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# Economic Impact Assessment of the Cycle Enfield Scheme on the A105 Corridor Towns Centres

A Final Report by
Regeneris Consulting

Enfield Council

# Economic Impact Assessment of the Cycle Enfield Scheme on the A105 Corridor Towns Centres

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# 1. Introduction

1.1 Regeneris Consulting and JMP were appointed by Enfield Council to undertake an economic impact assessment of the Cycle Enfield scheme on the economic vitality of nine town and local centres across the London Borough of Enfield.

1.2 The Cycle Enfield scheme aims to encourage more people to use bicycles instead of cars in Enfield. At the heart of the plans are proposals for segregated cycle lanes along three main road corridors through the borough – the A1010, A105 and A110. These routes pass through nine key centres in the borough: Enfield town, the district centres of Palmers Green, Edmonton Green and Angel Edmonton, and the local centres of Winchmore Hill Broadway, Winchmore Hill Green Dragon, Enfield Wash and Enfield Highway.

1.3 Retail and other businesses in these centres rely on the spend of visitors to the centres who travel in by a range of transport modes, including walking, cycling, public transport and private car. The design changes to town centres proposed under Cycle Enfield may affect the extent to which visitors by different modes of transport use the centre in the future. This report provides an assessment of the extent of these effects and their overall impact on the economic vitality of each centre.

1.4 The Cycle Enfield scheme is being developed in four phases. This report relates to the first phase covering Palmers Green, Winchmore Hill Broadway, and Winchmore Hill Green Dragon.

## Town Centres Context

### The Economic Role of Town Centres

1.5 Town centres plays an integral role in the functioning of local economies. As well as providing the focal point for convenience and comparison retail spending, they are leisure and recreation destinations, community hubs and places to work and live.

1.6 In recent years, there has been an increasing policy emphasis on town centres at both the national and local level. Much of this policy emphasis reflects the recognition that town centres are facing multiple economic challenges. Understanding High Street Performance (BIS, 2011) notes, for example, that recent years have witnessed a decline in the economic performance of high streets and town centres throughout the UK. Challenges faced by town centres are multi-faceted and include:

- **A struggling economy** – UK consumers are still struggling after the previous recession, with higher taxes, tighter lending restrictions and high house prices, all of which have reduced their disposable incomes.
- **An ageing society** – the number of older people wanting to access town centres will increase and may have differing needs and purposes, creating changing demands that town centres will need to respond to eg increasing demand for health facilities, need for enhanced accessibility.
- **A technologically driven consumer and economy** – the rise of the UK online retail sector, the largest and most mature in Europe, has experienced significant growth over the last decade. The Internet is increasingly used for bargain hunting and discount dealing, a trend expected to continue for the foreseeable future. The greatest threat for traditional retail, and not just town centres, is the trend for using the Internet to search for the best deals. Small independent stores on the high street are unable to compete with larger businesses

specialising in the sector, with large warehouses. The rise of m-commerce (mobile phone shopping) also increases the accessibility of shopping for people, which reduces their need to shop at local town centres.

- **Rising transport costs** – longer term trends of higher fuel and transport costs discourage people from visiting their town centres. Rising public transport costs and relatively high fuel costs (relative to other goods and services) discourage people from driving their own car, or taking public transport, which limits the distance they are able to travel to shop.
- **The rise of out-of-town shopping centres** – out-of-town shopping centres and retail parks are a real challenge to town centres, as these provide large amounts of parking and a wide range of shops all on one premises. Examples near to Enfield include Brent Cross, Westfield Stratford and the A10 Retail Park.

1.7 These challenges are recognised at national and local levels, and a raft of work has been done to analyse how town centres can be supported and how they might need to change eg the Portas Review (Portas, 2011), Understanding High Street Performance (BIS, 2011) and Reimagining the High Street (New Economics Foundation, 2012).

1.8 Within London:

- The Greater London Authority set out the need for town centres to "fundamentally rethink themselves: they must move away from being strictly retail focussed and become dynamic centres that can serve local communities with a unique and diverse offering of retail, public and community services, leisure, and housing" (*Future of London's Town Centres,* 2013)"
- The Outer London Commission highlight the important role that vibrant high streets play in supporting Outer London's town centres and the need for partnership working and imaginative measures to enhance the quality of town centres and their offers ('Mayor's Outer London Commission Report', 2010).

## The Enfield Town Centre Context

1.9 LB Enfield has a relatively large network of town and local centres, including one major centre (Enfield Town), four district centres (including Edmonton Green, Palmers Green, and Angel Edmonton covered in this study) and numerous local centres and smaller local parades (including Winchmore Hill Broadway, Winchmore Hill Green Dragon, Enfield Wash and Enfield Highway covered in this study).

1.10 Reflecting national and London-wide policy, LB Enfield places a high value on supporting the vitality and viability of these centres, particularly through the policies set out in its Core Strategy (LB Enfield, 2010).

