

Outline Application

NW Bicester Planning Application 1

Framework Travel Plan



A2 Dominion

NW Bicester Application 1:
Land North of Railway Line

Framework Travel Plan

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NW Bicester Application 1: Land North of Railway Line

Framework Travel Plan

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1 Introduction

1.1 Background

Hyder Consulting has been commissioned by A2 Dominion to prepare a Framework Travel Plan in support of Application 1 (Land North of Railway Line) forming part of the NW Bicester development. This document forms part of the planning submission and should be considered in conjunction with the Transport Assessment for the site.

The Application 1 development comprises approximately 2,600 homes including extra care housing, in addition to employment, shopping and community facilities, land for a primary school and an extension of the capacity of the Exemplar primary school. The total site area comprises 154.8 hectares of land.

Transport documents have been submitted as part of the submission for the 6,000 home NW Bicester Masterplan which will form SPG for the development. This Framework Travel Plan has been produced using the same principles and methodology as have been established for the Masterplan, recognising that Application 1 sits within the overall framework and should not be considered in isolation.

1.2 NW Bicester Vision

The NW Bicester Masterplan Vision and Objectives document sets out the spatial, sustainability and community vision for the NW Bicester development with respect to travel and transport:

“The overall design is centred around four urban and four rural areas interconnected through green “lanes” which include both direct and leisure routes, so everyone can get from home to work, and play, in no time at all.

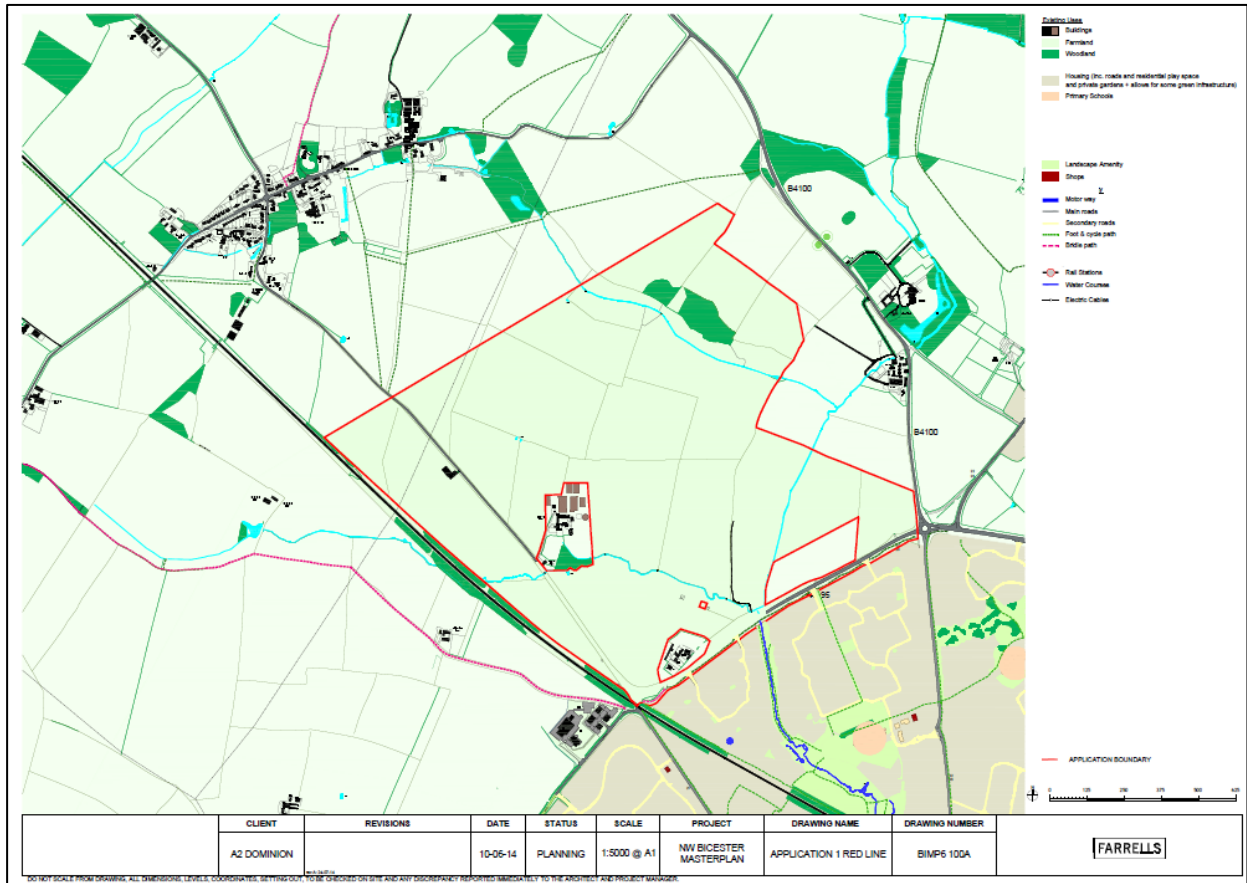
There will be plenty of opportunities to reduce travel by car and minimise CO2 emissions, because every home will be within 400 metres of a bus stop and within an easy ten-minute walk of local shops and primary schools. With so many beautiful and spacious green lanes, it will be easy for everyone to cycle to work in and around NW Bicester. And for those who travel a little further, there will also be improved cycle and bus routes into Bicester that can connect into improved rail connections to Oxford and beyond. Real time travel information in every home will make use of public transport more accessible.

The network of rural footpaths and cycle ways and a series of bus only road links will mean public transport is more rapid and frequent; enabling people to make sustainable travel choices. With a car club and network of charging points for electric vehicles, for those that do still require cars for longer journeys, we will inspire the use of hybrid or electric vehicles.” (Farrell’s, May 2014)

1.3 The Site

The site is located to the west of the B4100 Banbury Road and is bound to the south by the A4095. The site lies adjacent to the existing residential areas of Bicester and Bure Park and is 2.7km from the town centre (measured to the existing Hawkwell Farm enclosed within the land north of the railway). Figure 1-1 shows the boundary and location of the site.

Figure 1.1: Application 1 Land North of the Railway Line Site Location



The town of Bicester lies approximately 24km to the north east of Oxford and 28km to the south east of Banbury. The town is served by two rail stations, of which Bicester Town station is currently being improved as part of the Evergreen3 proposals, with frequent services to Oxford, London and Birmingham. There are bus services from the town to local and regional destinations with frequent services to Oxford and outlying villages such as Caversfield and Chesterton. For vehicle travel, the M40 is located 2km to the south west, with access to the town from Junction 9 via the A41. The site can also be accessed via Junction 10 of the M40 Motorway, which is located approximately 7km to the north-west. The site comprises agricultural land and woodland. The villages of Bucknell and Caversfield are located to the north and east of the site respectively.

1.4 Development Proposal

The proposed development quantum, which forms this application, is set out in Table 1.1. The 2,600 dwellings includes 250 units of extra care housing.

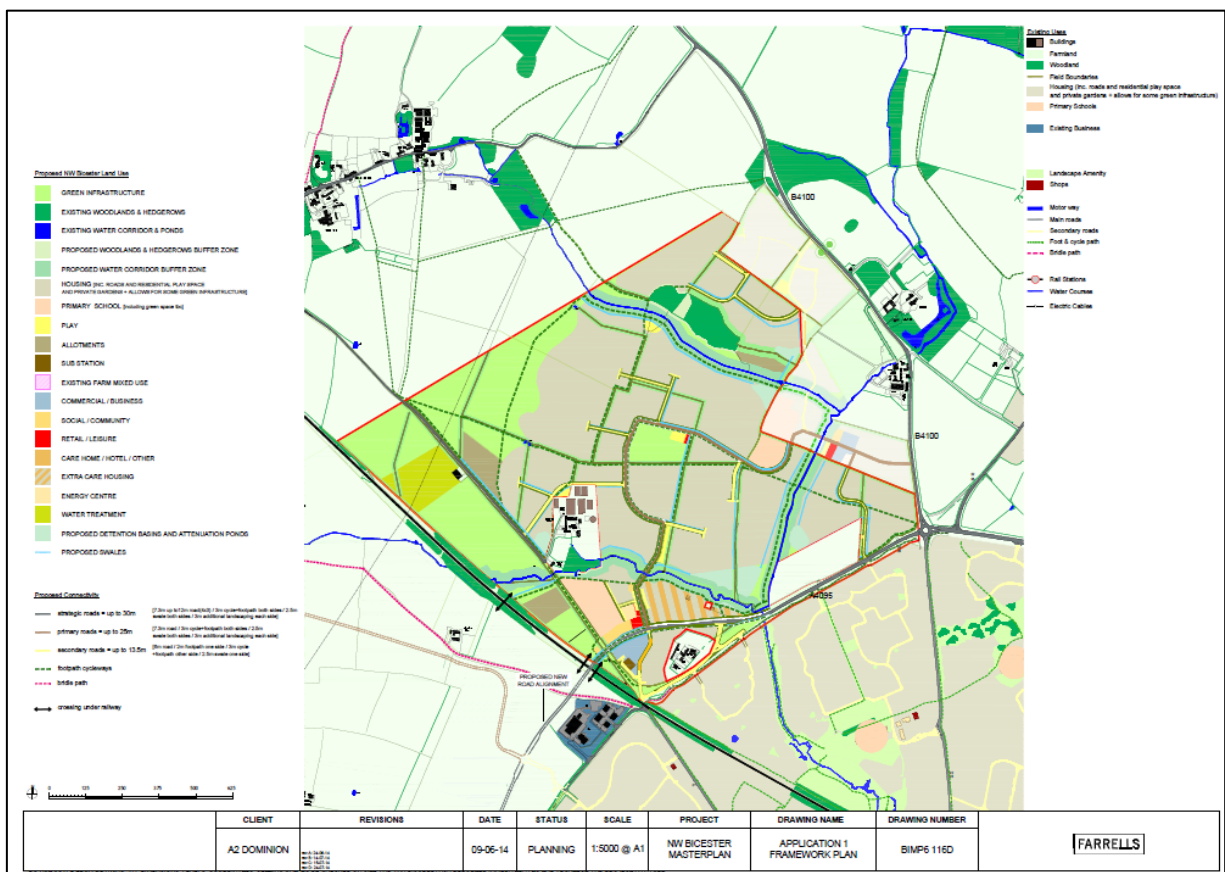
Table 1-1 Development Quantum

	Units	Quantum
Residential – Privately Owned * 70%	Dwellings	1820
Residential – Affordable Housing * 30%	Dwellings	780
		2600
Children’s Nursery	Children	63
Primary School	Pupils	630
B1 Office	m ²	3850
B2 Light Industry	m ²	974
Local Shops/Restaurants/A2 business	m ²	1771
Community Hall/Multi Faith Centre	m ²	2220
Energy Centre	m ²	440

Source: Farrell’s BIMP6 116 10/06/2014

The development proposals are illustrated on Figure 1.2, the Application 1 Framework Plan.

Figure 1.2: Application 1 Framework Plan



For the purposes of this Framework Travel Plan it has been assumed that the development would be constructed in phases commencing in 2019, with full occupation anticipated by 2031 (subject to the granting of planning permission). It is recognised that build out may take longer but this is not certain at present.

The provision of a range of non-residential and employment uses presents an opportunity to encourage a high level of containment of trips within the site. Moreover, the relationship of the mix of land uses to the wider Masterplan should be emphasised, with the land for the secondary school included in Application 2 and the proposals by Albion Land in relation to the business park identified within the master plan at the SE corner of the master plan site, fronting Howes Lane and Middleton Stoney Road (as well as the jobs provided within the Application 1 site).

1.5 Policy Context

The **National Planning Policy Framework (2012)** seeks to encourage the use of sustainable transport modes, with a Travel Plan being seen a key tool to facilitate this and is required for all developments which generate significant amounts of movements.

It defines a travel plan to be “a long-term management strategy for an organisation or site that seeks to deliver sustainable transport objectives through action and is articulated in a document that is regularly reviewed.”

The Department for Transport (DfT) **Circular 02/13** explains how the Highways Agency (HA) will participate in all stages of the planning process with Government Offices, regional and local planning authorities, local highway/transport authorities, public transport providers and developers to ensure national and regional aims and objectives can be aligned and met.

It is identified that a robust travel plan that promotes use of sustainable modes is an effective means of managing the impact of development on the road network and reducing the need for major transport infrastructure. The Highways Agency expects the promoters of development to put forward initiatives that manage down the traffic impact of proposals to support the promotion of sustainable transport and the development of accessible sites.

The NW Bicester Development is proposed in the **Annex to Planning Policy Statement 1** on sustainable development. The supplement specifically sets out a range of minimum standards for Eco-towns, with NW Bicester identified as one of the four Eco-town locations. The document states that many of the principles and standards are more challenging and stretching than would normally be expected for new development, with the aim of acting to ensure that Eco-towns are exemplars of good practice and provide a showcase for sustainable living.

Section ET11 – Transport sets out the standards to be achieved for transport. In particular, the guidance states in ET 11.2 and ET 11.3 as below:

ET 11.2 Planning applications should include travel plans which demonstrate:

- (a) How the town’s design will enable at least 50 per cent of trips originating in eco-towns to be made by non-car means, with the potential for this to increase over time to at least 60 per cent**

- (b) **Good design principles, drawing from Manual for Streets¹, Building for Life², and community travel planning principles³**
- (c) **How transport choice messages, infrastructure and services will be provided from 'day one' of residential occupation, and**
- (d) **How the carbon impact of transport in the Eco-town will be monitored, as part of embedding a long term low-carbon approach to travel within plans for community governance.**

ET 11.3 Where an eco-town is close to an existing higher order settlement, planning applications should also demonstrate:

- (a) **Options for ensuring that key connections around the eco-town do not become congested as a result of the development, for example by extending some aspects of the travel plan beyond the immediate boundaries of the town, and**
- (b) **Significantly more ambitious targets for modal share than the 50 per cent (increasing to 60 per cent over time) mentioned above and for the use of sustainable transport**

The **Oxfordshire Local Transport Plan (LTP3)** sets out objectives and plans for developing transport in their area from 2011 to 2030. In May 2014 a revised chapter on Bicester was produced. With respect to sustainable travel, Oxfordshire County Council will:

- Accommodate proposed strategic rail initiatives, including East West Rail and plans for electrification, and a possible future Rail Freight Interchange, in order to strengthen Bicester's position on the national rail network and maximise access to regional economic centres, such as Milton Keynes;
- Strengthen the town's walking, cycle and bus networks to reduce congestion, improve air quality and ensure good links to local employment opportunities and amenities within the town, as well as transport hubs.

It is noted that noted that bus priority measures may be required at anticipated pinch points on the main approaches to the town centre as future developments come forward. This is likely to include the Bucknell Road/Field Street junction, and the Buckingham Road approach to the three arm roundabout.

Policy BIC2 sets out that OCC will work with strategic partners to develop the town's walking, cycling and bus networks and links between key development sites and the town centre and railway stations. Policy BIC3 gives a commitment to travel choice awareness including undertaking travel promotions and marketing measures, developing a co-ordinated parking strategy in partnership with Cherwell District Council and discouraging undesirable routing of traffic by developing a signage strategy.

¹ Manual for Streets – Department of Transport – <http://www.dft.gov/pg/sustainable/manforstreets/>

² Building for Life – <http://www.buildingforlife.org/>

³ See Building Sustainable Transport into New Developments (DfT 2008) and Good Practice Guidelines: Delivering Travel Plans through the Planning Process (DfT/CLG 2009)

1.6 Purpose of the Framework Travel Plan

This Travel Plan aims to address the policy requirements and the targets set in PPS1 as well as respond to the wide body of research and best practice such as identified in the DfT guidance 'Making Travel Plans Work', the Smarter Choices report and the 'Good Practice Guidance for Travel Plans'. The Travel Plan will form a framework for sustainable travel for the Application 1 Development to enable detailed travel plans to be produced for individual sites and land uses as they come forward.

A Travel Plan has previously been prepared for the Exemplar development, the first part of NW Bicester to be delivered. The principles and measures contained in the agreed travel plan, together with the Access and Travel Strategy for the NW Bicester Masterplan, provide the basis for the Framework Travel Plan for Application 1.

