	486	2.6%	17844	521	2.9%
25	B4100 South of Bainton Road	19953	486	2.4%	18809	521	2.8%
26	B4100 North of A4095	18566	489	2.6%	17502	524	3.0%
27	A4095 West of B4100	19274	609	3.2%	18169	652	3.6%
28	B4100 South of A4095	8473	0	0.0%	7987	0	0.0%
29	A4095 East of B4100	23015	1092	4.7%	21695	1170	5.4%

63	Howes Lane West of A4095	11907	592	5.0%	11225	634	5.6%
65	Bucknell Road South of A4095	1610	54	3.4%	1518	58	3.8%
66	A4095 East of Bucknell Road	12177	597	4.9%	11479	639	5.6%
67	Bucknell Road North of A4095	6809	92	1.4%	6419	99	1.5%

Summary of Receptors and Sensitivity

6.4.28 The sensitivity of a road can be defined by the vulnerability of the user groups who may use it, such as elderly people or children, for example a road where pedestrian activity is high in the vicinity of a school, or where there is already an existing accident issue. It also takes account of the existing nature and purpose of the road, for example an existing "A" road is likely to have a lower sensitivity than a minor residential road.

6.4.29 Based on a review of the baseline conditions, Table 6.16 presents the receptors likely to be affected by the Proposed Development, and their sensitivity. This takes into account the location of the receptor, its relationship with the Site and anticipated routing choices for the Proposed Development traffic.

Table 6.16 Sensitivity Values

Location		Sensitivity Value
1	A43 North of B4100	Low
2	B4100 West of A43	Low
3	B4100 East of A43	Low
4	A43 South of B4100	Low
5	M40 J10 Southbound Off-Slip	Medium
6	A43 Between M40 Southbound Off-Slip and Cherwell Roundabout	Low
7	A43 Between Cherwell Roundabout and Ardley Roundabout	Low
8	Cherwell Valley Services Access Road	Low
9	M40 J10 Southbound On-Slip (N)	Medium
10	M40 J10 Southbound On-Slip (S)	Medium
11	A43 Between Cherwell Roundabout and Ardley Roundabout (W)	Low
12a	M40 J10 Northbound Off-Slip	Medium
12b	M40 J10 Northbound On-Slip	Medium
13	B430 East of Ardley Roundabout	Low
14	B430 North of Ardley Road	Low
15	Ardley Road West of B430	Medium
16	B430 south of Ardley Road	Low
18	Ardley Road East of B430	Medium
19	Ardley Road North of Bainton Road	Low
20	Middleton Road West of Ardley Road	Medium

21	Bicester Road South of Bainton Road	Medium
22	Bainton Road East of Ardley Road	Medium
23	Bainton Road West of B4100	Medium
24	B4100 North of Bainton Road	Low
25	B4100 South of Bainton Road	Low
26	B4100 North of A4095	Medium
27	A4095 West of B4100	Low
28	B4100 South of A4095	Medium
29	A4095 East of B4100	Low
63	Howes Lane West of A4095	Low
65	Bucknell Road South of A4095	Medium
66	A4095 East of Bucknell Road	Low
67	Bucknell Road North of A4095	Low

6.4.30 Table 6.17 presents other sensitive receptors which are not just receptive to car based traffic and changes.

Table 6.17 Other Sensitivity Receptors

Receptor	Sensitivity (Value)
Bus Network	Low
Rail Network	Low
Pedestrian Network	Low
Cycle Network	Low

6.5 Proposed Development – Management

6.5.1 The following sets out the Proposed Development as well as any embedded mitigation which will come forward as part of the delivery of the Park.

Construction

6.5.2 A Construction Traffic Management Plan (CTMP) will be conditioned as part of any future planning permission. The Framework Construction Traffic Management Plan is included as Chapter 16 of the Transport Assessment**.**

Access Strategy

6.5.3 Three new vehicular access points are proposed from the B4100, as summarised below:

- Primary access for most visitors will be from a new roundabout near the northern edge of the site, leading straight into the visitor car park. The B4100 will be widened at this point to avoid queuing causing any disruption on the road;
- Secondary access further south on the B4100, also from a new roundabout, will serve the hotels and conference facilities, whilst also providing a secondary access to the visitor car park and mobility hub; and

- Staff/servicing access to the southern end of the site, linked to the service route which runs around the boundary of the site.

6.5.4 The proposed footway and cycleway provision associated with the scheme has been designed into the access arrangements.

Public Transport

6.5.5 The Applicant will provide significant investment to improve bus services and ensure that public transport is a genuine, viable alternative to travelling to the Proposed Development by private car. The Applicant will work with operators to deliver improved bus services for the Site, with a preference for zero-carbon buses.

6.5.6 Within the Park, a centralised bus stop/interchange would form the core of a mobility hub alongside the following:

- Bus stops and stands with passenger waiting areas and real-time passenger information
- Secure cycle parking, micro-mobility and e-cargo bikes
- Cycle hire docking stations
- Cycle repair facilities
- Car pool/car club electric vehicles
- Taxi pick-up and drop-off area
- Fast EV car charging

6.5.7 The Proposed Development is supported by a comprehensive public transport strategy that integrates multiple modes to maximise accessibility, reduce car dependency, and support sustainable travel choices for visitors and staff. The strategy includes:

- Rail access: Visitors will be encouraged to travel via nearby rail stations Bicester North and Bicester Village, which provide national connectivity. These stations serve as key public transport gateways to the Park. The stations will be subject to improvements which will be secured through the Section 106 legal agreement.
- Shuttle services: A dedicated shuttle service will operate between key local rail stations and the Site, offering a seamless connection for visitors arriving by train, particularly during peak visitor periods.
- Local bus services: Existing local bus routes have been reviewed and, where feasible, enhanced to provide regular and reliable services connecting surrounding settlements to the development. This will cater to both daily staff travel and visitor movement. The 500 service will be improved as part of the local bus improvement proposals.
- Coach access: Dedicated coach parking and drop-off facilities will be provided to support group and long-distance travel. This offers a high-capacity option for school groups, tour operators, and event attendees, reducing individual car trips.

6.5.8 This integrated approach provides a range of sustainable travel options to suit different user needs, while supporting the Site's wider environmental and transport objectives.

Active Travel Strategy

6.5.9 The Applicant wants to promote local employment and to ensure that those living closest can travel actively to the Park. The Applicant has captured OCC's proposed LCWIP measures in this active travel strategy. The approach has also been discussed at a pre-application meeting with OCC officers.