1.11 To further improve the resilience of Enfield's town centres, the Council has established a 'Framework for the Management of Town Centres' (LB Enfield, 2014) which seeks to build on the strength of existing relationships with businesses, service providers and communities, and review how Enfield's town centres could be managed in the future. The council's objectives are to:

- Harness and empower the local community, voluntary, public and private sectors to further develop town centres.
- Embrace partnership in all its forms for the benefit of centres and for those who live, work, play and visit them.
- Innovate and be creative with the future direction of centres.
- Promote inclusive models of governance, enabling all stakeholders to shape town centres.

# The Cycle Enfield Scheme

1.12 In March 2014, LB Enfield was chosen as one of three outer London boroughs to be awarded £30m of new funding from the Mayor of London's Mini-Holland fund.

1.13 The Mini-Holland scheme aims to encourage more people to cycle, more safely and more often while providing better streets and places for everyone, by creating places dominated by people, not motor traffic. The programme specifically focuses on areas where people make short car journeys in outer London that could be cycled easily instead.

1.14 The Cycle Enfield proposals comprise a programme of physical changes to nine town and local centres across Enfield, targeted at improving conditions for cycling. The main proposals in the Cycle Enfield programme include:

- Creating a pedestrian friendly environment on Church Street, Enfield by removing through traffic and installing separate bus and cycle lanes.
- Converting the Edmonton Green Roundabout into a Dutch Style Roundabout with separate lanes for cycles.
- Introducing segregated cycle lanes along the A1010, A105 and A110.
- Developing a network of Quietway and Greenway routes across the whole Borough.
- Developing Cycle Hubs at Enfield Town and Edmonton Green Train Stations.
- Providing support for residents who want to take up cycling with free bike loans and residential cycle parking.
- Involving the local community in the design of all schemes, particularly those in residential streets.

1.15 The development of the scheme has involved the following steps to date:

- Submission of Cycle Enfield Bid Document: December 2013
- Award of Funding: March 2014
- Production of Designs: Completed July 2015
- Public Consultation on Stage 1, covering Palmers Green and Winchmore Hill: July to October 2015.

# Economic Impact Assessment Study

1.16 An economic impact assessment has been commissioned at this stage of the process to understand the impact that Cycle Enfield will have on the economic vitality of the nine town and local centres through which the scheme will pass. By undertaking the assessment at this stage, it has enabled a detailed analysis of impacts, based on review of the scheme designs, and an appreciation of the concerns raised through consultation with local business owners and residents.

1.17 The primary focus of the study is on the overall economic vitality of town centre businesses. It does not assess the economic impact on individual businesses.

1.18 The study is particularly designed to assess the risk of any unintended negative impacts of the scheme on the economic vitality of these centres. However, the aim of scheme planners is that n the longer term the scheme will have a positive effect on economic vitality, enhancing the attractiveness and character of the centres, making them less car dominated, and increasing footfall and spend in each centre.

1.19 The study has involved:

- Analysis of the design plans for the Cycle Enfield Scheme and site visits to the town and local centres with the design team to talk through the plans
- Analysis of consultation responses from the A105 Cycle Enfield proposals consultation process
- Analysis of a wide range of study reports undertaken, including modelled traffic flows, data on car parking, visitor survey evidence and town centre healthchecks
- Gathering and analysis of data relevant to economic performance and the factors affecting economic vitality, to be assessed in this study
- Analysis of evidence from other town centres, where available, to understand the impacts on town centre vitality of similar interventions
- Consultation with local authority officers and a selection of local businesses and other stakeholders closely involved with or interested in the proposals (both supportive and opposing the scheme)
- Development of assessment framework, and undertaking assessments, based on the full evidence gathered and analysed.
- Production of the assessment report.

# 2. Economic Impact Assessment Framework

2.1 This section sets out the methodology and framework developed for making the assessment of impact on economic vitality. The approach used is consistent across all of the town and local centres. This section sets out:

- How we define and measure impact on economic vitality
- The key factors that could affect this
- The methodology used to assess these factors
- How we define the magnitude of impacts
- Limitations of the analysis.

## Defining and Measurement of Economic Vitality of the Town Centres

2.2 There are numerous measures that help to capture aspects of town centre vitality, including vacancy rates, footfall counts, range of shops or business perceptions.