1.7 Report Structure

This Travel Plan report follows the structure identified below:

Chapter 2 – Existing Sustainable Travel Conditions

Chapter 3 – Aim, Objectives and Targets

Chapter 4 – Travel Strategy and Measures

Chapter 5 – Travel Plan Management

Chapter 6 – Monitoring and Review

Chapter 7 – Action Plan

2 Existing Sustainable Travel Conditions

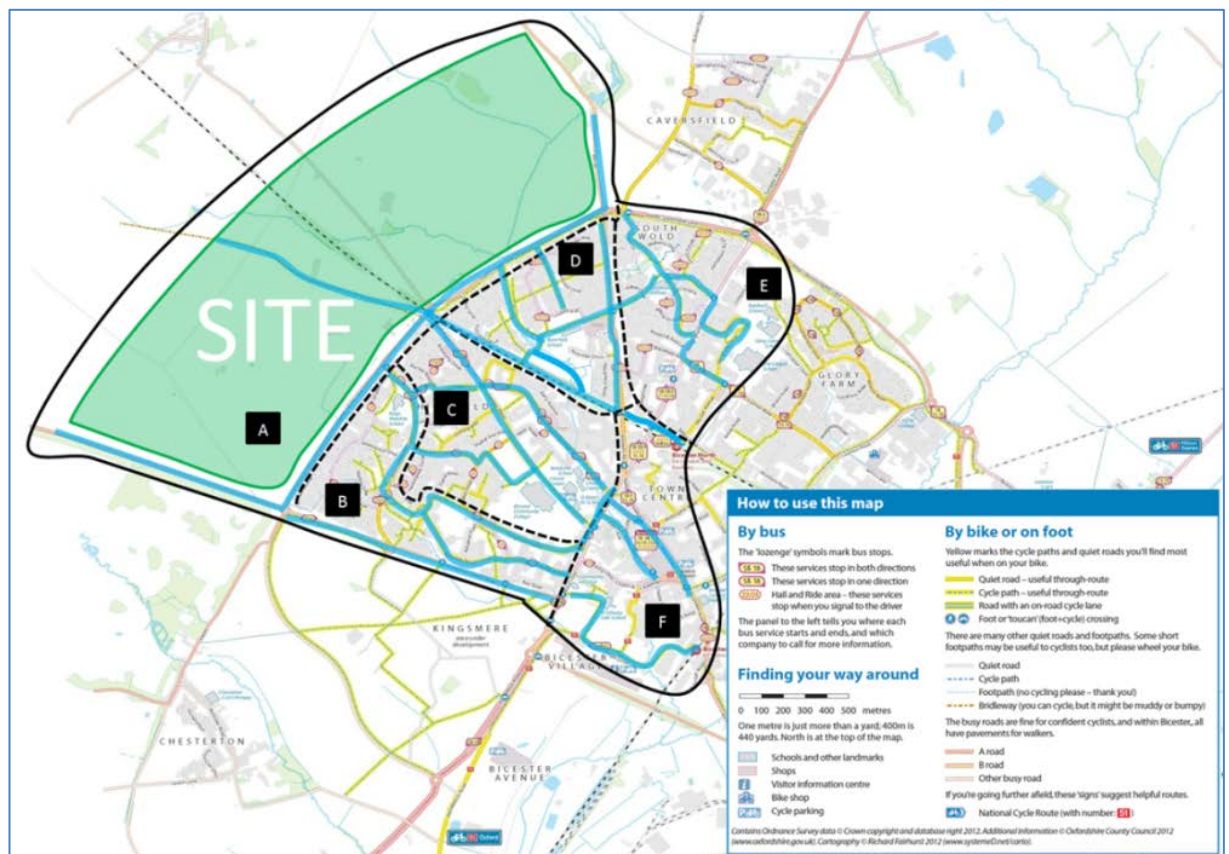
2.1 Overview

This chapter explores the existing conditions for sustainable travel modes surrounding the site including a description of the local transport network available for travel on foot, by bicycle, bus or rail. Details of the highway network and traffic conditions are contained in the Transport Assessment.

2.2 Walking

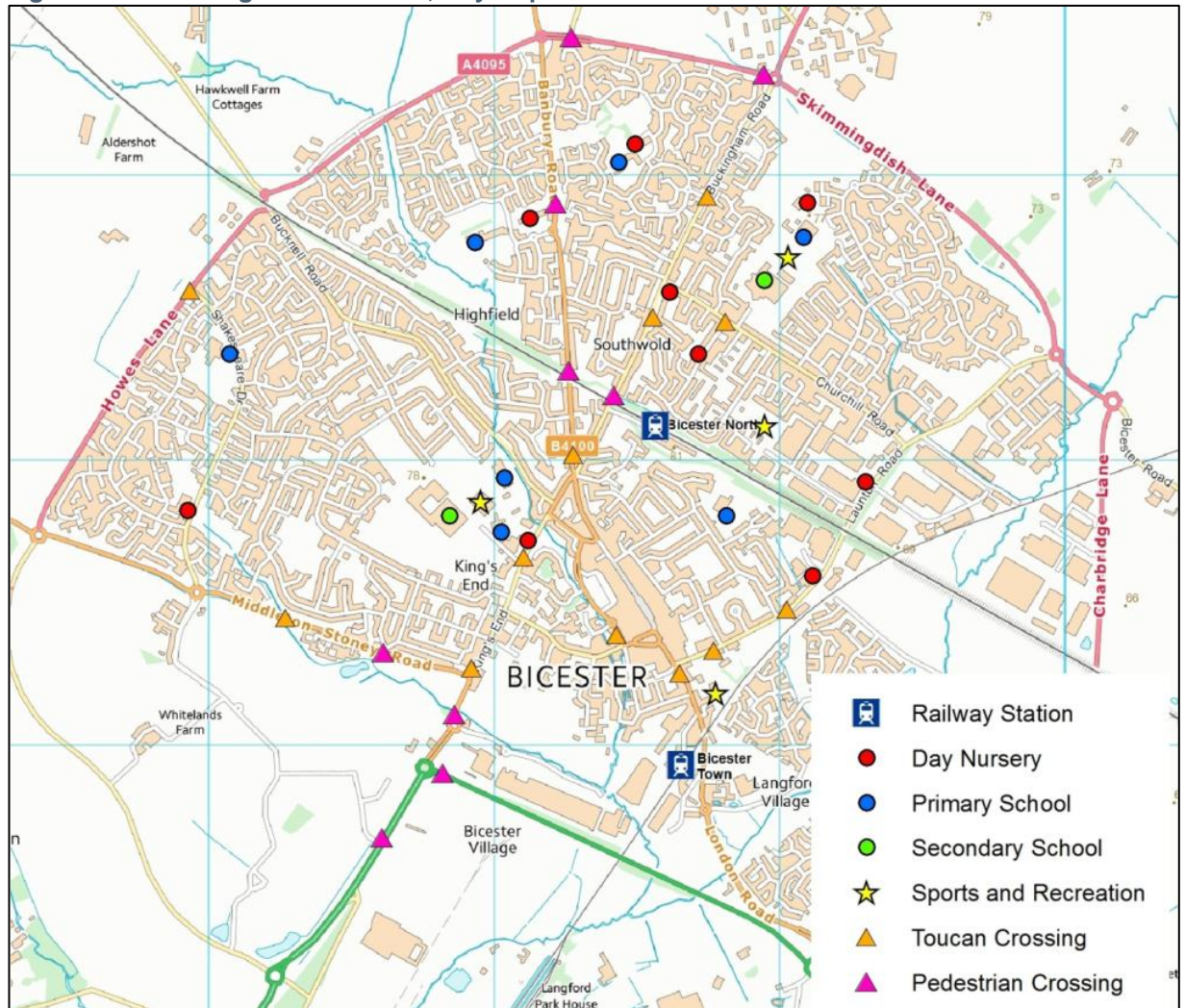
A comprehensive review of the walking infrastructure locally has been undertaken and is provided in Appendix 1 of the NW Bicester Masterplan Access and Travel Strategy. The study area with the existing routes that were assessed is shown in Figure 2.1. Each of these routes has been audited and this is included in the Masterplan Appendix referred to above.

Figure 2.1: Walking Audit Zones and Routes



These routes connect to Bicester town centre and other attractors and generators, as shown in Figure 2.2 which outlines the key education, transport and existing crossing infrastructure in Bicester. It can be seen that there are a number of **pedestrian** and **'toucan'** (foot and cycle) crossings in Bicester.

Figure 2.2: Crossing Infrastructure, Key Trip Attractors and Generators



Source: Produced by Hyder – Contains Ordnance Survey data © Crown copyright and database right (2012)

The figure shows that the majority of Bicester is located within a radius of approximately 3.2km (or 2 miles) from the centre of the site (one grid square equals 1km).

The nearest footpath to the Site is located adjacent to A4095 Lord's Lane that bounds the site to the south. This footway aligns the entire southern extent of the A4095 carriageway between the roundabout with Bucknell Road (to the south west) and the A4421 to the south east. Included in photographs 2.1 and 2.2 are images of the pedestrian facilities that adjoin the A4095 Lord's Lane and Southwold Lane routes.

Photograph 2.1 & 2.2: Pedestrian facilities the A4095 carriageway



The pedestrian route that aligns the A4095 carriageway is considered to benefit from a good horizontal alignment, street lighting, tactile paving and pedestrian refuges at junctions (as shown in photograph 2.1). There are however some sections that are secluded by vegetation. In addition, the footways that form the route are considered to be of an appropriate width and are well maintained in terms of their surface condition. A toucan crossing (shown in photograph 2.2) has been installed on the A4095 Southwold Lane approximately 100m to the east of the A4095 / B4100 roundabout convergence. This facility allows both pedestrians and cyclists to cross at this location.

A footpath and cycleway is to be constructed along the west side of Banbury Road to serve the Exemplar development and a new toucan crossing will be provided west of the B4100/ A4095 roundabout.

Pedestrians wishing to access the north of Bicester town centre can follow footpaths on both sides of the B4100 Banbury Road. The B4100 Banbury Road carriageway is generally aligned by footways along both sides for the entirety of the route, varying in width between 1.2 and 2.0 metres, which is substandard in places. The footways do however benefit from a generally good horizontal alignment, street lighting, tactile paving and appropriate crossing infrastructure and are considered to be well maintained in terms of their surface condition. Images of footways aligning the B4100 carriageway are shown in photographs 2.3 and 2.4.

Photographs 2.3 & 2.4: Pedestrian facilities adjoining the B4100 Banbury Road carriageway



Approximately 150m south of the priority controlled junction with Lodge Close, the footways that align both sides of the B4100 carriageway are guided away from the highway carriageway by hedge line boundaries, as shown in photographs 2.3 and 2.4. These pedestrian routes benefit from a generous width, a good surface condition and the presence of street lighting. The presence of formal crossing infrastructure at a number of locations along the B4100 corridor assists in the movement of pedestrians

and cyclists. A pelican crossing (shown in photograph 2.5) is in place approximately 100m north of the B4100 Banbury Road/Lucerne Avenue roundabout, whilst a zebra crossing (shown in photograph 2.6) has been installed along the B4100 Banbury Road between its junctions with Almond Road (to the north) and the Buckingham Road roundabout (to the south).

Photographs 2.5 & 2.6: Pedestrian crossing infrastructure in place along the B4100 Banbury Road



Bucknell Road has footways along both sides of the carriageway, varying in width between 1.2 and 2.0 metres, which is substandard in places. The footways do generally benefit from a good horizontal alignment, street lighting, appropriate crossing infrastructure and a well maintained surface condition.

There are also various pedestrian routes through the Bure Park residential area that lies between the site and Bicester town centre. These are shown in photograph 2.7 and photograph 2.8.

Photograph 2.7 & 2.8: Pedestrian routes throughout the Bure Park area of Bicester



Photographs 2.9 and 2.10 show the footpath that runs parallel to the Birmingham to London railway line in an easterly direction towards Bicester North Station. The route emerges onto Banbury Road. Site observations indicate that this route is well used and it provides a linkage between the A4095 Lord's Lane and the B4100 Banbury Road, and beyond. It is recognised however that it is not well lit and in places is not a properly surfaced route and proposals to improve the route are discussed later in the document.

Photograph 2.9 & 2.10: The pedestrian route running parallel to the railway line



2.3 Public Rights of Way

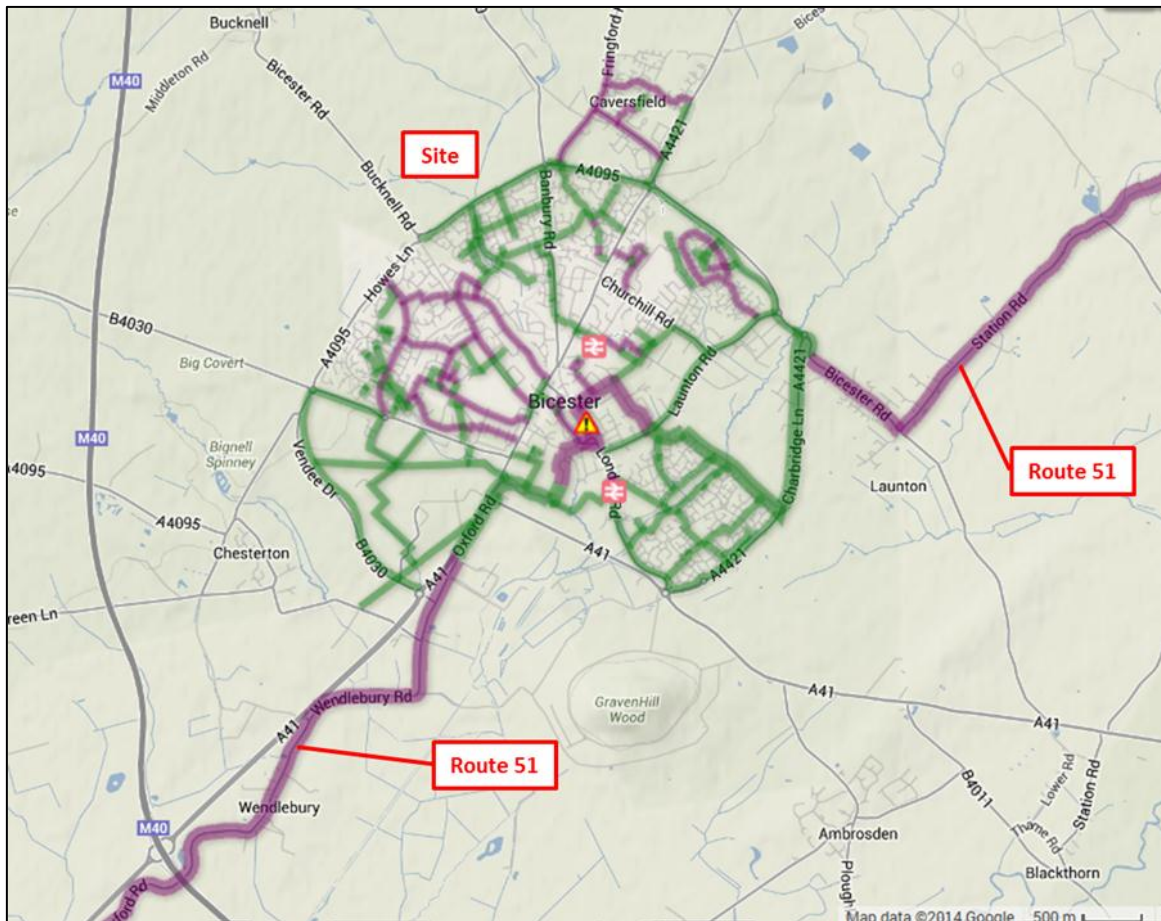
The Definitive Map of Public Rights of Way Map (included as Figure 2.3 at the end of this document) outlines footpaths and bridleways in the vicinity of the site. A public footpath is located from the south west of the site, dissecting Bicester in a north-west to south-east alignment connecting the A4095 and Buckingham Road. Public footpaths are also located to the north of the site serving Bucknell.

A public bridleway is located at the south western extent of the site, passing through the land south of the railway (the subject of Application 2).

2.4 Cycling

It can be seen from Figure 2.4 below that route 51 of the National Cycle Network (NCN) passes through Bicester in a south west to north east alignment. A combination of on-road (green) and off-road (purple) sections form the route as it passes in close proximity to Bicester town centre and via both railway stations. A number of routes currently exist to the south and east of the site, providing connectivity to Bicester and Caversfield respectively.

Figure 2.4: Local Cycle Routes

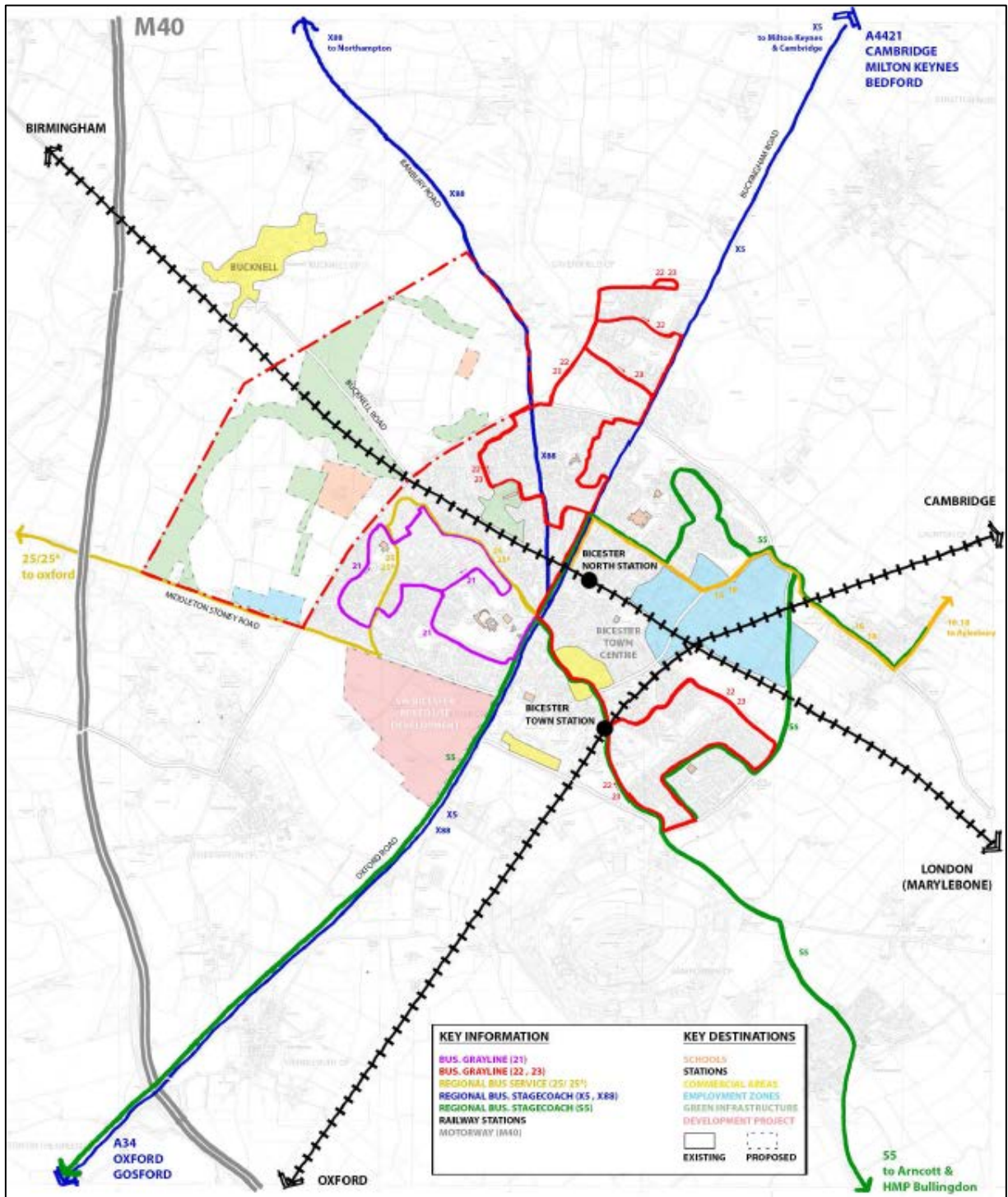


Source: Sustrans

2.5 Bus Services

Bus Services in the town are shown in Figure 2.5. The bus station facilities in Bicester town centre have been redeveloped to provide bus bays on Manorsfield Road adjacent to the new retail centre. Table 2.1 provides a summary of the bus routes that currently operate from Manorsfield Road in Bicester town centre. The X88 showing on the plan appears to have recently ceased as a service.