6.5.10 The Parameter Plans and Illustrative Masterplan establish a robust foundation for prioritising pedestrian and cycle movement, fostering seamless connectivity within the Proposed Development and with surrounding areas. This approach places people – rather than vehicles – at the forefront of the movement hierarchy. Active travel modes, including walking, cycling, and wheeling, will take precedence over all other forms of transport, supported by a permeable, fine-grain network of high-quality routes designed to enhance accessibility and convenience.

6.5.11 The walking and cycling strategy includes the following elements:

- Walking and cycle provision along the frontage of the Site;
- Improvements to Public Rights of Way which cross the Site, to create a high quality route around the boundary of the site;
- Improvements to the PRoW network to create connectivity between the site and local villages / hamlets.
- Connection to Bicester, via segregated footway / cycleway parallel to the B4100, providing a new route for both future users and those living locally; and
- Localised improvements to off-site infrastructure between the site and key locations such as Bicester North railway station.

6.5.12 All routes will be designed in accordance with LTN 1/20, with segregation from motorised traffic where appropriate, and ensuring that they are well-lit, hard surfaced and well-drained so that they are useable at all times and seasons.

6.5.13 Cycle parking will be of high quality, secure and convenient. It will cater for a range of journey purposes and types of cycles, including larger and adapted cycles. Cycle parking will be provided in line with policy requirements. Supporting facilities such as showers, lockers and changing facilities will be provided to a high standard to encourage take-up.

On-site PROW Improvements

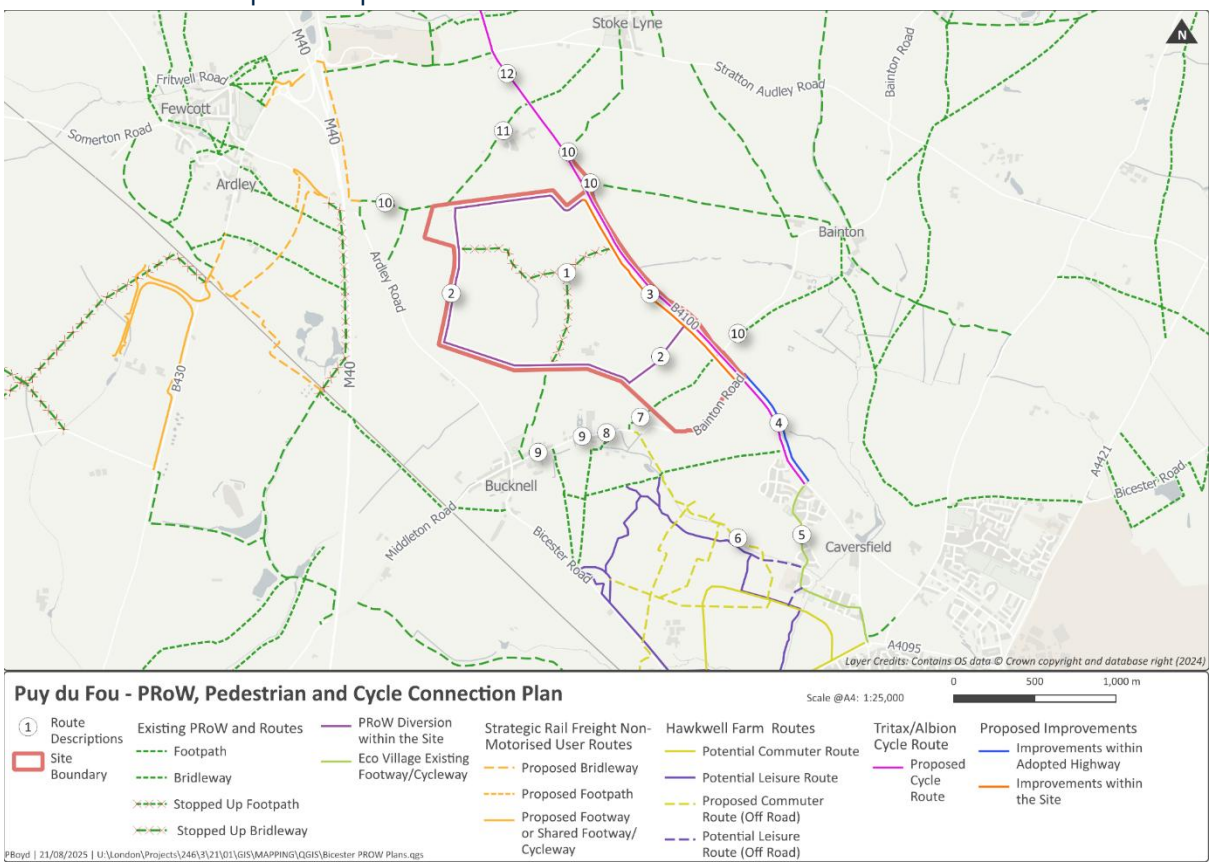
6.5.14 Figure 6.3 shows the PRoW that are required to be diverted, and where they have been re-routed, as part of the scheme being brought forward. The bridleways being diverted are ref.148/1/20, ref.367/12/10 and ref. 267/11/10 and footpath ref.148/8/10.

6.5.15 Following discussions with OCC, it was advised that any PRoW being stopped up and diverted be replaced with 5m bridleways wherever possible.

6.5.16 The diverted route replacements will therefore provide a segregated 2.5m bridleway and 2.5m cycleway (or 5m combined width route). The surface for these will be tailored to the user, e.g. a suitable surface for horses and for bicycles, both suitable and accessible for pedestrians, and a gap of at least 0.5m should be provided between any route and a fence. The re-routed PRoW will run around the boundary of the Site.

6.5.17 Figure 6.6 shows the existing PRoW, proposed re-routing improvements to be delivered as part of the Proposed Development, and off-site proposed improvements.

Figure 6.6 Existing PRoW, Planned and Proposed Development Infrastructure, and Puy du Fou Proposed Improvements



6.5.18 Table 6.18 summarises the proposals set out in Figure 6.6.

Table 6.18 Proposed Puy du Fou UK PRoW Improvements

Reference	Description
1	Existing bridleway (ref.367/12/10, ref.367/11/10 and ref.148/1/20) and footpath (ref.148/8/10) that cross the Site to be diverted (see para 6.5.14).
2	New bridleway and footpath to replace existing routes.
3	New footway and cycleway provision within the Site connecting the PRoW network and providing pedestrian and cycle access to hotels and Park entrance.
4	Provide footway and cycleway improvements between boundary of Site and existing network (via Eco Village[1]). This will be designed in parallel to Baynards Green proposals.
5	Existing footway and cycleway within Eco Village to be utilised.
6	Proposed pedestrian and cycle provision within north west Bicester to be utilised once operational.
7	Exiting Footpath to be upgraded from a footpath to bridleway

[1] Bicester Eco-Town will provide 6,000 homes and associated infrastructure in North West Bicester. The town will be a zero carbon project, providing energy efficient homes and promoting sustainable living.

8	Improve connection on Bainton Road between existing PRoW and diverted PRoW and proposed potential commuter route.
9	Consider the opportunity to improve connection via Bainton Road.
10	Utilise the opportunity to improve connection to PRoW (bridleway 367/9/10) utilising existing farm track and crossing of B4100 (which will require a provision of an equestrian crossing over the B4100).
11	There is no connection from the existing PRoW (ref.367/1/20) into Stoke Wood (to the north of the Site). There is an existing network of paths that connect to the PRoW network (ref.367/20/10, ref.267/20/20 and ref.267/21/30) north of the woodland and around M40 Moto Services, therefore this is being discussed with the landowner to enable the connection from PRoW ref.367/1/30 into Stoke Wood. Providing a permissive PRoW would enable connections from the Site both north and south, opening up a wider connected network in the local area.

Travel Plan

6.5.19 A Framework Travel Plan for the Proposed Development is provided in Appendix 6.2. It is expected that a detailed Travel Plan would be secured by a planning condition and agreed with OCC before operation (i.e., opening). The detailed Travel Plan would include a range of measures to support and encourage future employees and visitors of the Park to travel to and from the Site sustainably and reduce reliance on private vehicles.

Embedded Mitigation

6.5.20 Embedded Mitigation will include:

<u>During Construction</u>

- Seeking to route traffic away from the most sensitive areas through highway measures.
- Preparing an Outline Construction Logistics Plan to mitigate construction impacts – this will set out the appropriate routing for construction traffic, mostly routed via the M40 and A43 minimising the construction traffic on local roads.

<u>During Operation</u>

- Connecting shuttle services to nearby transport hubs (train stations and Park & Ride),
- Connecting to existing public transport amenities and improving local bus services to reduce private car use.
- Walking, cycling and equestrian improvements including at key junctions to improve accessibility, and reduce severance.
- Adapting opening and closing hours to mitigate impact on local transport infrastructure at peak times.
- Delivering on-site hotels and accommodation including spaces for campervans, all of which will reduce trips to the site in the peak hour.
- Providing coach parking spaces.
- Seeking to route traffic away from the most sensitive areas through highway measures.

- Creating promotional ticket options, making sustainable travel options cheaper than arriving by car.
- Introducing measures (such as car parking fees) to discourage car use.
- Targeting 50% of day ticket arrivals (annually) to the site by private car by year 10 of operation.
- Preparing a Travel Plan for staff to provide a comprehensive set of sustainable travel measures, including car sharing/ shuttle buses for staff.
- Setting up a Transport Working Group, including OCC, National Highways, CDC and relevant local stakeholders.

6.6 Construction Assessment of Effects

6.6.1 Based on available information and a reasonable worst-case assumptions relating to spoil removal, import of materials, and Site operatives, an indication of potential vehicle movements has been provided. The CTMP (to be secured by condition) will control the arrival and departure profile of operatives in accordance with industry standards, unless otherwise agreed.

6.6.2 The approximate duration of the construction phase is outline below:

- Construction to commence in late 2026
- Construction (Phase 1) to be complete in 2029

6.6.3 The estimated numbers of enabling works- and construction-related vehicle journeys, including Heavy Goods Vehicle (HGV) movements, have been projected for the busiest periods during the enabling works and construction programme to allow for an assessment of the 'worst case' scenario; thereby making the assessment as robust as possible. This has been calculated based on the value of the project, and historic data on volumes of construction traffic associated with construction cost.

6.6.4 The construction trip generation is provided at Table 6.19.

Table 6.19 Construction Trip Generation

Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
One-Way AADT										
All Vehicles	138.8	137.6	103.6	7.5	7.6	30.3	10.4	10.4	19.6	17.4
HGVs Only	61.09	60.54	45.58	3.29	3.34	13.34	4.60	4.60	8.64	7.66
Two-Way AADT										
All Vehicles	277.69	275.20	207.17	14.97	15.17	60.65	20.89	20.89	39.28	34.82
HGVs Only	122.18	121.09	91.15	6.58	6.67	26.68	9.19	9.19	17.28	15.32

6.6.5 The above shows that the peak construction year would be 2027, during which an estimated 122 HGVs per day would be proceeding to and from the Site. This decreases slightly in 2029, before lowering significantly in 2030.

6.6.6 The majority of the construction traffic will route via the strategic road network, and will enter the Site from the B4100. While some workforce traffic will arrive via the B4100 to the south, especially that related to trips from Bicester, HGV traffic will be routed via the SRN. A construction routing plan will be agreed with OCC and CDC.

6.6.7 The 2042 future baseline traffic on the B4100, as shown in Table 6.15, will be 19,844 AADT (of which 494 will be HGVs).

6.6.8 As a worst-case scenario, the peak AADT construction trips experienced in 2027 (Table 6.19) have been applied to the 2042 future baseline scenario (Table 6.15) to assess the impact on the B4100:

- AADT – 20,122 total vehicles and 617 HGVs = 1.4% increase in total vehicles and 24.9% increase in HGVs; and

6.6.9 The CTMP will outline measures to ensure that construction traffic is managed to avoid the network peaks where possible, so as to reduce inconvenience and delay to other roads users (including bus passengers).

6.6.10 In accordance with IEMA Guidelines, the change in total traffic and the composition of traffic during the construction phases is assessed as a temporary, direct, **negligible** effect. As such, further assessment of the environmental effects of the Development is not required under IEMA Guidelines.

Mitigation, Monitoring and Residual Effects

Construction

6.6.11 The Proposed Development includes the requirement for a detailed CTMP to be secured by planning condition (based on the Framework CTMP within the CEMP, also to be secured by condition) which will mitigate the impact of construction traffic. This will be developed/reviewed and monitored against over the construction period.