Figure 2.5: Existing Bus Services



Source: collated by Farrell's from Traveline data

Table 2.1: Bus Routes from Bicester Town Centre

Service	Route	First	Last	Approximate Daytime Frequency
8	Cambridge - Bedford - Oxford	0635	2145	Every two hours
8	Oxford - Bedford - Cambridge	0740	2305	
18	Buckingham - Steeple Claydon - Bicester	0830	1745	Every two hours
18	Bicester - Steeple Claydon - Buckingham	0835	1800	
21	Bicester - Chesterton - Bicester (Circular)	0755	1755	Every 30 minutes
21	Bicester - Chesterton - Bicester (Circular) <i>arrivals</i>	0750	1820	
22	Bicester - Caversfield - Bicester (Circular)	0735	1825	Hourly
22	Bicester - Caversfield - Bicester (Circular) <i>arrivals</i>	0755	1900	
23	Bicester - Caversfield - Bicester (Circular)	0845	1745	Hourly
23	Bicester - Caversfield - Bicester (Circular) <i>arrivals</i>	0930	1830	
24	Bicester - Churchill Road - Bicester (Circular)	0800	1830	Every 30 minutes
24	Bicester - Churchill Road - Bicester (Circular) <i>arrivals</i>	0812	1842	
25	Kidlington / Oxford – Bicester <i>arrivals</i>	0725	1907	Hourly
25	Bicester - Oxford / Kidlington	0625	1910	
S5	Oxford - Gosford - Bicester - Glory Farm / Launton / Arcott / Langford	0645	0011	Every 15 minutes
S5	Glory Farm / Arcott / Launton / Langford - Bicester - Gosford - Oxford	0555	2311	
X5	Cambridge - Bedford - Oxford	0635	2145	Every 30 minutes
X5	Oxford - Bedford - Cambridge	0740	2305	

Source: Traveline South East, times taken from Manorfield Road, correct as of 30/10/2013

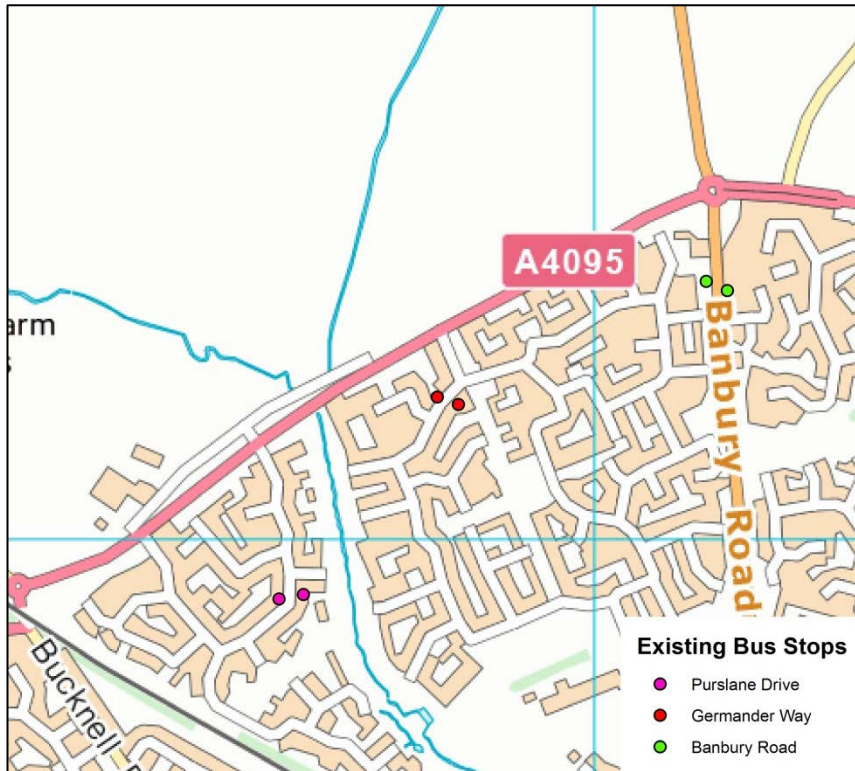
In the vicinity of the site there are bus services serving the Bure Park estate approximately three times per hour. This route circulates through the estate and Caversfield. Local services are shown in Table 2.2.

Table 2.2: Local Bus Services

Service	Bus Stop Name	Route	First	Last	Approximate Daytime Frequency
Banbury Road					
37	Barberry Place Shops (N-Bound)	Bicester – Hardwick - Finmere	1130	1430	Every 20 minutes (Tuesday Only)
37	Barberry Place Shops (S-Bound)	Finmere – Hardwick - Bicester	0945	1245	Every 20 minutes (Tuesday Only)
Germander Way					
3	Bure Park, Germander Way Hail & Ride (SW-Bound)	Bure Park – Bicester North Rail Station	0602	0808	½ hourly
22	Bure Park, Germander Way Hail & Ride (SW-Bound)	Bicester – Caversfield – Bicester (Circular)	0735	1715	Hourly
23	Bure Park, Germander Way Hail & Ride (NE-Bound)	Bicester – Caversfield – Bicester (Circular)	0910	1745	Hourly
Purslane Road					
3	Bure Park, Purslane Drive (NE-Bound)	Bure Park – Bicester North Rail Station	0602	0808	½ hourly

Bus stops are located some distance from the site, namely on Banbury Road, Germander Way and Purslane Drive as shown in Figure 2.6.

Figure 2.6: Location of Existing Bus Stops



2.6 Bus Occupancy

Bus occupancy surveys were undertaken by Hyder Consulting on 14th June 2013 in Bicester town centre to establish occupancy levels of buses arriving and departing. Surveys were conducted during the AM peak (07:30-09:00), inter peak (09:30-12:30) and the PM peak (15:00-18:00) to provide an overview of bus use across the day. The surveys were conducted on a Market Day (Friday), the busiest day of the week, to account for highest patronage numbers.

It can be seen from Table 2.3 that the average occupancy levels for buses arriving at Market Square were relatively low throughout the day, with averages exceeding 50%. The X5 service is the most utilised service, with maximum utilisation percentages of 92% during the inter peak and peak periods.

Table 2.3: Occupancy Levels of Bus Services Arriving at Market Square, Bicester

Service	Operator	Occupancy levels arriving at Market Square (%)					
		AM Peak (07:30-09:00)		Inter Peak (09:30-12:30)		PM Peak (15:00-18:00)	
		Average	Maximum	Average	Maximum	Average	Maximum
8	Stagecoach in Northants	No service	No service	11	13	No service	No service
18	Langston & Tasker	25	25	25	40	3	6
21	Grayline Coaches	26	32	31	48	5	16

Service	Operator	Occupancy levels arriving at Market Square (%)					
		AM Peak (07:30-09:00)		Inter Peak (09:30-12:30)		PM Peak (15:00-18:00)	
		Average	Maximum	Average	Maximum	Average	Maximum
22	Thames Travel	10	10	14	31	4	7
23	Thames Travel	2	3	5	24	0	0
24	Thames Travel	0	0	23	52	6	14
25/25A	Thames Travel	No service	No service	46	72	10	21
S5	Stagecoach in Oxfordshire	10	25	13	36	15	35
X5	Stagecoach in Bedford	29	41	35	92	46	92

Table 2.4 outlines the percentage occupation for buses departing from Market Square. Similarly to buses arriving at Market Square, no average occupation percentage exceeds 50%. Again, the X5 service displays the highest maximum occupation percentage at the inter peak (88%) and PM peak (90%). During the inter peak period, the 21, 25/25A and the X5 were the most popular services.

Table 2.4: Occupancy Levels of Bus Services Departing Market Square, Bicester

Service	Operator	Occupancy levels departing Market Square (%)					
		AM Peak (07:30-09:00)		Inter Peak (09:30-12:30)		PM Peak (15:00-18:00)	
		Average	Maximum	Average	Maximum	Average	Maximum
8	Stagecoach in Northants	No service	No service	11	13	No service	No service
18	Langston & Tasker	0	0	8	16	5	6
21	Grayline Coaches	2	6	42	81	22	68
22	Thames Travel	17	17	15	24	4	7
23	Thames Travel	4	7	16	79	12	24
24	Thames Travel	21	21	6	17	6	14
25/25A	Thames Travel	No service	No service	34	62	18	45
S5	Stagecoach in Oxfordshire	11	28	13	32	14	35
X5	Stagecoach in Bedford	28	39	35	88	45	90

2.7 Rail Stations and Services

The town has two rail stations, namely Bicester North and Bicester Town. Bicester North station is located approximately 2.9km south east of the centre of the site, whilst Bicester Town station is sited approximately 3.7km south east of the centre of the site. At the time of writing, Bicester Town rail station was closed due to improvements being undertaken in relation to the Chiltern Railways Evergreen3 project. This will provide a passenger train service between Oxford and London Marylebone via Bicester. The station is due to re-open in summer 2014 with the Oxford-London link opening in spring 2016. This will see improvements to the station itself including level access, two new platforms, a rebuilt car park, cycle parking, bus stops and improved access roads.

Bicester North Station offers passengers a range of facilities including coffee and snack shop, undercover cycle storage (20 racks, shown in photograph 2.11) and open air racks (10 racks, shown in photograph 2.12) and a fast ticket machine. There are also car parking facilities available on a pay and display basis with the opportunity for monthly, quarterly, bi-annual and annual season tickets available. Observations indicate that the cycle racks are very well used.

Photograph 2.11 & 2.12: Cycle parking provision at Bicester North Railway Station



Bicester Town station is unmanned with the nearest staffed station located in Oxford. Undercover cycle storage is available with four racks provided near the station entrance. Table 2.5 summarises the direct services available from Bicester North and Bicester Town stations.

Table 2.5: Summary of Rail Services

Station	Route	Journey Time (approximate)	Frequency
Bicester North	To London Marylebone	60 minutes	4 per hour
	To High Wycombe	30 minutes	2 per hour
	To Banbury/ Birmingham	20 minutes	4 per hour
Bicester Town	To Oxford	30 minutes	1 every 2 hours

As can be seen from Table 2.5 above, the regular services throughout the day ensure a good range of destinations are readily accessible from Bicester North and Bicester Town rail stations. The employment, recreational and shopping opportunities within Oxford are available within a 30 minute rail journey from Bicester Town station although services are only every two hours at present. There is a service approximately every 15 minutes to Banbury, Birmingham and London from Bicester North station. Once the Evergreen3 proposals are finished there will be half hourly

services to London and Oxford from Bicester Town Station and a reduction in the journey time to London.

2.8 Baseline Carbon Emissions from Cars

In order to be able to assess and monitor the carbon impact from travel and transport of the NW Bicester development, it is important to understand existing data and past trends in carbon emissions. Data is available at a national level showing the trend in vehicle kilometres, carbon intensity per vehicle and overall emissions from various types of vehicles.

Figure 2.7 is extracted from a report by DECC (The Fourth Carbon Budget - reducing emissions through the 2020's - 7 December 2010) showing the historical trends in car kilometres, million tonnes of carbon and carbon per kilometre for the UK from 1990 to 2008. There has been a 3% reduction in carbon emissions from passenger cars between 1990 and 2009, from 73.1 MtCO₂e to 70.9 MtCO₂e (although it peaked in 2002 to more than 77 MtCO₂e and then fell again).

Vehicle standards per vehicle improved substantially over this period in terms of gCO₂/km, however vehicle kilometres also significantly increased. The report states that between 1990 and 2008 emissions intensity of cars fell by 16% from 205 gCO₂/km to 173 gCO₂/km, whilst distance travelled increased by 20% from 350 billion km to 418 billion km².

Data from the period to 2012 from Great Britain Transport Statistics however shows that total vehicle kilometres by car has remained at levels similar to 2008, reflecting recessionary impacts and fuel price increases in the period. During the same period average CO₂ emissions from all the licensed cars first registered from 2001 onwards down to 160 g/km.

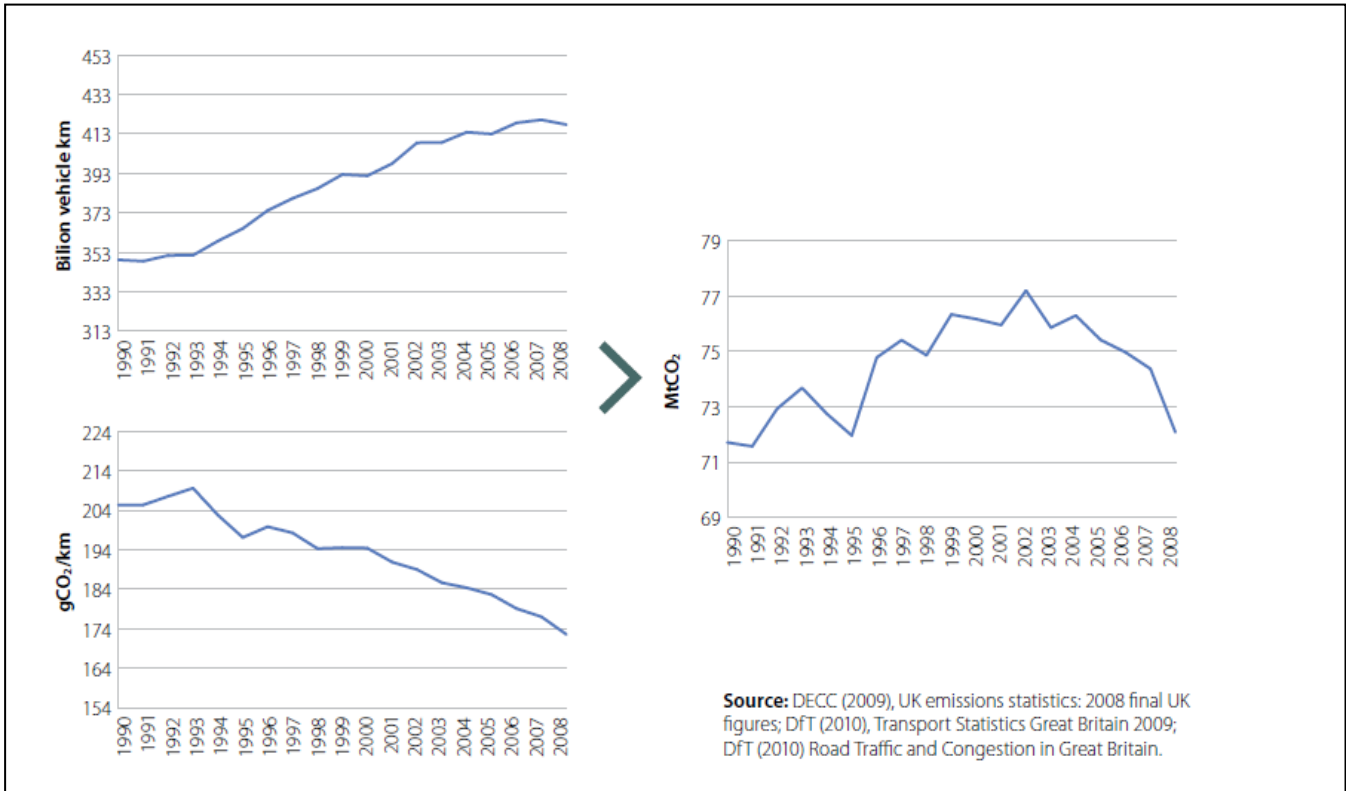
In summary therefore, the overall emissions of CO₂ will have reduced over recent years as vehicle kilometres have remained static and average emissions per vehicle have reduced.

Carbon intensity per new vehicle was said to be 150gCO₂/km in 2009 and has continued to fall with data from registrations⁴ showing that the average CO₂ emissions from cars newly registered in 2012 fell to an average figure of 133 g/km. Since 2001 therefore the average emissions of new cars has fallen by 25 per cent.

The number of vehicles in the lower bands for CO₂ emissions has increased with 27 per cent of all licensed cars in one of the lowest five VED bands (A to E, up to 140 g/km). This compares with under one per cent of cars emitting under 140 g/km of CO₂ in 2001 and 8 per cent in 2006.