6.6.12 The CTMP measures are inherent in the assessment and therefore additional mitigation is not necessary. As a result, the residual effects during the construction phase remain the same as previously assessed, i.e. a temporary, direct, negligible (not significant) effect.

Public Rights of Way

6.6.13 Any PRoW that crosses the Site will need to be diverted, as they will no longer be accessible to the public at all times. This will include during construction, i.e. alternative routes need to be provided prior to construction (as it is a criminal offence to block a PRoW without legal basis).

6.7 Operation Assessment of Effects

6.7.1 The anticipated trip attraction of the Proposed Development has been estimated using the BTM flows for the following scenarios:

- 2042 with Local Plan mitigation without Proposed Development.
- 2042 with Local Plan mitigation with Proposed Development and mitigation.

6.7.2 The 2042 future scenario with the Proposed Development also accounts for the resultant redistribution of existing traffic that will occur as a result of an increase in traffic on certain links, thus representing the most accurate ‘with development’ future scenario.

6.7.3 The following flows have been calculated:

- AADT – Annual Average Daily Traffic. This is the typical measure by which schemes are assessed under the IEMA guidance. This is based on the 85th percentile traffic flows associated with the Proposed Development during the operational period, but with a factor to

take into account that the most of the Park is only operational for 176 days of the year, i.e. the 85th percentile opening has been averaged out across the full year.

- DT (24 hrs) – Daily Traffic. This is based on the 85th percentile operating position, and therefore represents a typical operation position within the high season. This typical level of impact only arises on days when the Park is fully operational. There will be a handful of days when this position is exceeded, however these are typically at weekends and in school holidays when background traffic flows are lower. Additional mitigation will also be in place for these events.
- AAWT – Annual Average Weekday Traffic, as with the AADT taking into account that the Proposed Development is only open for 176 days of the year, but excluding weekends
- WT (24 hours) – Weekday Traffic, as with the DT occurring only on days when the Park is open, but excluding weekends.

6.7.4 It is of note that flows summarised in the assessment are taken from the BTM, which allows for traffic redistribution which may occur as a result of increase or reductions in traffic flows. As such, there is an expectation that background traffic flows will change between the open and closed seasons, in a similar way to how traffic behaviour can change between term time and school holidays.

6.7.5 Where percentage changes occur that are greater than 30% or greater than a 10% and the link is identified as a sensitive receptor, an additional assessment is undertaken against the identified criteria.

6.7.6 The 2042 With Development traffic flows, summarised in AADT and AAWT, is presented in Table 6.20 across the various links.

Table 6.20 Summary of AADT and AAWT Flows (2042 With Development)

Link		2042 With Development (AADT)			2042 With Development (18hr AAWT)		
		Total Veh	HDV	HDV%	Total Veh	HDV	HDV%
1	A43 North of B4100	45806	3105	6.8%	43179	3327	7.7%
2	B4100 West of A43	7916	102	1.3%	7462	110	1.5%
3	B4100 East of A43	20301	661	3.3%	19137	708	3.7%
4	A43 South of B4100	43249	3242	7.5%	40769	3474	8.5%
5	M40 J10 Southbound Off-Slip	11837	890	7.5%	11500	1006	8.7%
6	A43 Between M40 Southbound Off-Slip and Cherwell Roundabout	44390	2963	6.7%	41845	3174	7.6%
7	A43 Between Cherwell Roundabout and Ardley Roundabout	29367	1547	5.3%	27683	1657	6.0%
8	Cherwell Valley Services Access Road	12365	1576	12.7%	11656	1688	14.5%
9	M40 J10 Southbound On-Slip (N)	20742	2019	9.7%	19976	2182	10.9%

10	M40 J10 Southbound On-Slip (S)	20839	2107	10.1%	20070	2276	11.3%
11	A43 Between Cherwell Roundabout and Ardley Roundabout (W)	32637	1741	5.3%	30765	1866	6.1%
12a	M40 J10 Northbound Off-Slip	21491	1551	7.2%	21242	1764	8.3%
12b	M40 J10 Northbound On-Slip	8844	395	4.5%	8992	454	5.0%
13	B430 East of Ardley Roundabout	14824	73	0.5%	13974	79	0.6%
14	B430 North of Ardley Road	14798	76	0.5%	13949	82	0.6%
15	Ardley Road West of B430	3462	41	1.2%	3263	44	1.4%
16	B430 south of Ardley Road	12106	89	0.7%	11412	95	0.8%
18	Ardley Road East of B430	8924	33	0.4%	8412	35	0.4%
19	Ardley Road North of Bainton Road	8568	40	0.5%	8077	43	0.5%
20	Middleton Road West of Ardley Road	5278	0	0.0%	4975	0	0.0%
21	Bicester Road South of Bainton Road	3589	40	1.1%	3383	43	1.3%
22	Bainton Road East of Ardley Road	854	0	0.0%	805	0	0.0%
23	Bainton Road West of B4100	854	0	0.0%	805	0	0.0%
24	B4100 North of Bainton Road	18465	361	2.0%	17406	387	2.2%
25	B4100 South of Bainton Road	19049	361	1.9%	17957	387	2.2%
26	B4100 North of A4095	18602	365	2.0%	17536	392	2.2%
27	A4095 West of B4100	19949	325	1.6%	18805	348	1.9%
28	B4100 South of A4095	8349	0	0.0%	7870	0	0.0%
29	A4095 East of B4100	22955	698	3.0%	21638	748	3.5%
63	Howes Lane West of A4095	12250	262	2.1%	11548	280	2.4%
65	Bucknell Road South of A4095	1612	39	2.4%	1519	42	2.7%
66	A4095 East of Bucknell Road	12954	316	2.4%	12211	339	2.8%
67	Bucknell Road North of A4095	7232	42	0.6%	6817	45	0.7%

6.7.7 The 2042 With Development traffic flows, summarised in DT and WT, is presented in Table 6.21 across the various links.

Table 6.21 Summary of DT and WT Flows (2042 With Development)

Link		2042 With Development (DT)			2042 With Development (18hr WT)		
		Total Veh	HDV	HDV%	Total Veh	HDV	HDV%
1	A43 North of B4100	44376	4382	9.9%	46140	3949	8.6%
2	B4100 West of A43	6976	135	1.9%	7973	130	1.6%
3	B4100 East of A43	20639	1152	5.6%	20449	840	4.1%
4	A43 South of B4100	43503	4684	10.8%	43565	4123	9.5%
5	M40 J10 Southbound Off-Slip	12036	1190	9.9%	12076	1118	9.3%
6	A43 Between M40 Southbound Off-Slip and Cherwell Roundabout	43996	3913	8.9%	44714	3768	8.4%
7	A43 Between Cherwell Roundabout and Ardley Roundabout	28996	2049	7.1%	29581	1967	6.6%
8	Cherwell Valley Services Access Road	12206	2074	17.0%	12455	2004	16.1%
9	M40 J10 Southbound On-Slip (N)	21295	2687	12.6%	21428	2579	12.0%
10	M40 J10 Southbound On-Slip (S)	21375	2802	13.1%	21529	2690	12.5%
11	A43 Between Cherwell Roundabout and Ardley Roundabout (W)	32792	2342	7.1%	32875	2214	6.7%
12a	M40 J10 Northbound Off-Slip	21753	2232	10.3%	21501	2539	11.8%
12b	M40 J10 Northbound On-Slip	8967	650	7.2%	9117	747	8.2%
13	B430 East of Ardley Roundabout	15579	138	0.9%	14932	93	0.6%
14	B430 North of Ardley Road	15516	144	0.9%	14906	97	0.7%
15	Ardley Road West of B430	3566	54	1.5%	3487	52	1.5%
16	B430 south of Ardley Road	12106	127	1.0%	12195	113	0.9%
18	Ardley Road East of B430	9189	22	0.2%	8989	42	0.5%
19	Ardley Road North of Bainton Road	8502	36	0.4%	8631	51	0.6%
20	Middleton Road West of Ardley Road	4894	0	0.0%	5317	0	0.0%

21	Bicester Road South of Bainton Road	4144	36	0.9%	3615	51	1.4%
22	Bainton Road East of Ardley Road	848	0	0.0%	861	0	0.0%
23	Bainton Road West of B4100	848	0	0.0%	861	0	0.0%
24	B4100 North of Bainton Road	17822	533	3.0%	18600	459	2.5%
25	B4100 South of Bainton Road	17925	533	3.0%	19188	459	2.4%
26	B4100 North of A4095	18499	542	2.9%	18738	465	2.5%
27	A4095 West of B4100	20526	394	1.9%	20095	413	2.1%
28	B4100 South of A4095	8151	0	0.0%	8410	0	0.0%
29	A4095 East of B4100	22713	946	4.2%	23122	888	3.8%
63	Howes Lane West of A4095	12526	328	2.6%	12339	333	2.7%
65	Bucknell Road South of A4095	1601	51	3.2%	1623	49	3.0%
66	A4095 East of Bucknell Road	13694	382	2.8%	13048	402	3.1%
67	Bucknell Road North of A4095	7633	37	0.5%	7284	53	0.7%

6.7.8 The vehicle and proportional increase in AADT and AAWT flows in the 2042 Without Development and With Development scenarios is presented in Table 6.22, and the proportional increase in DT and WT flows are presented in Table 6.23. Links where percentages changes are over 10% are shown in yellow, while those over 30% are shown in the red cells.

Table 6.22 Summary of Vehicle and Proportional Increase AADT and AAWT Flow (2042 With Development)

Link		AADT			AAWT		
		2042 LP	2042 LP + Dev	% Change	2042 LP	2042 LP + Dev	% Change
1	A43 North of B4100	46803	45806	-2.1%	44119	43179	-2.1%
2	B4100 West of A43	8728	7916	-9.3%	8228	7462	-9.3%
3	B4100 East of A43	19844	20301	2.3%	18706	19137	2.3%
4	A43 South of B4100	42709	43249	1.3%	40259	40769	1.3%
5	M40 J10 Southbound Off-Slip	11686	11837	1.3%	11353	11500	1.3%
6	A43 Between M40 Southbound Off-Slip and Cherwell Roundabout	44440	44390	-0.1%	41892	41845	-0.1%
7	A43 Between Cherwell Roundabout and Ardley Roundabout	29502	29367	-0.5%	27810	27683	-0.5%

8	Cherwell Valley Services Access Road	12424	12365	-0.5%	11711	11656	-0.5%
9	M40 J10 Southbound On-Slip (N)	20658	20742	0.4%	19896	19976	0.4%
10	M40 J10 Southbound On-Slip (S)	20773	20839	0.3%	20007	20070	0.3%
11	A43 Between Cherwell Roundabout and Ardley Roundabout (W)	32262	32637	1.2%	30412	30765	1.2%
12a	M40 J10 Northbound Off-Slip	21340	21491	0.7%	21093	21242	0.7%
12b	M40 J10 Northbound On-Slip	8763	8844	0.9%	8911	8992	0.9%
13	B430 East of Ardley Roundabout	14021	14824	5.7%	13217	13974	5.7%
14	B430 North of Ardley Road	14029	14798	5.5%	13224	13949	5.5%
15	Ardley Road West of B430	3341	3462	3.6%	3149	3263	3.6%
16	B430 south of Ardley Road	12021	12106	0.7%	11331	11412	0.7%
18	Ardley Road East of B430	8616	8924	3.6%	8121	8412	3.6%
19	Ardley Road North of Bainton Road	8568	8568	0.0%	8077	8077	0.0%
20	Middleton Road West of Ardley Road	5596	5278	-5.7%	5275	4975	-5.7%
21	Bicester Road South of Bainton Road	3051	3589	17.6%	2876	3383	17.6%
22	Bainton Road East of Ardley Road	3600	854	-76.3%	3393	805	-76.3%
23	Bainton Road West of B4100	3599	854	-76.3%	3393	805	-76.3%
24	B4100 North of Bainton Road	18929	18465	-2.5%	17844	17406	-2.5%
25	B4100 South of Bainton Road	19953	19049	-4.5%	18809	17957	-4.5%
26	B4100 North of A4095	18566	18602	0.2%	17502	17536	0.2%
27	A4095 West of B4100	19274	19949	3.5%	18169	18805	3.5%
28	B4100 South of A4095	8473	8349	-1.5%	7987	7870	-1.5%
29	A4095 East of B4100	23015	22955	-0.3%	21695	21638	-0.3%
63	Howes Lane West of A4095	11907	45806	2.9%	11225	11548	2.9%
65	Bucknell Road South of A4095	1610	7916	0.1%	1518	1519	0.1%

66	A4095 East of Bucknell Road	12177	20301	6.4%	11479	12211	6.4%
67	Bucknell Road North of A4095	6809	43249	6.2%	6419	6817	6.2%