⁴ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198753/vls-2012.pdf

Figure 2.7: Historical trends of vehicle km, MtCO₂ and gCO₂/km for cars (1990-2008)



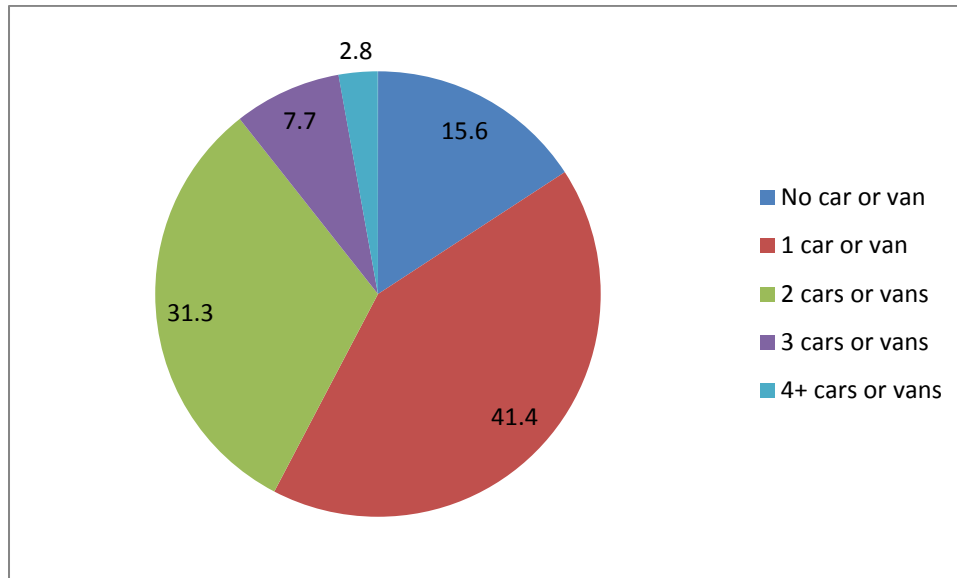
Moreover, there were 178 thousand alternative fuel vehicles in the UK licensed car fleet by December 2012. This figure increased fairly steadily by an average of 20 thousand a year over the previous six years. These alternative fuel vehicles are able to use a range of alternatives to purely petrol or diesel fuel, including gas, electricity, or a combination such as gas bi-fuel and hybrid electric. In total, 3,491 new ultra low emission vehicles (vehicles with tailpipe emissions of CO₂ below 75 g/km or with pure electric powertrains) were registered for the first time in the United Kingdom in 2012, up from 2,114 in 2011. Most of the increase has been due to vehicles eligible for the plug-in car and van grants introduced in January 2011 and February 2012 respectively.

2.9 Car Ownership

Statistics from vehicle registrations⁴ showed that at the end of 2011, the South East of England had 548 cars per thousand head of population.

The 2011 Census records an average of 1.42 cars or vans per household in Cherwell district (Table KS404EW). The percentage of households owning each number of cars is shown in Figure 2.8. For comparison, car ownership is higher in Cherwell than the South East of England as a whole, where there are 18.6% of households with no car and an average of 1.35 cars per household.

Figure 2.8: Car Ownership of Cherwell Households, 2011 Census



ONS 2011, Table KS404EW

2.10 Baseline Mode Share and Containment

2.10.1 Introduction

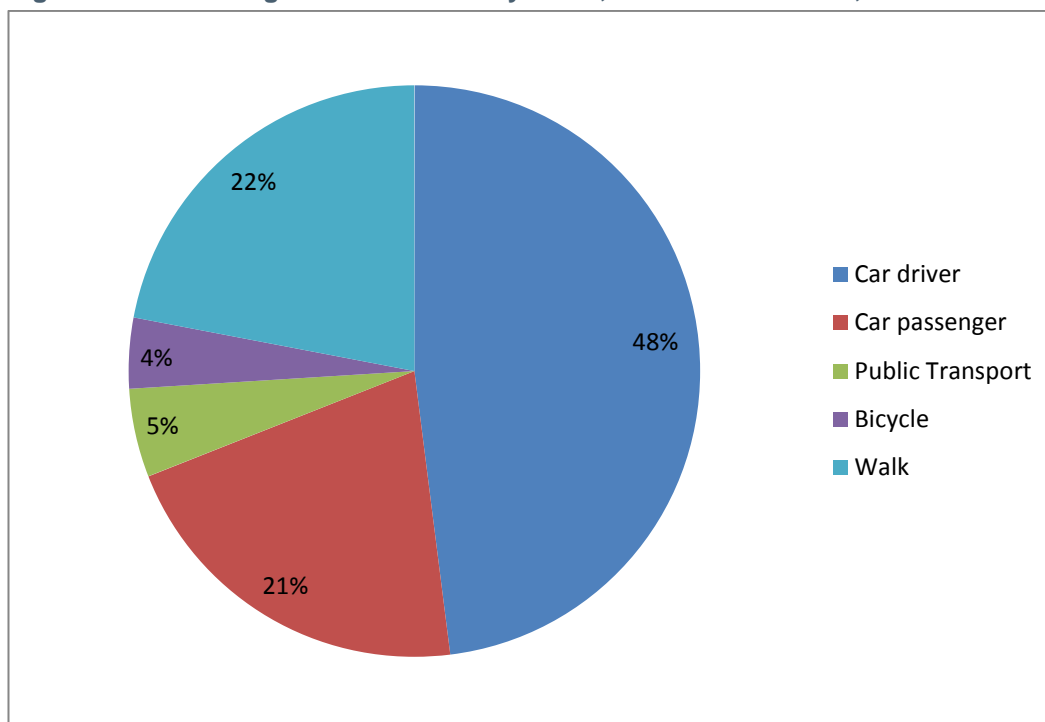
Appendix 5 of the Masterplan Access and Travel Strategy details the baseline mode share and containment of trips and this is summarised in this chapter to inform the Travel Plan.

Baseline information on mode share of trips is available from the Bicester Household Travel Diary Data (2007 and 2010) and the 2011 Census on Method of Travel to Work. The 2010 Household Survey provides some data but is not as comprehensive as the survey undertaken in 2007. The 2010 Household Diary is used as it is most recent, but this has been supplemented by data from 2007 where it has not been available.

2.10.2 Mode Share

The share of trips by various modes for Bicester residents as a whole (2010 survey) is shown in Figure 2.9. This is of all trips made by residents across a seven day period.

Figure 2.9: Percentage of Total Travel by Mode, Bicester Residents, 2010



Source: Travel Behaviour Survey, Summary of Results, Autumn/Winter 2010/11, OCC 2011

The figures indicate that at present **69% of total trips are made by car modes and 31% by non-car modes**. This is a slight increase in car trips compared to the 2007 survey which recorded 67.5% of all trips by households being made by car or goods vehicle.

The proportion of those currently using sustainable modes⁵, when car sharing is included as a sustainable mode, is currently 48%, showing the influence of car sharing on overall car use.

Of non-car modes, walking has the largest share at 22%. The public transport percentage includes both bus and rail trips (it is not broken down in the results into the separate modes).

Table 2-6 sets out modal share for trips within NW Bicester (under 1km), within Bicester (1-3km) and outside of Bicester (more than 3km). In this context trips of under 1km are assumed to be within the NW Bicester Application 1 site, trips of 1-3km are within Bicester and those of more than 3km are assumed to be outside of Bicester.

⁵ Walking, cycling, electric car, rail, bus, taxi, car passenger or motorcycle as defined in Appendix 5 for the Masterplan

Table 2-6: Bicester Household Diary Surveys Mode Share by Distance (2010)

	2010 Bicester Household Survey		2010 Modal Share Internal Trips (under 1km)		2010 Modal Share External Trips Within Bicester (1-3km)		2010 Modal Share External Trips Outside Bicester (>3km)	
	% by mode	Total Car/ Non Car	% by mode	Total Car/ Non Car	% by mode	Total Car/ Non Car	% by mode	Total Car/ Non Car
Car driver	48%	69%	12%	22%	39%	60%	65%	86%
Car passenger	21%		10%		21%		21%	
Bus passenger	5%	31%	1%	78%	2%	40%	6%	14%
Bicycle	4%		5%		8%		3%	
Walk	22%		72%		30%		5%	
Total	100%	100%	100%	100%	100%	100%	100%	100%

It can be seen from reference to Table 2-6 that in the baseline, 69% of all trips by households were made by vehicle but this varies from only 22% of internal trips, to 60% within Bicester and 86% of trips outside of Bicester. Furthermore, of non-vehicle modes, walking has the largest share at 22% of all trips but represents 72% of local trips of under 1km.

Journey to Work Mode Shares: 2011 Census Data

The 2011 Census data provides a modal share of journeys to work in the Bicester North and Caversfield Wards compared to Cherwell District and England as a whole (daytime population). The table includes those who work from home (all the time) within the percentages. The data is shown in

Table 2-7.

The Census records approximately 76.9% of work journeys combining Caversfield and Bicester North as being made by car (71.2% drivers, 5.7% passengers). This is higher than the 68% for the Cherwell District and 62% for England as a whole. The percentage working from home is 6% on average in Cherwell District but higher at 8% in Caversfield. The percentage does not include those who work from home on a regular but not full time basis.

Table 2-7: Summary of Method of Travel to Work – Daytime/Working Population

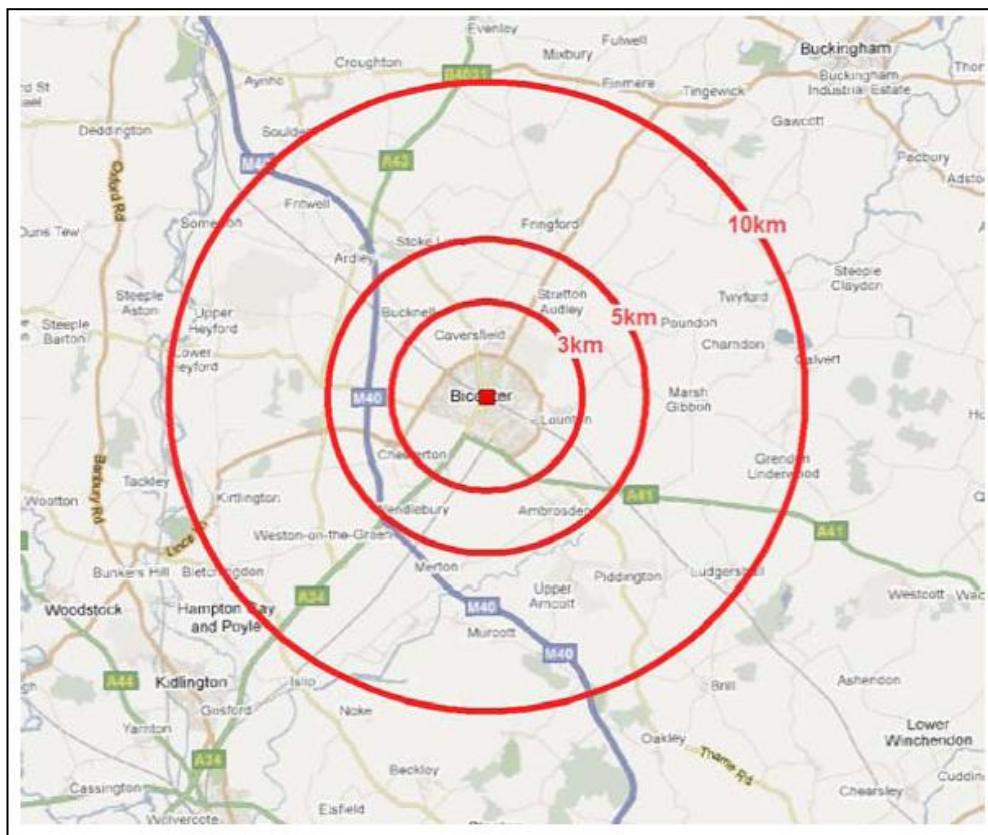
	Caversfield	Bicester North	Cherwell	England
All Usual Residents Aged 16 to 74	1,573	4,223	74,829	25,162,721
Work Mainly at or From Home	8%	5%	6%	5%
Underground, Metro, Light Rail, Tram	0%	0%	0%	4%
Train	2%	4%	3%	5%
Bus, Minibus or Coach	2%	4%	5%	7%
Taxi	0%	0%	0%	1%
Motorcycle, Scooter or Moped	1%	1%	1%	1%
Driving a Car or Van	77%	69%	63%	57%
Passenger in a Car or Van	5%	6%	5%	5%
Bicycle	1%	3%	3%	3%
On Foot	3%	8%	12%	11%
Other Method of Travel to Work	1%	0%	1%	1%

Source: 2011 Census

2.10.3 Containment of Trips

Figure 2-10 shows the extent of the various travel distances from the centre of Bicester. The whole of Bicester and the main development sites (including most of the NW Bicester site) is within the 3km distance. This distance therefore can be used to represent those trips ‘contained’ within Bicester.

Figure 2-10: Distance from Bicester Town Centre

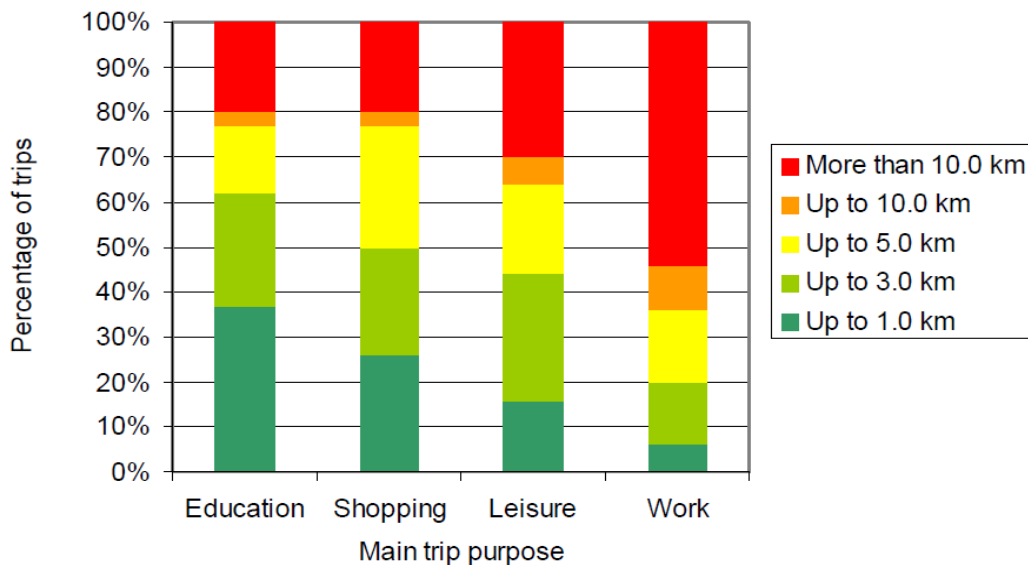


Source: Travel Behaviour Survey, Summary of Results, Autumn/Winter 2010/11, OCC 2011

Containment by Trip Purpose

The 2010 survey provides information on the distance versus the trip purpose, as shown in Figure 2-11. The results show that the level of containment of trips within the 3km varies substantially by trip purpose, with 62% of educational trips, 50% of shopping trips and 44% of leisure trips contained compared to only 20% of work trips. The main challenge for achieving a high level of containment for the NW Bicester site will thus be ensuring a high level of containment of jobs within the 3km of residents of the development, whereas other trip purposes tend to have relatively high containment at present in the town.

Figure 2-11: Trip Purpose vs Distance Travelled



Source: *Travel Behaviour Survey, Summary of Results, Autumn/Winter 2010/11, OCC 2011*

Destinations

The 2007 Bicester Household Travel Diary survey data has been analysed to establish the destinations of Bicester residents by trip purpose.

Table 2-8 shows the main destinations for work based trips, highlighting that Oxford is a key destination, followed by Kidlington. Trips to the east of Bicester (to the industrial estates) and the town centre are also significant. Work based trips are however the most dispersed out of Bicester of the journey purposes, illustrating that the majority of Bicester residents commute out of the town for employment.

Table 2-8: Employment and Business Trips Main Destinations

Zone	District/ Ward Name	% of Trips
35	Oxford District (B)	9.8
36	Kidlington Wards	9.5
41	Bicester East Ward	9.5
43	Bicester Town Ward	9.5
37	Wards South and West of Bicester	6.9

Zone	District/ Ward Name	% of Trips
27	South Oxfordshire District	6.4
38	Wards North and West of Bicester	4.9
24	South Northamptonshire District	4.6
25	West Oxfordshire District	4.1
33	Aylesbury Vale District (South)	3.6
	Total to Main Destinations	68.9

The majority of education related trips made by Bicester households are within Bicester, as shown in Table 2-9, totalling 81%. These trips are generally within walking or cycling distance of homes and thus have a high propensity for sustainable travel.

Table 2-9 Education Trip Main Destinations

Zone	District/ Ward Name	% of Trips
43	Bicester Town Ward	19.6
44	Bicester West Ward	19.0
45	Bicester North Ward	17.9
41	Bicester East Ward	14.7
42	Bicester South Ward	9.8
35	Oxford District (B)	5.4
29	Banbury	3.8
36	Kidlington Wards	2.7
	Total to Main Destinations	92.9

As shown in Table 2-10, shopping trips are concentrated (61%) in the Bicester Town Ward and Bicester South (the town centre, Tesco store and Bicester Village) or are likely to be local centre trips (13% to Bicester North, East and West). The town centre is likely to have increased as a proportion following the opening of the new Sainsbury's store and associated retail units.

Table 2-10 Shopping Trip Main Destinations

Zone	District/ Ward Name	% of Trips
43	Bicester Town Ward	40.9
42	Bicester South Ward	19.7
36	Kidlington Wards	10.2
41	Bicester East Ward	5.1
35	Oxford District (B)	4.4
45	Bicester North Ward	4.4
29	Banbury	3.6
44	Bicester West Ward	3.6

Zone	District/ Ward Name	% of Trips
37	Wards South and West of Bicester	2.9
	Total to Main Destinations	94.9

Table 2-11 shows the destinations of the majority of leisure trips, with the town centre and other parts of Bicester accounting for 54% of trips. Areas to the south and west of Bicester, and Oxford, are also popular destinations.

Table 2-11 Leisure Trip Main Destinations

Zone	District/ Ward Name	% of Trips
43	Bicester Town Ward	33.3
44	Bicester West Ward	12.5
37	Wards South and West of Bicester	11.1
35	Oxford District (B)	8.3
36	Kidlington Wards	8.3
42	Bicester South Ward	5.6
26	Vale of White Horse District	4.2
39	Fringford Ward	4.2
45	Bicester North Ward	2.8
	Total to Main Destinations	90.3

The data on destinations for people visiting friends and family as shown in Table 2-12 shows strong social linkage to Oxford, with Oxford District accounting for 22% of trips. However, 43% of visits were to people also living in Bicester.