Table 6.23 Summary of Vehicle and Proportional Increase ADT and AWT Flows (2042 With Development)

Link		ADT			AWT		
		2042 LP	2042 LP + Dev	% Change	2042 LP	2042 LP + Dev	% Change
1	A43 North of B4100	46443	44376	-4.5%	47144	46140	-2.1%
2	B4100 West of A43	8661	6976	-19.5%	8792	7973	-9.3%
3	B4100 East of A43	19692	20639	4.8%	19989	20449	2.3%
4	A43 South of B4100	42381	43503	2.6%	43020	43565	1.3%
5	M40 J10 Southbound Off-Slip	11723	12036	2.7%	11922	12076	1.3%
6	A43 Between M40 Southbound Off-Slip and Cherwell Roundabout	44099	43996	-0.2%	44764	44714	-0.1%
7	A43 Between Cherwell Roundabout and Ardley Roundabout	29276	28996	-1.0%	29717	29581	-0.5%
8	Cherwell Valley Services Access Road	12329	12206	-1.0%	12514	12455	-0.5%
9	M40 J10 Southbound On-Slip (N)	21121	21295	0.8%	21342	21428	0.4%
10	M40 J10 Southbound On-Slip (S)	21239	21375	0.6%	21461	21529	0.3%
11	A43 Between Cherwell Roundabout and Ardley Roundabout (W)	32014	32792	2.4%	32497	32875	1.2%
12a	M40 J10 Northbound Off-Slip	21340	21753	1.9%	21093	21501	1.9%
12b	M40 J10 Northbound On-Slip	8763	8967	2.3%	8911	9117	2.3%
13	B430 East of Ardley Roundabout	13913	15579	12.0%	14123	14932	5.7%
14	B430 North of Ardley Road	13921	15516	11.5%	14131	14906	5.5%
15	Ardley Road West of B430	3315	3566	7.6%	3365	3487	3.6%
16	B430 south of Ardley Road	11928	12106	1.5%	12108	12195	0.7%
18	Ardley Road East of B430	8549	9189	7.5%	8678	8989	3.6%

19	Ardley Road North of Bainton Road	8502	8502	0.0%	8630	8631	0.0%
20	Middleton Road West of Ardley Road	5553	4894	-11.9%	5637	5317	-5.7%
21	Bicester Road South of Bainton Road	3028	4144	36.9%	3073	3615	17.6%
22	Bainton Road East of Ardley Road	3572	848	-76.3%	3626	861	-76.3%
23	Bainton Road West of B4100	3572	848	-76.3%	3626	861	-76.3%
24	B4100 North of Bainton Road	18784	17822	-5.1%	19067	18600	-2.5%
25	B4100 South of Bainton Road	19800	17925	-9.5%	20099	19188	-4.5%
26	B4100 North of A4095	18424	18499	0.4%	18702	18738	0.2%
27	A4095 West of B4100	19126	20526	7.3%	19415	20095	3.5%
28	B4100 South of A4095	8408	8151	-3.1%	8534	8410	-1.5%
29	A4095 East of B4100	22838	22713	-0.5%	23183	23122	-0.3%
63	Howes Lane West of A4095	19692	20639	4.8%	19989	20449	2.3%
65	Bucknell Road South of A4095	42381	43503	2.6%	43020	43565	1.3%
66	A4095 East of Bucknell Road	11723	12036	2.7%	11922	12076	1.3%
67	Bucknell Road North of A4095	44099	43996	-0.2%	44764	44714	-0.1%

Severance of Communities

6.7.9 With reference to the criteria for measuring severance set out in the assessment methodology and the proportional increase in AADT and AAWT flows above, full build out and occupation of the Proposed Development is likely to have only a negligible separation effect in terms of community severance on the vast majority of links, as the changes on all links will be below 30%.

6.7.10 Table 6.22 and 6.23 shows that link 21 (Bicester Road south of Bainton Road) experiences a 17.6% increase in AADT flows and a 36.9% increase in DT flows. Bicester Road has a Medium sensitivity, therefore the Proposed Development will have a **minor** negative impact on severance, which is not significant.

6.7.11 None of the other links within the study area are anticipated to experience an increase in AADT vehicle numbers of more than 10%.

6.7.12 Links 13 (B430 East of Ardley Roundabout) and 14 (B430 North of Ardley Road) experience a 12.0% and 11.5% increase respectively, in DT flows. These links both have a Low sensitivity value, therefore the impact of the Proposed Development is **negligible**.

6.7.13 The signalised crossings to link the bridleway provision on either side of the B4100 and the introduction of a refuge island on the B4100 will reduce severance for local communities, and is therefore a minor beneficial impact.

Driver Delay and Passenger Delay

6.7.14 Sweco were commissioned by Steer to undertake a series of assessments of the impacts of the Proposed Development on the local highway network. The Sweco report is included at Appendix 6.4.

6.7.15 Appendix 2 of the Sweco report provides a summary of the journey routes, which presents the total expected change in travel time for users traversing each of the assessed routes. The routes are provided on Figure 6.7 and the comparison of journey times is provided at Table 6.24 for the morning peak hour.

Figure 6.7 Journey Routes

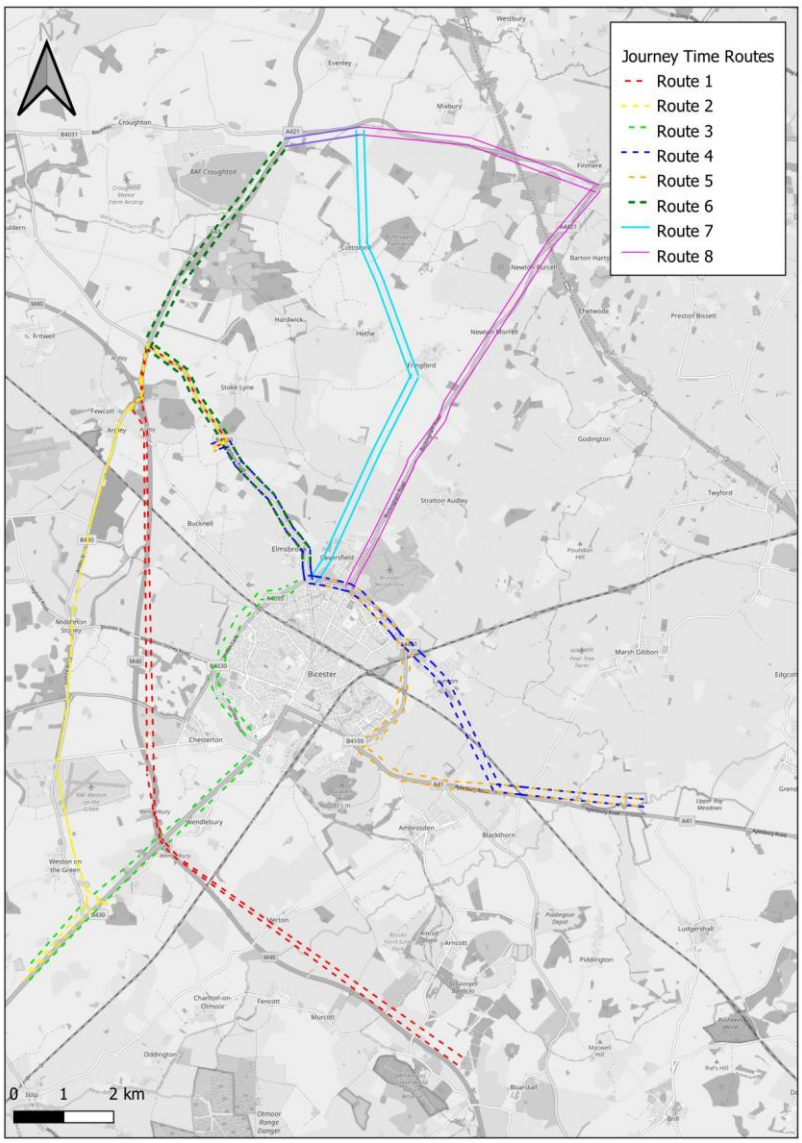


Table 6.24 Journey Time Route Comparison – AM Peak

Route			AM Peak		
			2042 LP	2042 LP + Dev	Diff
1	A43/ A421 junction to Bicester (A4095/ A4421 junction) via Hethe Rd	NB	1032.6	1144.12	111.52
		SB	1434.39	1365.87	-68.52
2	A43/ A421 junction to Bicester (A4095/ A4421 junction) via A4421	NB	720.73	732.57	11.84
		SB	876.27	893.27	17
3	A43/ A421 junction to Bicester via B4100	NB	821.09	707.8	-113.29
		SB	820.73	901.45	80.72
4	M40 south of junction 9 to PDF site via junction 10.	NB	1026.37	989.83	-36.54
		SB	1090.73	988.14	-102.59
5	A41 south of M40 to PDF via Bicester bypass	NB	468.94	465.07	-3.87
		SB	697.02	630.9	-66.12
6	A41 south of M40 to PDF via B430	NB	693.57	716.01	22.44
		SB	632.22	650.21	17.99
7	A41 east of Bicester to PDF via A41/ A4421	NB	685.25	721.57	36.32
		SB	742.38	742.44	0.06
8	A41 east of Bicester to PDF via A41/ Blackthorn Rd/ A4421	NB	793.92	828.46	34.54
		SB	1030.57	1022.63	-7.94

6.7.16 Table 6.24 demonstrates that during the morning peak hour, Route 1 NB would experience the largest journey time increase between the 2042 scenario to the 2042 + Development scenario, of 112 seconds (less than 2 minutes). The addition of the Proposed Development results in a reduction in journey time on a number of links, including Route 1 SB, Route 3 NB, Route 4 NB, Route 4 SB, Route 5 NB, Route 5 SB and Route 8 SB.

6.7.17 Given that the majority of the main routes to the Site have a Medium to Low sensitivity, the Proposed Development will have a **minor** to **negligible** impact on driver and passenger delay, which is **not significant**.

Non-Motorised User Delay

6.7.18 The Proposed Development will significantly enhance non-motorized user infrastructure including the construction of a cycle route adjacent to the B4100 the provision of prioritised side roads, a signalised crossings of the bridleway, introduction of a refuge island on the B4100 and improvements infrastructure within Bicester. These are likely to improve conditions for users.

6.7.19 The B4100 (Link 3) is estimated to experience a change in AADT flows of only 2.3%, and an increase in DT flows of 4.8%, therefore resulting in a **negligible** change in pedestrian delay, especially as there is no current pedestrian provision on the majority of the B4100.

6.7.20 As the majority of the main routes to the Site have a Medium to Low sensitivity, the Proposed Development will have a **minor** to **negligible** impact on non-motorised user delay with their being some minor beneficial impact on the B4100. Overall the impact is **not significant**.

Fear and Intimidation

6.7.21 The IEMA Guidelines suggest how to determine what the level of fear and intimidation of vehicle movements may be on vulnerable users, and the magnitude of impact that occur as a result of the Proposed Development.

6.7.22 Referring back to the Assessment Methodology section, Table 6.25 provides a summary of the level of fear and intimidation that may be felt on the various links without the Proposed Development (whereby numbers over different thresholds are assigned various scores of 0, 10, 20, 30, or 40). Table 6.26 provides the summary with the Proposed Development in 2042, for the links that experience a 10% increase in AWT (as a worst-case) or more.

Table 6.25 Fear and Intimidation (2042 Baseline)

Link	AAWT 18 hours/ hourly two-way	Total 18hr HDV	Vehicle Speed*	a score	b score	c score	Total Hazard
Bicester Road South of Bainton Road	3073	110	40mph / 60mph	30	0	20-30	50-60

* Posted speed limit

Table 6.26 Fear and Intimidation (2042 with Development)

Link	AAWT 18 hours/ hourly two-way	Total 18hr HDV	Vehicle Speed*	a score	b score	c score	Total Hazard
Bicester Road South of Bainton Road	3615	51	40mph / 60mph	30	0	20-30	50-60

* Posted speed limit

6.7.23 The results demonstrate that there is no step change in the hazard level between the 2042 Future Baseline and the 2042 With Development scenario on Bicester Road (South of Bainton Road). Therefore, using the IEMA Guidelines, there will be a **negligible** change in fear and intimidation and in reality a user's experience of the network will not change negatively as a result of the Proposed Development. There are no sensitive receptors on this section of Bicester Road, and therefore there is a **negligible** effect as a result of the Proposed Development.

6.7.24 Improvements for pedestrians and cyclists on the B4100 will provide dedicated facilities which are otherwise not there, and as such impacts on the B4100 will be **minor beneficial**.