Table 2-12 Visiting Friends and Family Trip Main Destinations

Zone	District/ Ward Name	% of Trips
35	Oxford District (B)	22.0
42	Bicester South Ward	13.4
43	Bicester Town Ward	12.2
38	Wards North and West of Bicester	7.3
45	Bicester North Ward	7.3
36	Kidlington Wards	6.1
44	Bicester West Ward	6.1
41	Bicester East Ward	3.7
	Total to Main Destinations	78.0

Total Trip Containment

Applying the containment levels for each land use to the proportion of trips made by each purpose (set out in the Appendix 4 to the NW Bicester Masterplan Access and Travel Strategy) gives an overall estimate of 56.4% of trips contained within Bicester.

The current containment of trips within a sector of the town (such as NW Bicester will be) is not known but is assumed to be in the order of 25% given that such areas include educational facilities as well as some jobs and a range of local shops and services and some leisure facilities. The assumption of 25% is half that of Bicester containment as a whole.

Containment of trips by car

The 2010 survey leads to the estimation that of total car trips made by Bicester residents, 48% are made within Bicester and 52% are to destinations outside of Bicester.

2.11 Summary

The baseline conditions show that there is some good provision for walking and cycling in the vicinity of the proposed development but some need for improvements if a high standard of connections is to be achieved. Bus services are relatively limited in the vicinity of the development but will need to be provided as part of the proposals. Substantial investment is taking place into rail services and infrastructure and this will be of benefit for longer distance journeys.

The mode share of journeys by car is currently high, although car sharing has a significant role in trips. Car ownership levels are higher in the area than the average for the South East of England. Many trips within Bicester are locally based and achieving and improving on this for the development will provide the opportunity to encourage sustainable travel.

3 Aim, Objectives and Targets

3.1 Travel Plan Aim and Objectives

An aim has been set to guide the development of the sustainable travel strategy. This was established for the Travel Plan for the Exemplar development and applies to the overall NW Bicester development and Application 1 (Land North of the Railway). It responds to the overall vision for the NW Bicester development and provides a means of measuring success.

The objectives have been developed in accordance with good practice for Travel Plans and support the specific requirements of the Annex to PPS1. The overarching aim for the development is to:

Reduce the need or desire to travel through integrated design and provide sustainable travel choice options that have less reliance on private cars and seek to relieve congestion.

The specific objectives are:

- 1 To create a high quality place in which people want to live and work
- 2 To reduce the need to travel whilst ensuring access to a full range of facilities and services
- 3 To provide people with information on travel choices
- 4 To promote the use of non-car modes – walking, cycling and public transport
- 5 To reduce single occupancy vehicle trips
- 6 To reduce the travel related carbon impact of the site
- 7 To manage traffic to reduce vehicle speeds and give priority to pedestrians, cyclists and public transport over cars
- 8 To ensure there are no undue congestion impacts on the wider town and road network arising from the development
- 9 To provide a mechanism for the ongoing development and implementation of the Travel Plan

3.2 Framework Travel Plan Targets

The Travel Plan aims to address all types of trips made by residents of the site and those travelling to the site for school, shopping, work or other purposes. The Framework Travel Plan sets overarching targets to be achieved for the Application 1 (Land North of the Railway) Development. It is envisaged that interim targets and more specific targets for each land use will be developed as part of final Travel Plan for the development.

T1: By 2031, 50% of all trips originating from the Application 1 (Land North of the Railway) will be by non-car modes

The NW Bicester development is committed to meeting the PPS1 targets. The Masterplan is an eco-development whereby the whole range of services and facilities together with jobs will be developed in close proximity to homes. Moreover, there will

be a high standard of provision for sustainable travel and initiatives to promote and encourage sustainable mode use.

The maximum modal share target of no more than 50% by car is aimed at, given the requirements of PPS1.

Table 3.1 sets out more detailed mode share for trips within NW Bicester (under 1km), within Bicester (1-3km) and outside of Bicester (more than 3km). This is based on setting targets for reduction in car use against the baseline for each of the different distances with the aim of achieving an overall modal share of no more than 50% by car.

Table 3.1: Target Modal Share by Distance

	2031 PPS Target All trips		2031 Internal Trips		2031 External Trips within Bicester		2031 External Trips Outside of Bicester	
	% by mode	Total Car/ Non Car	% by mode	Total Car/ Non Car	% by mode	Total Car/ Non Car	% by mode	Total Car/ Non Car
Car driver	40.00%	50.00%	7.00%	14.00%	35.00%	52.00%	57.00%	77.00%
Car passenger	10.00%		7.00%		17.00%		20.00%	
Bus passenger	10.00%	50.00%	1.00%	86.00%	5.00%	48.00%	11.00%	23.00%
Bicycle	10.00%		10.00%		10.00%		7.00%	
Walk	30.00%		75.00%		33.00%		5.00%	
Total	100%	100%	100%	100%	100%	100%	100%	100%

It is acknowledged that PPS1 seeks to achieve a higher target of 60% non-car modes for Eco towns where they are adjacent to a higher order settlement. The targets set for NW Bicester seek to achieve the 50% non-car as a minimum, but it also needs to be recognised that the town of Bicester currently has high car use given the long distances travelled to work and rural nature of the surrounding area with dispersed jobs and services and therefore achieving 50% already represents a substantial shift in travel towards non-car modes.

It should be noted that trips by electric vehicle are included in the totals of car trips given that they also contribute to traffic levels, however as with car sharing, they are a 'sustainable mode' and the Travel Plan seeks to encourage EV use. A separate target for car emissions is set to measure the success of initiatives for EV use.

The Transport Assessment details how at least 35% of trips are to be contained within NW Bicester and 60% to be within Bicester as a whole (i.e. 40% or less travelling outside of Bicester). A separate target for containment of trips is not specified in the Framework Travel Plan targets as it is difficult to measure and whether or not containment levels are achieved can be seen by mode share and traffic generation.

T2: By 2031, the traffic generation from the Application 1 (Land North of the Railway) development will equal or be less than the forecasts using Mean Average Residential Trip Rates.

The Transport Assessment has used the higher, 85th percentile residential trip rates to calculate trips by all modes. This gives rise to similar forecast vehicle trip rates to those used for other developments in Bicester. Using average trip rates however would give

a traffic generation of 80% of the 85thile rates and can be used as an indicator of the development resulting in less traffic impact by a combination of sustainable mode use, car sharing, higher linked trips or working from home. The target of matching or improving on the average trip rate traffic generation therefore gives an indicator of the success of the development in minimising car use.

T3: By 2031, no more than 20% of pupils will arrive at school by car on a typical school day.

The primary schools within the Application 1 site will be a key influence on overall modal share, thus a separate target is set for trips by pupils. This can be compared to the average for pupils to Bicester primary schools of 25% arriving by car (from data in 2010).

T4: By 2020, average vehicle emissions for cars owned by site residents will be less than 110gCO₂/km.

The emissions from transport are a large component of people's carbon footprint and the development needs to meet the guidance in the Annex to PPS1, which requires a demonstration of "how the carbon impact of transport in the eco-town will be monitored, as part of embedding a long term low-carbon approach to travel within plans for community governance." The OCC LTP3 also has the objective to "Reduce carbon emissions from transport". Overall, the UK has CO₂ reduction targets of 80% by 2050 (from 1990 levels), and a 34% reduction by 2020 (from 1990 levels). These national (all sectors) targets basically suggest an annual average reduction of 3.3% over the next 40 years. However between 1990 and 2008 emissions from cars fell by only 3% across the period.

In April 2009 the EU adopted legislation which requires manufacturers to ensure that the average emissions of all the new cars they sell across Europe is less than 130 gCO₂/km by 2015, less than 95g by 2020 and less than 80gCO₂/km by 2030 (DECC as above). In the UK the average new car was 133gCO₂/km in 2012 thus the 2015 target is likely to be achieved. These aims take into account measures to improve engine efficiency and non-power train measures and include the contribution of electric cars. Conventional car efficiency is targeted to be 110gCO₂/km by 2020. The DECC extended ambition:

- Recommends that by 2020 around 5% of all cars and 16% of new cars should be battery electric and plug in hybrid.
- Targets biofuels to account for 8% of total liquid fuel consumption (by energy) in 2020.
- Aims to encourage smarter choices such as car sharing, working from home and use of public transport, in order to achieve a reduction in car km of around 5-7%.

For NW Bicester, it would be appropriate to seek both a low average emissions per kilometre of vehicles owned by residents.

Chapter 4 sets out the Travel Strategy and measures to achieve the targets set out in this chapter.

4 Travel Strategy and Measures

4.1 Introduction

This chapter outlines the travel plan strategy and a range of measures that will be commenced and implemented prior to or during the Development build-out. This approach has the objective of encouraging people to adopt sustainable travel patterns from the time they take occupation in the Development in line with research undertaken to support the DfT documents 'Smarter Choices – Changing the Way we Travel' and 'Making Travel Plans Work' which indicate that travel behaviour change can most effectively be achieved at a time of other lifestyle change (e.g. moving house or job).

The strategy to achieve the objectives and targets for the Travel Plan, as set out in Chapter 3, has four main strands:

- **Limiting the need to travel;**
- **Promoting sustainable travel and vehicle choices;**
- **Providing high quality public transport; and**
- **Providing high quality walking and cycling infrastructure.**

4.2 Limiting the Need to Travel

4.2.1 Land Use Containment

The Transport Assessment sets out in detail in Chapter 8 how the level of trips anticipated to be contained within NW Bicester and Bicester as a whole has been calculated, with an aim of achieving at least 35% within NW Bicester and 60% within Bicester. The opportunity to minimise trips off site is offered by the provision of a range of jobs, facilities and services within the Application 1 development and/or as part of the NW Bicester Masterplan.

Table 4.1 summarises the number of trips from the development anticipated to be within the NW Bicester development or external to the site but within Bicester. It can be seen that the level of containment varies in the peak hours, with more trips being contained in the morning peak due to the influence of education trips, and less in the evening peak due to employment trips. Overall for the 12 hour period, 58% of trips are anticipated to be contained in Bicester. This is slightly lower than the target of 60%, but provides a robust estimated to trips for the impact analysis.

Table 4-1 Containment of Trips for Application 1 Development

	AM peak (08:00 to 09:00)			PM Peak (17:00 to 18:00)			12 Hour (07:00 to 19:00)		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
CONTAINMENT									
Within NWB	416	1147	1564	501	333	833	3937	4828	8765
Within Bicester	323	590	913	535	380	915	3461	4121	7582
Outside of Bicester	426	915	1341	902	654	1556	5274	6386	11660
Total	1165	2652	3817	1938	1367	3304	12672	15335	28007
Within NWB			41%			25%			31%
Within Bicester			24%			28%			27%
Total Containment			65%			53%			58%

Table 4-2 summarises the containment of trips by each mode. It can be seen that car trips are forecast to be predominately outside of Bicester, with 67% of trips. This is a robust assumption given that the Bicester Household Survey 2010 found that only 52% of trips were to destinations outside of Bicester – although this is of resident trips only. Moreover the percentage of bus passenger trips outside of Bicester is 73% reflecting the usage of services such as the X5 to travel to longer distance destinations.

In contrast, 68% of walking trips are anticipated to be internal to the development and 36% of cycling trips.

Table 4-2 Containment of Trips by Mode (12 Hour Trips)

Mode	Internal to NW Bicester		Within Bicester		External to Bicester		Total Trips
	No.	%	No.	%	No.	%	
Car driver	614	6.2%	2654	26.8%	6646	67.0%	9914
Car passenger	614	14.5%	1289	30.4%	2332	55.1%	4235
Bus passenger	88	5.0%	379	21.7%	1283	73.3%	1749
Bicycle	876	35.8%	758	30.9%	816	33.3%	2451
Walk	6573	68.1%	2502	25.9%	583	6.0%	9659
Total	8765	31.3%	7582	27.1%	11660	41.6%	28007

4.3 Working from Home/ Locally

A high level of Broadband provision, together with the flexibility for homes to provide workspace, will maximise the numbers of residents working from home, either full or part time. This would reduce the volume of out commuting trips and particularly reduce the longer distance trips to work as it is for such workers that home working has the highest time and cost benefits.

The Employment Strategy (which accompanies Application 1) sets out that the Cherwell Economic Analysis report (August 2012) gives a figure of 14.2% for the average percentage of workers who worked from home in Cherwell District over the last 10 years, based on ONS data.

The Cherwell average working adults per household is 1.26. On this basis, 2,350 homes (2,600 net of extra care homes, for which job generation has been calculated separately) will accommodate 2,961 working adults, of which 421 will work from home.

Moreover, the development includes employment floorspace in the local centre with an estimate of 253 jobs, as well as a further 201 jobs in community, education, retail and services jobs within the Development. Whilst these jobs are not home working, they provide the opportunity for locally based employment that does not generate traffic on the highway network.

4.4 Promoting Sustainable Travel and Vehicle Choices

4.4.1 Branding and Marketing

The Travel Plan will be branded using the 'NW Bicester – thinking about tomorrow' logo and philosophy. Branding of the Travel Plan helps to raise awareness of the Travel Plan and sustainable travel initiatives and present them as part of the overall ethos of NW Bicester.



Marketing the travel plan and sustainable travel opportunities and benefits is however not just about branding. It is also about the establishment of effective channels of two way communication between those who are responsible for delivery (Travel Plan Co-ordinator and Group) and those who benefit from the implementation of the Travel Plan (i.e. future residents, employers and employees).

Individual Travel Plans would highlight the materials and marketing channels available and how they would practically support the Travel Plan Framework through the dissemination of materials to their own employees / parents and pupils/ customers.

The probable communication and marketing channels that would be employed (as a minimum) are as follows:

- In home information system and NW Bicester website – providing ordered and accessible links to valuable travel resources (e.g. journey planners, timetables etc.);
- Link to the car share website through the Oxfordshire lift share scheme (Oxfordshire.liftshare.com);
- Travel information / advice available from the Travel Plan Co-ordinator (by telephone and also face to face);
- Email dissemination via the Travel Plan Co-ordinator; and
- Onsite marketing events, to tie into local and national promotions.

The home information system will be the primary source of sustainable travel information. The first Exemplar Phase of NW Bicester will provide all homes with a real-time home information system. As well as supplying households with real time energy consumption and costs, it will also present real-time travel information to every home. Designed to help to encourage behaviour change and support residents to adopt more sustainable travel choices, the tablet system will inform households when the next bus is due from their closest stop, the availability of the electric car club and have a section of maps detailing safe and direct walking and cycle routes to key

destinations in NW Bicester and the wider town. A2Dominion are continually evolving the content of the home information system and are currently exploring options to enable residents to book the electric car club direct from their tablet device. A2Dominion intend to work with residents on the Exemplar to review and evaluate the effectiveness of the device in influencing people's behaviour.

Development of high quality travel information for the development across multiple formats (paper, electronic and 'interactive'/ web-based/ in-home information systems based) must be complete, accurate and thoroughly tested prior to the first phases of occupation. It will make use of material already produced by other organisations where appropriate. It is likely that information will be produced for the Exemplar development and can be rolled outwards for the Application 1 (Land North of the Railway).

In addition, the following channels would be explored and employed (where appropriate):

- Newsletters for residents and employees;
- Seminars, focus groups or other formal or informal local or educational events run by the TPG;
- Marketing via branded merchandise;
- Timely press releases and features on local radio or in the local press; and
- Email distribution lists for different land uses.

4.4.2 Travel Awareness

The travel plan co-ordinator would be responsible for promoting travel awareness initiatives to site residents and business occupants such as Walk to School Week, Step Up, and Liftshare Week etc. This would be in conjunction with the OCC Travel Choices team.

4.4.3 Personalised Travel Planning

Personalised travel planning has proved particularly effective when targeting residential populations and has been shown to reduce modal share by between 3 and 6%. Each new household and employee within the Application 1 development is proposed to be offered a personalised travel plan at the point of property handover or job induction. This will continue to be in place for new households or employees.

The personalised travel plan will involve the completion of a questionnaire by each member of the household/ employee identifying their main travel needs. A personalised information pack will then be produced showing local walking and cycling routes; details of bus/ train services providing access to their place of work/ education; and information on the public transport providers (links to websites etc.). Discounts will be provided within the pack, tailored to the household/ employee requirements. A range of incentives will be provided to encourage the use of public transport, cycling and electric vehicles. Promoting Cycling

One of the most effective ways in which the development can achieve modal shift targets is to provide a good quality offer for cyclists. The analysis of accessibility set out in Chapter 7 of the Transport Assessment demonstrates that cycling is an attractive option for most journeys between the development and Bicester. Bicester is a very cycle-able town already with the majority of journeys under 5 kms.

The targets for modal shift to cycling are recognised as ambitious, aiming to increase modal share from 4% in the 2010 household survey to 10% by 2031. Delivering this level of modal share requires a focussed and enthusiastic approach and the developer is committed to attracting as many cyclists to the Development as possible in order to achieve a much higher than average cycling population as well as then promoting cycling as a mode for residents and employees. The following initiatives are put forward:

- Quality cycle paths, cycle storage at the homes and cycle parking facilities at the local centre and bus stops;
- Strong cycling identity incorporated into the town;
- Public art at key locations featuring bicycle themes;
- Menu of incentives for all new residents to choose from, this could include free bikes, free folding bikes, free bike servicing, free high visibility waterproofs, free bike lights or locks, free panniers;
- Promotion of electric bikes through link up with local bike shop offering supply and maintenance;
- Governance body to set up a cycling club or work with an existing club/ link to local clubs and a programme of events such as sponsored rides raising money for local Bicester charities, "Pimp my bike" sessions;
- Best practice in cycle promotion through cycle to work schemes, cycle to school schemes, Bikeability programme, taking advantage of all the best practice learnt by Sustrans and the Cycling Demo Towns; and
- Hold an annual Bicester Bike Day that will promote the use of cycling within Bicester.

In addition, the site marketing strategy could involve the following:

- Advertise and produce articles for cycling magazines such as CTC magazine, 'Cycling' magazine etc.
- Sales team to be fully clued up on all the cycling provision and offers, to be familiar with the cycle routes around the town (Travel Plan Co-ordinator to be part of the sales team);
- At the onsite sales office, there should be at least one sales person who is knowledgeable about cycling; and
- Offering of incentives that are cycling related.