Road Safety

6.7.25 The IEMA Guidelines are clear that an assessment on road safety is based on professional judgement. A review of the local collision data presented in the TA and summarised in the existing conditions section does not indicate an underlying issue with road safety (relating to personal injuries) in the surrounding area, with a relatively low number of recorded incidents in a range of locations.

6.7.26 The proposed three access points (main access, staff access and servicing access) to the Site along the B4100 has been subject to Stage 1 Road Safety Audit, with all appropriate measures incorporated into the junction. The Road Safety Audit and the Designers Response is included within Appendix L of the Transport Assessment.

6.7.27 As a result, it is deemed that, whilst the Proposed Development results in an uplift in multi-modal movements on surrounding links, the proposed infrastructure for vehicles, pedestrians, and cyclists will ensure the road safety is improved for all. As there are no sensitive receptors

on this section of the B4100, there is a **negligible** effect as a result of the Proposed Development.

Public Rights of Way

6.7.28 As requested by OCC's PRoW team during the EIA Scoping process, the impact of the development on the PRoW network in the immediate vicinity of the Site's boundary has also been assessed as a receptor. The PRoW strategy for the Site has been developed on the basis that:

- Any PRoW that crosses the Site will need to be diverted, as they will no longer be accessible to the public at all times. This will include during construction, i.e. alternative routes need to be provided prior to construction (as it is a criminal offence to block a PRoW without legal basis).
- A continuous route between the Site and Bicester for pedestrians and cyclists is necessary prior to operation commencing. While not a PRoW this will introduce new pedestrian and cycle infrastructure, reducing the pressure on alternative routes which may not be as direct or as usable throughout the year.
- While there are bridleways on the east and west of the B4100, there is no provision between these or across the B4100. The site access arrangements include an equestrian crossing, improving connectivity and safety.
- Review distance of diversion and amount of PRoW created.
- The provision of a new island crossing on the B4100 will improve safety and connectivity for new and existing users of the PoW network.
- The realignment of the existing PRoW across the Site, connected to provision to the south and west will improve connectivity between villages, and also encourage longer distances to be travelled across the PRoW network.

6.7.29 Overall there will be a **minor beneficial** impact to the PRoW network and its users.

6.8 Cumulative Effects

Construction

6.8.1 No further mitigation is proposed during the construction phase. The residual effects of the construction phase are not significant in terms of all assessment criteria.

6.8.2 A CEMP (to be secured via planning condition) will allow OCC and CDC to coordinate construction should it coincide with any other scheme coming forward within a similar timeframe, thus reducing any potential impacts.

6.8.3 The assessment of the Proposed Development includes the committed development traffic flows which are factored into the future base modelling. This ensures a robust worst case assessment (it may be that they are phased over time, but that is beyond the control of the Proposed Development so the calculations are based on full traffic flows from the committed developments). Therefore, the cumulative effects will remain the same as the assessment of the Proposed Development.

Mitigaton, Monitoring and Residual Effects

6.8.4 For the reasons above (i.e. that the cumulative effect is the same as the operational effects), no mitigation, monitoring, and residual effects beyond those set out for the Proposed Development (e.g. Framework Travel Plan, Delivery and Servicing Plan) are necessary.

6.8.5 A summary of the proposed mitigation measures is provided at Table 6.27.

6.9 Likely Significant Effects

6.9.1 To conclude, no likely significant effects are anticipated during the construction or operational phases of the Proposed Development in relation to traffic and transport. **No significant effects are anticipated.**

Table 6.27 Summary of effects

Receptor	Receptor sensitivity	Description of potential impact	Effects prior to further mitigation	Proposed mitigation	Residual effect	Significant / not significant
Construction						
People at home	Low	• Severance of communities • Road vehicle driver and passenger delay • Non-motorised user delay • Non-motorised user amenity • Fear and intimidation on and by road users • Road user and pedestrian safety	Temporary, minor	Construction Traffic Management Plan	Temporary, short-term negligible adverse	Not significant
People at work	Low		Temporary, minor		Temporary, short-term negligible adverse	Not significant
People using affected PRoW (including pedestrians, cyclists and horse riders)	High		Temporary, minor		Temporary, short-term negligible adverse	Not significant
People using affected local roads within a defined study area	Moderate		Temporary, minor		Temporary, short-term negligible adverse	Not significant
Sensitive and/ or vulnerable groups (including young age; older age; income; health status; social disadvantage; and access and geographic factors)	High		Temporary, minor		Temporary, short-term negligible adverse	Not significant
Recreational area	High		Temporary, minor		Temporary, short-term negligible adverse	Not significant
Local schools	High		Temporary, minor		Temporary, short-term negligible adverse	Not significant

Receptor	Receptor sensitivity	Description of potential impact	Effects prior to further mitigation	Proposed mitigation	Residual effect	Significant / not significant
Care homes	High		Temporary, minor		Temporary, short-term negligible adverse	Not significant
Tourist attractions	Low		Temporary, minor		Temporary, short-term negligible adverse	Not significant
Collision clusters and routes with road safety concerns	Moderate		Temporary, minor		Temporary, short-term negligible adverse	Not significant
Junctions and highway links at (or over) capacity	Moderate		Temporary, minor		Temporary, short-term negligible adverse	Not significant
Operational						
People at home	Low	• Severance of communities • Road vehicle driver and passenger delay • Non-motorised user delay • Non-motorised user amenity	Minor	• Travel Plan • Vehicular Access Strategy • Active Travel Strategy • Public Transport Strategy	Negligible	Not significant
People at work	Low		Minor		Negligible	Not significant
People using affected PRoW (including pedestrians, cyclists and horse riders)	High		Moderate		Negligible	Not significant
People using affected local roads within a defined study area	Moderate		Minor		Negligible	Not significant
Sensitive and/ or vulnerable groups (including young age; older age; income; health status; social disadvantage; and access and geographic factors)	High		Moderate		Negligible	Not significant
Recreational area	High		Minor		Negligible	Not significant

Receptor	Receptor sensitivity	Description of potential impact	Effects prior to further mitigation	Proposed mitigation	Residual effect	Significant / not significant
Local schools	High	• Fear and intimidation on and by road users • Road user and pedestrian safety	Minor		Negligible	Not significant
Care homes	High		Minor		Negligible	Not significant
Tourist attractions	Low		Minor		Negligible	Not significant
Collision clusters and routes with road safety concerns	Moderate		Minor		Negligible	Not significant
Junctions and highway links at (or over) capacity	Moderate		Minor		Negligible	Not significant