In addition to all these measures, the developer is committed to ensuring there are high quality cycling links within the development and to key destinations in the town. These infrastructure measures are set out later in this Chapter.

All of these cycling measures are within the context of the overall Travel Plan. The reason for this specific focus on cycling is that cycling offers so much potential in the Bicester context.

4.4.4 Non Residential Travel Plans

Alongside the Framework Travel Plan for the development, each of the non-residential aspects of the development will develop a travel plan. The non-residential travel plans will include:

- The Primary School;
- Local shops with more than 10 FTE employees;
- Local employment with more than 10 FTE employees;
- Children's Nursery; and
- Community Centre.

Primary School

The primary school is anticipated to have 420 pupils and the Application 1 development will also provide playing fields to enable the expansion of the Exemplar phase primary school to a 2 form entry, 420 pupil school. A full travel plan will be prepared for the new primary school as part of the detailed design process and submission for full planning permission. This will set detailed targets for modal share and identify specific travel measures to be incorporated in the school from the outset. The travel plan will then be reviewed following the set-up of the school and evaluation of outcomes in terms of modal share.

It is suggested that the aims of the travel plan for the new school on site would be to:

- Maximise travel to school by staff and pupils by sustainable means;
- Give priority to pedestrian safety, particularly in the vicinity of the school entrance;
- Facilitate access to the school by coach and for visitors; and
- Avoid causing a congestion/ road safety issue in adjacent areas.

Modal share data for journeys to school was previously compiled by Oxfordshire. In 2010, on average the modal share for pupils to school was 57% walking, 9% cycling and 9% by bus, with a relatively low 25% travelling by car.

An appropriate target is to seek a modal share of pupils to school by car of no more than 20%. This would reflect the catchment area which will be housing within the Application 1 development, within walking distance of the school. The school travel plan may include the following measures:

- Walking bus (from the furthest parts of the Development to the school);
- Child-friendly route marking of safe routes to school;
- Cycle proficiency/ road safety training provided to all pupils;
- Provision of covered cycle and scooter storage (assuming 10% of children cycle) and storage facilities for helmets/ reflective jackets etc.;
- Staff showers and lockers for those who cycle/ walk longer distance;
- Staff car share spaces and promotion of initiatives; and
- Engagement with national/ OCC initiatives such as 'Walk to School Week'.

The development of an effective travel plan would also help the school to achieve the Eco-Schools awards, which would be an appropriate aim for the school.

Other Non-residential Uses

A travel plan will be prepared for each of the main non-residential uses, namely a convenience store, offices, children's nursery, and extra care housing (this will focus on staff travel thus is included in the non-residential uses). Each travel plan will be prepared by the building occupants prior to opening, with the assistance of the Travel Plan Co-ordinator. The travel plans might include the following specific measures:

- Personalised travel plans for each new permanent employee;
- Provision of secure cycle storage;
- Provision of showers and lockers (agreements may be reached to share showering facilities provided in the business units);
- Promotion of car sharing – including provision of car sharing spaces and a guaranteed lift home scheme;
- Provision of bus taster tickets;
- Timing of deliveries and use of electric vehicle fleets, or in the case of the convenience store, using cycles for home deliveries; and
- Look to develop a business based car club/ leasing option, similar to AlphaCity.

In addition to the travel plans for the individual site uses, the Travel Plan Co-ordinator will need to engage with the secondary school and health centre on the Application 2 site as well as other education and service providers within the town to ensure that residents can access sites using sustainable modes.

4.4.5 Parking Strategy

The approach to parking in each aspect of the development requires a careful balance between meeting the needs of residents/ businesses and not unduly encouraging car use. Whilst the PPS1 and Eco Development good practice recommends a much reduced provision of parking over standard developments, it is recognised that the NW Bicester site is in a predominately rural County where car ownership levels are (often by necessity) high.

Residential Parking

Parking provision for the development has been developed through the application of Oxfordshire County Councils 'Parking Standards for New Residential Developments'⁶. The guidance sets out the maximum parking standards for allocated and unallocated spaces within new residential areas throughout Oxfordshire, together with guidance on space dimensions and parking layouts.

The parking standards set out in the guidance have been informed by research undertaken in Oxfordshire, which found that the most important factors influencing car ownership are dwelling size and tenure, location and that the overall number of car parking spaces in a development can be reduced if some spaces are provided as unallocated to specific properties.

The guidance provides parking standards for new residential developments for different areas of the County and the specific parking standards for the Cherwell Urban Areas including Bicester are detailed below in Table 4.3.

⁶ <http://www.oxfordshire.gov.uk/cms/content/transport-new-developments>

Table 4.3: Car Parking Provision in New Development for Urban Area in Cherwell

Number of bedrooms per dwelling	Maximum number of allocated spaces	Maximum number of spaces when two allocated space per dwelling is provided		Maximum number of spaces when one allocated space per dwelling is provided		Maximum number of unallocated spaces when no allocated spaces
		allocated spaces	unallocated spaces	allocated spaces	unallocated spaces	
1	1	N/A	N/A	1	0.4	1.2
2	2	2	0.3	1	0.6	1.4
2/3	2	2	0.3	1	0.7	1.5
3	2	2	0.3	1	0.8	1.7
3/4	2	2	0.4	1	1.0	1.9
4+	2	2	0.5	1	1.3	2.2

It is proposed that as an average for the Application 1 development parking will be provided for homes following that agreed for the Exemplar development. The provision will be part of a parking strategy which links to the Travel Plan for each part of the development. The figures given are an average. It is likely that there may be some variation by density with the higher density areas with highest access to public transport potentially having lower parking provision than the average.

Table 4.4 indicates provision by unit type. It can be seen that all dwelling types are lower than the maximum standards with the exception of a small number of 5 bedroom dwellings with more allocated space. As a total, the provision of parking would be less than the standards. Garages are included as allocated spaces and the unallocated spaces includes visitor parking provision.

Table 4.4: Indicative Residential Parking Provision

Unit Type	Provision	
	Allocated space	Unallocated
1b	1	0
2b	1	1.22
3b	2	0.22
4b	2	0.22
5b	3	0.22

4.4.6 Non-Residential Parking

Parking for non-residential uses will be detailed as part of detailed/ reserve matters applications but is expected to be in accordance with the parking provision for the Exemplar development. This sets provision well below the maximum CDC standards but demonstrates how this will be achieved in a parking accumulation.

4.4.7 Car Club

It is proposed to establish an electric car club for Exemplar site residents and this will be expanded to the Application 1 development. The car club would involve purchase and adaptation of cars (electric) which would be parked centrally within the site and accessed by car club members. Research reviewed by Hyder has shown that typically

a car club requires 50 members per car and that they are effective in reducing second car ownership.

Following exploration by A2 Dominion, interest has been shown by the community run Common Wheels Car Club (operating in other parts of Oxfordshire) in getting involved in the Exemplar site but other options are being investigated. The establishment of a car club will require from the developer:

- provision of marked and branded parking bays; and
- marketing and promotion of the car club to home buyers and businesses.

The cars provided as part of the car club could be electric given that technology has moved on such that this would now be possible. In the past, the charging time for electric cars ruled them out for car clubs but now with the right infrastructure, cars can be charged in 15 minutes.

Parking bays should be provided at a ratio of approximately one bay per 100 homes. These will be identified on street in highly visible locations, near to as many homes as possible but not in a place that feels like a private area for any particular home.

It will be important for the car club to be established close to the outset in order that people can join at an appropriate time (for example when the car tax or insurance runs out) to provide people with choice and establish positive travel habits.

4.4.8 'Eco' Vehicles (EV)

It is recognised that vehicles will be owned by residents and required by businesses and there should be promotion and incentives to encourage use of 'Eco-friendly' vehicles. Initiatives as part of the development may include:

- Electric car charging points to be installed for any residents requesting them;
- Free electricity for charging electric vehicles; and
- Special deals to purchase electric cars and scooters

The developer sees this as being a key area to ensuring that the modal share targets are met. To encourage future residents into using and purchasing EV the developer will provide a package of measure to encourage EV take up. This could include the following;

- Promotional material within sales office;
- Demonstration vehicles;
- Whole life and running cost information;
- Engage with a EV manufacture to promote EV ownership; and
- Lease scheme for business

4.4.9 Car Sharing

The travel plan co-ordinator would promote car sharing amongst residents travelling to or from the site for work. The co-ordinator will direct people towards existing car sharing websites, such as 'Oxfordshire car share' <https://oxfordshire.liftshare.com/>. Whilst this would not help achieve the PPS1 target of 50% by non car modes, it has significant benefits in reducing traffic as well as travel costs. Each non-residential use

travel plan will include for the promotion of car sharing for employees, including the provision of car sharing spaces and a guaranteed lift home scheme.

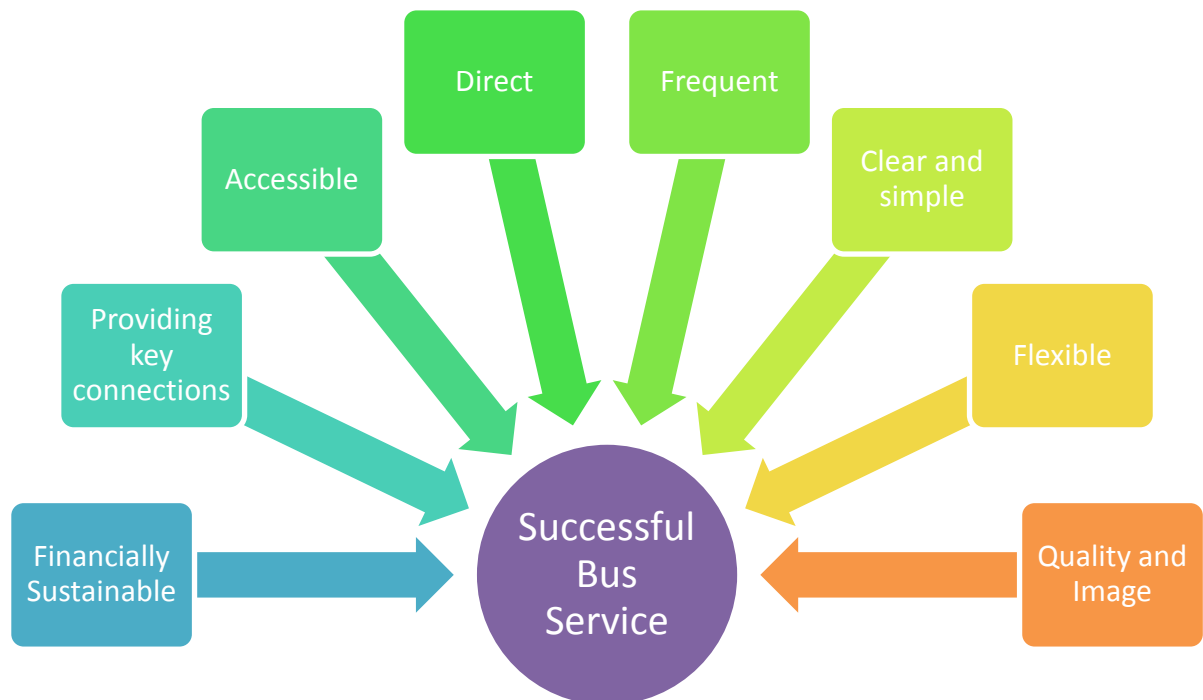
4.5 Providing High Quality Public Transport

4.5.1 Bus Services and Infrastructure

Establishing a Successful Bus Service

PPS1 seeks for a minimum of 50% of travel to and from the site to be via non car means and the bus will have a significant role to play in providing a means of sustainable travel for journeys by residents of the site and those employed/ visiting NW Bicester. Moreover, the bus will provide accessibility to education, jobs, services and facilities for those who do not have a car, which in particular will benefit young people, elderly people and those on lower incomes. A service which does this effectively as part of the long term development of the site will be a 'successful' bus service. The following aims are proposed for a bus service for NW Bicester in order for it to be successful as shown in **Figure 4.1**.

Figure 4.1: Components of a Successful Bus Service



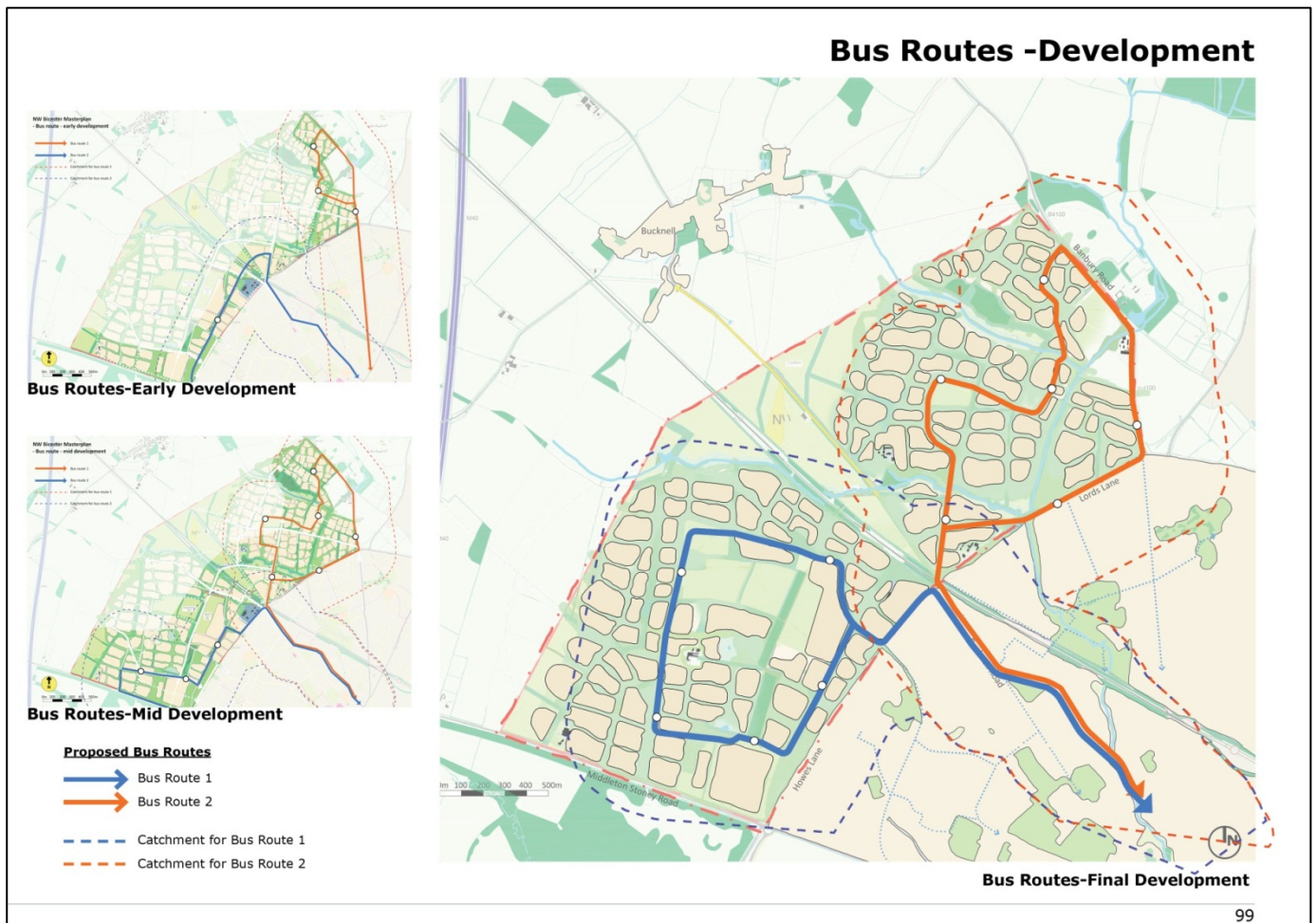
It is recognised that an effective bus strategy needs to balance the above aims, noting that there can be a conflict between aims, for example in providing a high degree of accessibility with directness and financial sustainability.

4.5.2 Proposed Bus Route

The proposed bus routes at the full build out of the development will go to and from Bicester Town Station, through the town centre to Bucknell Road and then loop through the land north of the railway. The proposed routes for both sides of the railway are shown in Figure 4.2 with Route 2 being the proposed route for the land north of the railway.

The bus route suggested is an indication of how services may develop. Bus services will however evolve over time to meet passenger needs and there may be demand for additional / alternative services such as east to west on the new link and then westwards to wider destinations.

Figure 4.2: Bus Route Development



Phasing of Bus Routes

The development of the Application 1 site will be phased and built out in different areas. There is therefore a need to phase the bus service to reflect the development phasing.

The route will serve each of the early phases of the development, in order to ensure that there are bus routes within 400 metres of homes as the site builds out. Initially the route will go to Bicester North Station but over time it will directly connect to Bicester Town Station:

- **Early Development (Phase 1)** – this involves a northern loop (the route planned for the Exemplar) which would use Banbury Road to and from the development, giving access to Bicester North Station in the early years of the development.
- **Further Development (Phase 2 onwards)** – involves the establishment of a full loop on the northern side. The bus would travel up Bucknell Road, along Lord's Lane and Banbury Road, then through the development from north to south. This direction would enable those living at the northern end of the site to use a bus to

the centre of the site and walk to the secondary school for example. At this stage it is anticipated that the route through the Exemplar development would alter to continue into the Application 1 development.

Service Frequencies

It is proposed that there is a frequency of every 15 minutes on the northern loop from the occupation of an agreed number of units. Once a 15 minute service has become commercially viable, frequencies might be increased to every 10 minutes.

The bus service of 15 minutes frequency will be provided by the developer from an appropriate point which will be agreed with the County Council. In the early build out, a half hourly frequency bus service is proposed. From first occupation, either a responsive mini bus service will be provided (managed by the travel plan co-ordinator) or a half hourly bus service will be operated.

Patronage Assumptions

Potential patronage in each phase has been estimated based on the forecast bus use for the development in each phase, assuming a modal share of 6.6% for buses with a service frequency of 4 per hour to all parts of the development. This can be compared to the current modal share for buses of 5% for Bicester Households (2010 survey). It is considered this is realistic given the level of accessibility, frequency and directness of the services and is compatible with the targets set out in Chapter 3.

Bus Priority

The access layout includes the provision of a bus only link from Bucknell Road into the development to provide a priority route for bus services. The means of designing and enforcing the bus links will be determined through agreement with OCC.

There is a need to afford greater priority to buses on Bucknell Road and in the town centre, and this will be the subject of further discussion and development of proposals in conjunction with OCC. The use of Bucknell Road as the main bus route in the long term gives advantages to buses in that other routes are expected to be more heavily trafficked.

Bus Infrastructure

A high standard of infrastructure will be provided on bus routes including shelters with seating, real time information and cycle parking.

Links to Other Services

The bus route provides links to the town centre and Bicester Town Station. This will also provide the opportunity to extend services to other areas of the town (such as the Launton Road employment area) or to interchange with longer distance bus services.

4.5.3 Rail Services and Infrastructure

The implementation of Evergreen3 will lead to a significant improvement in rail services from Bicester Town Station, with the existing services from Bicester North to and from Birmingham and London remaining of key importance. It is recognised that the Application 1 homes will be attractive to those who commute longer distance and thus the travel strategy aim is to encourage use of rail for these trips. The site developer may make a contribution towards improving the Oxford to Bicester rail service and link, towards establishing an hourly service, proportionate to the number of dwellings.

It will be important to maximise the use of sustainable travel modes to link to rail services by:

- Linking the bus services to the two stations (as far as can be achieved);
- Providing sufficient cycle and motorbike storage at the stations;
- Providing direct cycle and walking links.

The latter two points will be contributed to as part of the overall transport contribution and are assumed to be implemented in conjunction with Chiltern Railways and Oxfordshire County Council.

4.6 Providing High Quality Walking and Cycling Infrastructure

4.6.1 Walking and Cycling Routes

In order to achieve the amount of trips by walking and cycling set out in the targets, the site layout has been developed to ensure a high level of accessibility within the site on foot and cycle and strong connections to off-site destinations. A Walking and Cycling Strategy for the NW Bicester Masterplan has been formulated and is set out in Appendix 1 to the Access and Travel Strategy. The ingredients of the ideal walking and cycling routes are illustrated in Figure 4.3.

Figure 4.3: Ingredients of High Quality Walking and Cycling Routes



4.6.2 Internal Connections

It is proposed that the internal walking and cycling routes will be of a high quality with commuter routes having all-weather surfacing and being well-lit and easily maintained. The layout of home and routes will ensure natural surveillance to increase user safety. Where possible pedestrians and cyclists will be segregated to minimise potential

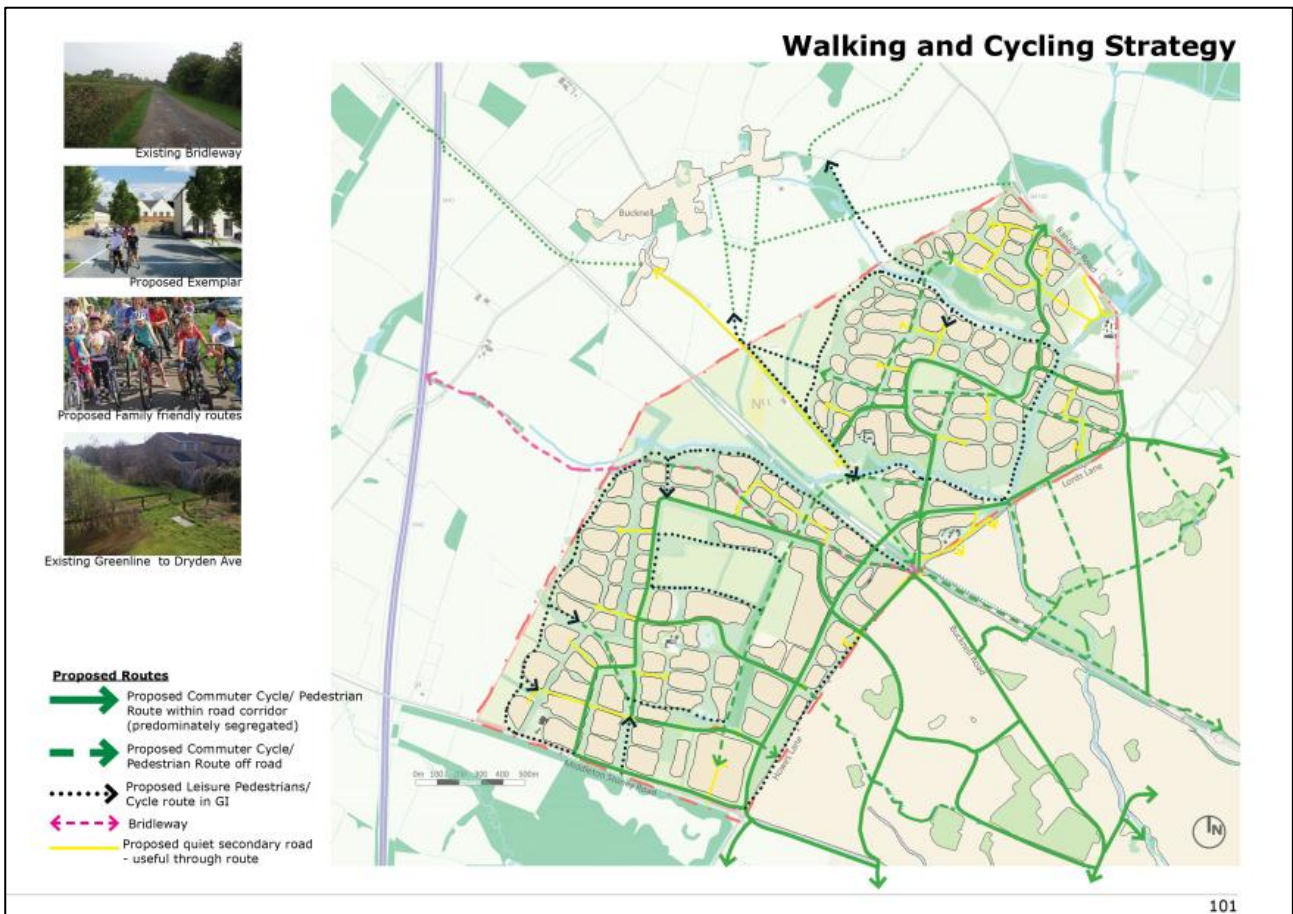
conflicts, and walking and cycling routes will be segregated from vehicular routes. Safety of pedestrians and cyclists will be ensured by providing routes of adequate widths and with numerous crossing points.

To ensure cycle and walking routes are well used and fit for purpose, they will be split into two distinct categories. 'Commuter Routes' will be the most direct routes segregated from traffic but either adjacent to the roads or off-road where this is more direct. They will allow direct and fast access to key local employment areas, schools, local centres and hubs. This allows for the provision of cyclists and walkers travelling to school and to work.

As a contrast, a network of 'leisure routes' will be introduced, which allow more 'weekend' routes, longer meandering paths, these will tend to be more rural and will take in the arable farmland, the Bure stream and the hedgerows.

Figure 4.4 illustrates the proposed walking and cycling connections within the site layout for the Application 1 development and the connections to wider Bicester.

Figure 4.4: Walking and Cycling Connections



4.6.3 External Connections

A detailed audit and review was undertaken of walking and cycling routes between the development and the rest of Bicester. From this, a number of primary routes were identified which are likely to be the main routes for residents of NW Bicester as well as secondary connections, also important but less direct. Figure 4.5 shows the primary and secondary route connections for the Masterplan. It is recognised that these

connections are not all of the routes which will be used but these provide the best opportunity for direct routes which could be enhanced or upgraded and provide for both walkers and cyclists.

Of the routes identified, the following primary and secondary connections are considered important for the land north of the railway:

Primary Connections

The primary connections between the Application 1 development and Bicester, and east-west connecting the different parts of the development, in order to encourage walking and cycling are considered to be:

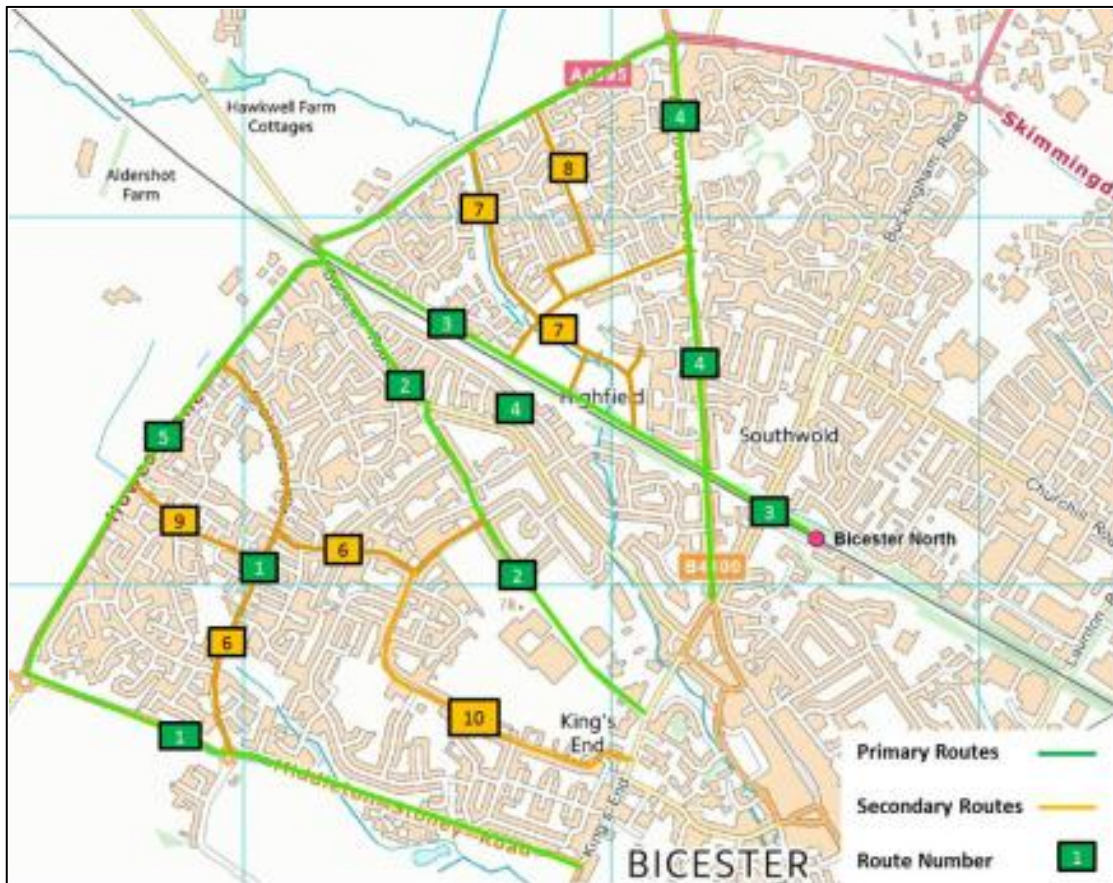
- Alongside the railway from Lord's Lane to Bicester North Railway Station (Route 3);
- Adjacent to Banbury Road – connecting the east side of the development with the town centre (Route 4); and
- Alongside Lord's Lane – connecting the different parts of the NW Bicester development (Route 5).

In response to the principles for routes, primary connections should be:

- Segregated from traffic;
- All weather surface;
- Lit;
- The most direct routes.

The east-west route along Howes Lane and Lord's Lane is planned for the southern side of the road as a route with separated walking and cycling provision (4.5m wide). It is also recommended that, subject to feasibility, the route adjacent to the railway line running towards the town centre should also be wider to enable segregation.

Figure 4.5: Primary and Secondary Connections from NW Bicester



Secondary Connections

The following connections are considered to be of additional significance in linking the land north of the railway into and through the existing residential areas:

- Routes through Bure Park nature reserve connecting to the railway route – connecting the central part of the east side of the development to the town centre (**Route 7**); and
- From Lord's Lane to Lucerne Avenue through the Bure Park housing estate (as above) (**Route 8**).

In response to the principles for routes, secondary connections may be:

- Sharing quiet streets with traffic; and
- On gravelled surfaces and potentially unlit if in environmentally sensitive areas.

Other Routes

In addition to the primary and secondary connections there are certain routes in the wider town that will also be important for connections from NW Bicester, as well as for residents of the town as a whole. Key routes that may require consideration include:

- From Bicester North Station area to Launton Industrial Estate. This was not surveyed, but it is noted that there is an existing off road walking and cycling route running to the north of the railway line on Town Walk North and connecting via Town Walk East to the industrial estate; and
- From the town centre/ Kings End to Bicester Town Station.

In summary, the following areas for improvement are of particular relevance in providing good connectivity for walkers and cyclists to and from the Application 1 development:

- Upgrade of the route alongside the railway from Lord’s Lane to Banbury Road as a surfaced cycleway and footpath;
- Improvements along Banbury Road, some of which are being delivered as part of the Exemplar development;
- Minor improvements to the existing cycleway on the south side of Lord’s Lane to remove vegetation that impacts on feelings of personal security for users;
- Improvements to the routes through Bure Park to encourage their use as leisure walking and cycling routes.

Improvements to routes will be further investigated in conjunction with Oxfordshire County Council and will form part of discussions regarding the s106 for Application 1.

4.6.4 Cycle Parking

The residential units will have cycle storage provided in accordance with the Code for Sustainable Homes (assuming the second option of storage for 1 cycle for 1 bed homes, 2 for 2 and 3 bed and 4 for 4 or more bed homes). The criteria for achieving COSH credits is shown below.

Criteria	Credits
Where either individual or communal cycle storage is provided that is adequate, safe, secure and weather-proof (as defined in <i>Relevant Definitions</i> below) for the following number of cycles:	
Studio or 1 bedroom dwelling - 1 cycle for every two dwellings (only applicable to communal storage)	1
2 and 3 bedroom dwellings - storage for 1 cycle	
4 bedrooms and above - storage for 2 cycles.	
OR	
studios or 1 bedroom dwellings - storage for 1 cycle	
2 and 3 bedroom dwellings - storage for 2 cycles	
4 bedrooms and above - storage for 4 cycles.	
	2

The non-residential uses will have cycle parking for staff and visitors provided over and above the Cherwell DC standards, which are shown in [Table 4.5](#). With regard to the primary school, the CDC standards do not include a standard for cycle parking at schools and it is suggested that an allowance of 1 space per 10 pupils is accommodated. A space allowance should also be made for children’s scooter parking.

Table 4.5: Cycle Parking Standards – Cherwell DC

	Residential	Food Retail	Non Food Retail	B1 - Offices	D2 Assembly and Leisure	A3 - Restaurant/ pubs
Long stay/ employee/ resident	1 bed - 1 space; 2+ beds - 2 Spaces	1 stand per 12 staff *	1 stand per 6 staff *	1 stand per 150 sqm	1 stand per 12 staff **	1 stand per 12 staff **
Visitor	1 stand per 2 units where more than 4 units	1 stand per 200sqm	1 stand per 200sqm	1 stand per 500 sqm	1 stand per 20 sqm	1 stand per 20 sqm of public space

Stands will be of ‘Sheffield’ type and will be located in well lit, accessible locations. Storage for staff will be provided in covered secure shelters close to building entrances. Cycle stands will also be provided adjacent to each of the bus stops to encourage people to cycle and then transfer to bus.

4.6.5 Cycle Purchase/ Hire

Initiatives could be developed to encourage residents and employees to purchase or hire bicycles. Residents could be provided with assistance to purchase bikes (or indeed gifted one) as part of their package of personalised travel planning incentives.

Employers will be encouraged to participate in the Cycle to Work tax incentive scheme for cycle purchase.

There is an existing initiative, Cycle for Bicester, which was launched in 2012 as part of the Eco-Bicester travel demonstration project. It was funded from the Communities and Local Government (CLG) eco town grant held by Cherwell District Council and was administered by Oxfordshire County Council. The scheme was successful and is now being run by Bicester Green – centre for sustainability, skills and training. The [Bicester Green’s bike loan scheme](#) offers cycles for periodic one off use or the opportunity to subscribe for regular access.

The site developer will actively engage in exploring initiatives in conjunction with OCC and to provide stands to accommodate such bikes at key locations on site.

4.6.6 Cyclist Facilities

In order to encourage cycling to the facilities and employment within the site, shower facilities and lockers will be provided within the main non-residential uses such as the primary school, community centre and commercial businesses.

4.7 Summary of Travel Strategy and Measures

Table 4.6 summarises the Framework Travel Plan measures set out above including a commentary on which targets of the travel plan each measure will contribute towards.

Table 4.6: Summary of Travel Strategy and Measures

Measure	Elements	Contribution to Travel Plan Target
Limiting the Need to Travel		
Containment of land uses	<ul style="list-style-type: none"> Achieving the mix of housing, employment, education, retail and social and community uses 	T1 Mode Share T2 Reduced traffic generation T3 School mode share
Working from Home/ locally	<ul style="list-style-type: none"> High level broadband provision Employment space within the development plus range of facilities providing jobs 	T1 Mode Share T2 Reduced traffic generation
Promoting Sustainable Travel and Vehicle Choices		
Branding and Marketing	<ul style="list-style-type: none"> Branding as NW Bicester In home information system Wide range of means for information provision 	T1 Mode Share
Travel Awareness	<ul style="list-style-type: none"> Promoting travel awareness initiatives to site residents, pupils and employees 	T1 Mode Share T2 Reduced traffic generation T3 School mode share
Personalised Travel Planning	<ul style="list-style-type: none"> Personalised travel planning service to all new residents and employees 	T1 Mode Share T2 Reduced traffic generation T3 School mode share
Promoting Cycling	<ul style="list-style-type: none"> High quality infrastructure for cycling Creation of cycling identity Resident and employee incentives Cycling club Sales and marketing initiatives 	T1 Mode Share
Non Residential Travel Plans	<ul style="list-style-type: none"> Development of detailed measures and initiatives for each land use 	T1 Mode Share T2 Reduced traffic

Measure	Elements	Contribution to Travel Plan Target
		generation T3 School mode share
Parking Strategy	<ul style="list-style-type: none"> Provision of parking below the maximum CDC standards 	T2 Reduced traffic generation
Car Club	<ul style="list-style-type: none"> Set up of a car club and provision of marked spaces at a ratio of one per 100 homes 	T2 Reduced traffic generation T4 Reduced emissions
Eco Vehicles	<ul style="list-style-type: none"> Installation of electric charging points on request by residents and consideration of free electricity for charging Special deals for the purchase of electric vehicles 	T4 Reduced emissions
Car Sharing	<ul style="list-style-type: none"> Promotion of car sharing initiatives 	T2 Reduced traffic generation
Providing High Quality Public Transport		
Provision of a Frequent Bus Service	<ul style="list-style-type: none"> Bus service at 15 minutes frequency between the development and the town and rail stations by full build out of the development rising to every ten minutes subject to viability 	T1 Mode Share T2 Reduced traffic generation
Bus Infrastructure	<ul style="list-style-type: none"> Provision of bus stops with shelter, seating, real time information and cycle storage at intervals of no more than 800m within the development 	T1 Mode Share T2 Reduced traffic generation
Rail Services and Infrastructure	<ul style="list-style-type: none"> Significant increase in attractiveness of rail services to Oxford and London being delivered by Chiltern Railways through Evergreen3 East-West rail link will offer new journey opportunities to Milton Keynes, Cambridge etc. Provision of additional cycle storage at rail stations 	T1 Mode Share T2 Reduced traffic generation
Providing High Quality Walking and Cycling Infrastructure		
Internal Connections	<ul style="list-style-type: none"> Network of high quality walking and cycling routes – commuter and leisure routes New connection under the railway between the eastern and western halves 	T1 Mode Share T2 Reduced traffic generation

Measure	Elements	Contribution to Travel Plan Target
	of the Masterplan	
External Connections	<ul style="list-style-type: none"> ▪ Upgrade of the route alongside the railway from Lord's Lane to Banbury Road as a surfaced cycleway and footpath; ▪ Improvements along Banbury Road, some of which are being delivered as part of the Exemplar development; ▪ Minor improvements to the existing cycleway on the south side of Lord's Lane to remove vegetation that impacts on feelings of personal security for users; ▪ Improvements to the routes through Bure Park to encourage their use as leisure walking and cycling routes. 	<p>T1 Mode Share</p> <p>T2 Reduced traffic generation</p>
Cycle Parking	<ul style="list-style-type: none"> ▪ Provision of cycle storage for residents in line with Code for Sustainable Homes ▪ Provision for non-residential uses above CDC standards 	<p>T1 Mode Share</p> <p>T2 Reduced traffic generation</p>
Cycle Purchase/ Hire	<ul style="list-style-type: none"> ▪ Offering of cycle purchase incentives ▪ Promotion of Cycle to Work scheme ▪ Promotion of, and potential support for bike loan scheme 	<p>T1 Mode Share</p> <p>T2 Reduced traffic generation</p>
Cyclist Facilities	<ul style="list-style-type: none"> ▪ Provision of showers and locker facilities within the main non-residential uses or shared between premises 	<p>T1 Mode Share</p> <p>T2 Reduced traffic generation</p>

5 Travel Plan Management

5.1 Overview

In order to be successful in achieving the targets, the Framework Travel Plan for the development will require a management structure to develop, implement and communicate measures. The Travel Plan for the Exemplar Site is being managed by a travel plan co-ordinator who is likely to also have responsibility for other green initiatives. Application 1 sits within the overall NW Bicester Masterplan. It would be appropriate for the Application 1 Framework Travel Plan to be managed in the same manner as the Exemplar to give consistency to the NW Bicester development. It would also be advantageous for there to be a shared Travel Plan Co-ordinator and Travel Plan Group for the whole Masterplan site, with representatives from each of the separate developments comprising NW Bicester.

5.2 Travel Plan Co-ordinator

In order to become more than just a document, all Travel Plans require an 'implementer', often referred to as the Travel Plan Coordinator (TPC). The availability of dedicated staff time and resources is essential.

A good development related Travel Plan provides sufficient information to the planning authority regarding the level of staff time and resources which would be available for plan development, implementation, monitoring and review. This enables all parties to check that the proposed programme and scope of measures is realistic and achievable.

For the Application 1 development, it is proposed that one member of staff will be employed part time as a Travel Plan Coordinator. If the development was a standalone site of 2,600 homes the role would need to be full time, but there would be significant savings of time and resources, and benefits to the implementation of travel planning measures across the Eco-Town as a whole, by sharing co-ordination in NW Bicester. The TPC for the Exemplar is to be employed for a period of 17 years and it would be appropriate for the Application 1 role to be of a similar timescale, reaching from achieving consent until 2032.

The TPC would assist in establishment and formation of the Travel Plan Group and in working-up a full implementation programme and monitoring strategy. He/she would also be responsible for building the necessary partnerships and delivery of site-wide initiatives such as an appropriate website and a car-sharing database. These would be developed in conjunction with the Travel Behaviour Campaign for Bicester to reinforce the same standards and approach.

The TPC would play an essential role in the development and success of sustainable travel measures, particularly in the development and delivery of area wide initiatives and promotional activities designed to raise awareness of the Travel Plan and its aims and objectives and will need to be involved prior to first occupation.

The key tasks of the TPC would be:

- To lead and manage the development and implementation of the site-wide travel plan;

- To act as a central point of contact for all site occupiers and external stakeholders in relation to the Travel Plan Framework;
- To implement the monitoring plan set out within the monitoring strategy;
- To implement and manage the data collection procedures as set out in the monitoring strategy;
- To take responsibility for raising awareness of and championing sustainable travel issues;
- To promote schemes and events which encourage walking, cycling and the use of public transport along with the reduction of the use of the private car;
- To represent the 'human face' of the travel plan and the TPG - explaining its purpose and the opportunities on offer;
- To build and nurture the necessary partnerships required for Travel Plan implementation and success;
- To promote and market the TPG to wider audiences;
- To deliver and/or manage, procure and/or oversee delivery of site-wide travel plan measures;
- To keep abreast of developing travel plan techniques;
- To regularly review and evaluate both the travel plan and the operation of the TPG and to provide feedback to the planning and the highway authority via meetings and/or other channels;
- To prepare progress reports, action plans and budgets for the travel plan aimed at best meeting its objectives and targets; and
- To liaise with the Employment, School and Residential Travel Plan Representatives to ensure coordination of measures and monitoring in order to maximise effective Travel Planning.

5.3 Travel Plan Group

A Travel Plan Group (TPG) could be established to provide a framework for the implementation of travel planning measures at the site, including representatives of all of the land uses. The TPG would be led by the site-wide Travel Plan Coordinator. Where there may be various developers engaged in taking forward the site, these would each be represented on the group.

The TPG could be a private, non-profit making organisation with a remit to promote sustainable travel. Each occupier of the non-residential uses (with more than 10+ employees) within the site would be expected to appoint a representative to the TPG.

Roles that the TPG could undertake are likely to include:

- **Consultants:** provide transportation advice and technical support for programmes that can be implemented collectively or by individual occupiers.
- **Providers of information:** The information might relate to transportation issues, local requirements, regulations and the availability of services;
- **Forum for consensus:** Where consensus is built between members this can empower the TPG membership to act effectively and speak with one voice. For example, a coordinated approach can be made to public transport providers to extend routes or increase services to accommodate the needs of the localised

community. By acting jointly, the TPG can prepare an evidence base to support such improvements;

- **Advocacy Role:** addressing transportation issues within various venues, such as participation in local transport planning and economic development processes; and
- **Educator:** The TPG can serve as an educator to benefit a broad audience of employers, developers, public agencies, residents and customers about the nature of transport problems that exist in an area.

The TPG would provide a good mechanism for forming and nurturing partnerships and for amending strategies and expectations in an accountable manner.

6 Monitoring and Review

6.1 Overview

It is recognised that effective monitoring is critical in determining the success of a Travel Plan, especially when targets have been agreed for the proportion of trips by different forms of travel. Furthermore, it is deemed appropriate to split monitoring up into three separate categories:

- **Monitoring** – this would be undertaken by a Travel Plan Coordinator to ensure appropriate implementation of the Travel Plan for a range of land uses;
- **Review** – a process that would be conducted by the Travel Plan Coordinator to manage and monitor progress. It is assumed that there would also be input from Travel Choice officers from the local authority; and
- **Assessment** – independent analysis of the Travel Plan to ensure trip rate and targets for different forms of travel are being met (perhaps through the use of i-trace or TRICS SAM procedures).

This section provides initial suggestions for monitoring and review but this will be agreed in detail for the final Travel Plan which will be approved prior to occupation.

6.2 Monitoring Timeframe

It is anticipated for the purposes of the Travel Plan that development of the Application 1 Site will begin on site in 2019 and would be completed by 2031.

It is suggested that Travel Plan monitoring could commence on occupation of the 50th unit of the site and be reported until a point one year following the completion of the development (i.e. 2032).

In terms of relating the mode share targets to the suggested monitoring timeframe, as identified above, year-on-year mode share targets would be calculated in proportion to the reduction in car use target that has been established for 2031.

In addition, it is proposed that future occupiers of the non-residential elements of the Exemplar Site would conduct baseline surveys within 3 months (of occupation) and have a workplace travel plan strategy in place within 6 months of occupation. Once the 'main' monitoring is triggered, then non-residential workplace monitoring should coincide with that.

6.3 Monitoring Mechanisms

Monitoring of the Travel Plan will be essential to gain an understanding of the effectiveness of the Travel Plan initiatives in achieving the objectives and targets for the development. Indicators will be established prior to the baseline monitoring and data will be collected by the following:

- Ongoing measurement of walking and cycling on the main connections through the development by use of permanent counters;

- Ongoing measurement of traffic entering and leaving the site through each of the three additional access points (there will already be monitoring of the Exemplar site accesses) by the placement of permanent loops in the carriageway; and
- Monitoring of total trips generated, mode share for each land use and emissions of car owned on site on a bi-annual basis through:
 - Household travel diaries;
 - Employee travel plan questionnaires.
- Monitoring of total trips generated and modal share for the school through and annual hands-up survey and staff questionnaire.

Details of data collection procedures to inform the Travel Plan Monitoring Strategy will be established in the Final Travel Plan.

Independent Monitoring

The Development Site could be subject to appropriate independent monitoring (overseen by the Travel Plan Coordinator), although it should be noted that it will be difficult to distinguish between Exemplar Site and Application 1 Site people and traffic generations, as well as that from other developments. Despite this, it is possible that the iTRACE or TRICS Standard Assessment Monitoring (SAM) procedures could be utilised to monitor the travel generating nature of the Exemplar Site.

For clarification, iTRACE is an innovation in Travel Plan Management Software that provides a centralised software suite designed to monitor and report on the performance of Travel Plans, offering quicker, easier Travel Planning, Assessment, Auditing and Forecasting. Furthermore, the new web-enabled version of iTRACE means that there is no software to install.

The TRICS SAM procedure has been developed as a system of monitoring and assessing the effectiveness of travel plans. It uses long established TRICS methods of multi-modal data collection enhanced with comprehensive information on travel plan details to produce robust travel plan survey results. It is therefore considered that the iTRACE and TRICS SAM procedures could be an appropriate and unbiased means of monitoring the travel generating nature of the development.

6.4 Monitoring & Reporting

A monitoring report would be produced annually by the Travel Plan Co-ordinator and submitted to the Travel Behaviour Team at OCC. The monitoring report would enable the site travel plan group and OCC to ascertain whether the indicators are working towards targets. The report will contain the data collected from the four means set out above and will analyse achievement of each of the targets of the Travel Plan, together with the following:

- Details of progress made since the submission of the previous report. This could include details of measures which have been implemented and details of any other changes which have occurred over the time period which are significant to the Travel Plan (e.g. a rise in the number of residents and staff at the site);
- A summary of the monitoring results. As a minimum this would include the results of the travel survey, however where applicable it may include the results of surveys undertaken of cycle parking usage, traffic counts at the access point/relevant junctions, review of bus patronage.

- An assessment of whether Travel Plan indicators or targets (depending on year) are on track to be met. If the results show that targets are not likely to be met either due to negative shifts in modal shares or little movement from the previous survey, it should be considered as to whether it is appropriate to implement remedial measures at this stage; and
- An identification of actions and priorities for the forthcoming year should be outlined which explains what actions are to be undertaken to help meet the targets contained within the Travel Plan.

6.5 Remedial Actions

In the event that the Travel Plan is shown to be underachieving on the indicators, remedial action is likely to be required to be taken to put more resources into the 'softer measures' and help to get the Travel Plan 'back on track'. If in Year 5 the target has not been met then OCC are likely to seek additional contributions towards sustainable travel measures, and again at intervals until 2032.

The measures that are appropriate would be reviewed in consultation with Oxfordshire County Council, Cherwell District Council and the Highways Agency. If required, these will be modified or implemented more stringently. The achievement of the target for lower, average trip rate traffic generation may be used to govern the extent of any contributions to improvements to J9 and J10 of the M40.

7 Action Plan

As set out in Section 4.7 and Table 4.6, a series of measures have been set out to meet the objectives and targets established in Chapter 3 of this Framework Travel Plan. Table 7.1 provides an action plan for the measures with responsibilities, and indicative timescales against each action.

These will be confirmed for the final Travel Plan that will need to be agreed prior to first occupation

Table 7.1: Action Plan

Measure	Elements	Responsibility	When
Containment of land uses	<ul style="list-style-type: none"> Achieving the mix of housing, employment, education, retail and social and community uses 	Site developer	By 2031 but in line with agreed provision of education and social and community uses
Working from Home/ locally	<ul style="list-style-type: none"> High level broadband provision Employment space within the development plus range of facilities providing jobs 	Site developer	Broadband by 1 st occupation. Employment space by 2031 and other uses in line with agreed provision of education and social and community uses
Branding and Marketing	<ul style="list-style-type: none"> Branding as NW Bicester In home information system Wide range of means for information provision 	Site developer Travel Plan Co-ordinator (TPC)	Prior to first occupation and continuing during build out
Travel Awareness	<ul style="list-style-type: none"> Promoting travel awareness initiatives to site residents, pupils and employees 	TPC	Throughout life of Travel Plan
Personalised Travel Planning	<ul style="list-style-type: none"> Personalised travel planning service to all new residents and employees 	TPC	Throughout life of Travel Plan
Promoting Cycling	<ul style="list-style-type: none"> High quality infrastructure for cycling Creation of cycling identity Resident and employee incentives Cycling club Sales and marketing initiatives 	Site developer TPC	Prior to first occupation and continuing during build out
Non Residential Travel Plans	<ul style="list-style-type: none"> Development of detailed measures and initiatives for each land use 	TPC and TPG, Future occupiers	Prior to occupation of non-residential land uses
Parking Strategy	<ul style="list-style-type: none"> Provision of parking below the maximum CDC 	Site developer	Throughout life of Travel Plan

Measure	Elements	Responsibility	When
	standards		
Car Club	<ul style="list-style-type: none"> Set up of a car club and provision of marked spaces at a ratio of one per 100 homes 	Site developer TPC	Prior to 50 th occupation or from 1 st occupation if already established for Exemplar development
Eco Vehicles	<ul style="list-style-type: none"> Installation of electric charging points on request by residents and consideration of free electricity for charging Special deals for the purchase of electric vehicles 	Site developer TPC	From 1 st occupation
Car Sharing	<ul style="list-style-type: none"> Promotion of car sharing initiatives 	TPC	Throughout life of Travel Plan
Provision of a Frequent Bus Service	<ul style="list-style-type: none"> Bus service at 15 minutes frequency between the development and the town and rail stations by full build out of the development rising to every ten minutes subject to viability 	Site developer	From point of occupation to be agreed with OCC. Half hourly service to be provided from 50 th occupation.
Bus Infrastructure	<ul style="list-style-type: none"> Provision of bus stops with shelter, seating, real time information and cycle storage at intervals of no more than 800m within the development 	Site developer	During construction of primary roads
Rail Services and Infrastructure	<ul style="list-style-type: none"> Significant increase in attractiveness of rail services to Oxford and London being delivered by Chiltern Railways through Evergreen3 East-West rail link will offer new journey opportunities to Milton Keynes, Cambridge etc. Provision of additional cycle storage at rail stations 	Off-site contribution from site developer OCC/ Off-site contribution from site developer	At occupation level – to be agreed
Internal Connections	<ul style="list-style-type: none"> Network of high quality walking and cycling routes – commuter and leisure routes 	Site developer	As phases of site are developed

Measure	Elements	Responsibility	When
	<ul style="list-style-type: none"> New connection under the railway between the eastern and western halves of the Masterplan 		
External Connections	<ul style="list-style-type: none"> Upgrade of the route alongside the railway from Lord's Lane to Banbury Road as a surfaced cycleway and footpath; Improvements along Banbury Road, some of which are being delivered as part of the Exemplar development; Minor improvements to the existing cycleway on the south side of Lord's Lane to remove vegetation that impacts on feelings of personal security for users; Improvements to the routes through Bure Park to encourage their use as leisure walking and cycling routes. 	OCC/ Off-site contribution from site developer	Earliest opportunity subject to feasibility and deliverability
Cycle Parking	<ul style="list-style-type: none"> Provision of cycle storage for residents in line with Code for Sustainable Homes Provision for non-residential uses above CDC standards 	Site developer	From 1 st occupation
Cycle Purchase/ Hire	<ul style="list-style-type: none"> Offering of cycle purchase incentives Promotion of Cycle to Work scheme Promotion of, and potential support for bike loan scheme 	TPC in partnership with local businesses	Throughout life of Travel Plan as required to meet targets for cycle use
Cyclist Facilities	<ul style="list-style-type: none"> Provision of showers and locker facilities within the main non-residential uses or shared between premises 	Site developer Future occupiers	From 1 st occupation of each premise