2.3 Ultimately however, there are two headline indicators which provide an overview of town centre economic performance, and are a function of all of the indicators above. These are:

- **Rental values of premises** – ultimately all of the factors reflecting quality of place, quality of premises, success of businesses and levels of demand for premises will be reflected in the rental value of premises in each town centre. This is increasingly the economic measure advocated by HM Treasury upon which economic impact can best be assessed and **is a long term indicator that Enfield Council can use to monitor economic vitality in each of their centres**. However, accessing up-to-date data and predicting change in this indicator is very challenging for this type of assessment, and so a second headline indicator is more useful:
- **Total turnover across town centre businesses –** this captures the sum of revenues generated across all town centre businesses, and can be estimated at a local level using a range of datasets which are updated at least annually. Predicting change in this indicator is also more feasible, as it is a direct product of footfall and spend in the centre. As such, **this is the primary indicator used for the purposes of the economic impact assessment.**

## Factors Affecting Economic Vitality and the Theory of Change

2.4 The factors affecting economic vitality of the town and local centres have been identified by analysing the detailed plans for each centre, reviewing consultation feedback and analysing case study evidence from other areas (set out in more detail in the individual assessment sections).

2.5 There are clearly many issues arising from the consultations which were considered in developing this framework, but not included. These were mainly:

- **Factors that did not relate to town centre economic vitality**
- **Factors that would not be significantly affected** eg while the assessment analyses change in visitors arriving by cycle, car and bus (all of which might be affected by the scheme) it

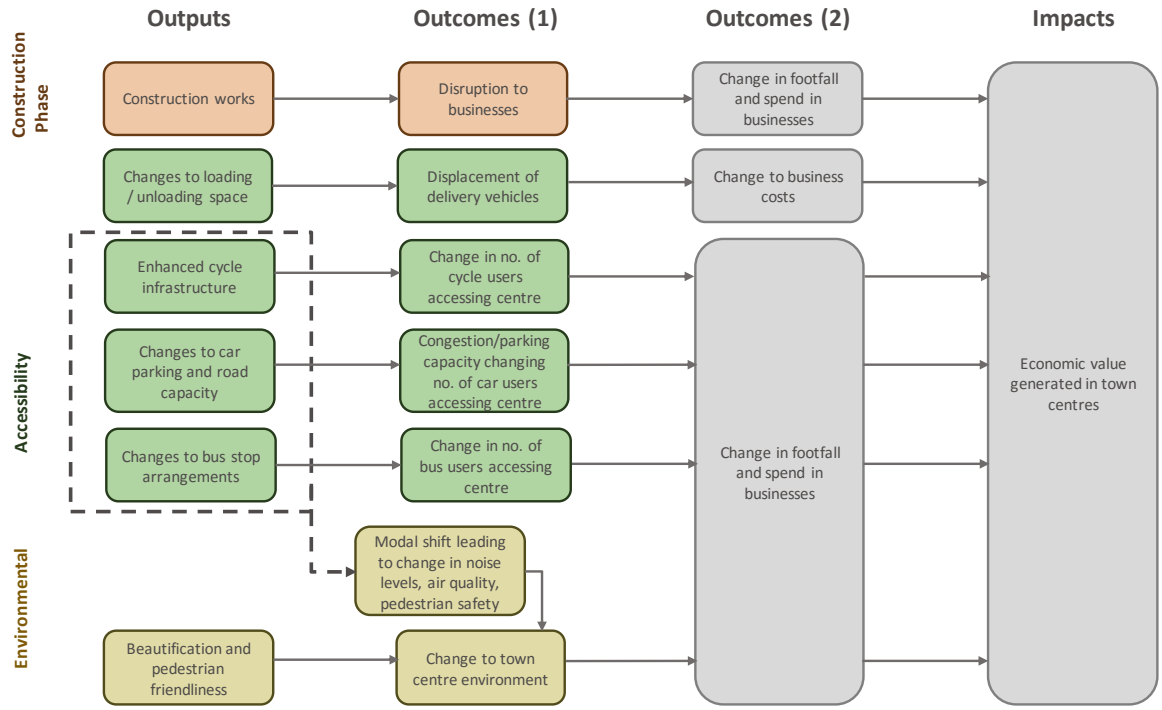
does not directly assess visitors arriving on foot, as there is little evidence that visitors arriving by this mode would be specifically affected by the scheme proposals (note however the effects on town centre environment describe impact across all visitors so would also incorporate visitors arrive on foot).

2.6 In each case, we have identified a clear logical link (a 'theory of change') between the output that would occur as a result of the Cycle Enfield scheme, and the way in which this transmits through to impact on economic vitality.

2.7 The chart below sets out these theories of change, connecting from outputs (the physical changes to the town centres), to outcomes (the effects of these outputs relevant to the economic impact assessment), to impacts (the changes we are ultimately interested in assessing).

2.8 Given the relative complexity, we have broken the outcomes stage into two linking sections.

Figure 2.1 Theories of Change




Source: Regeneris Consulting

# Methodology for the Economic Impact Assessment

2.9 The same methodology has been used in making the impact assessment for each town centre, following the steps below:

## 1. Developing a Baseline of Total Annual Town Centre Business Turnover

2.10 To understand the impacts of the Cycle Enfield scheme on town centre business turnover, it is necessary to develop a baseline of the number of trips and total spending of visitors to the town centre.

2.11 This poses a fundamental challenge, as there is no directly available data to measure the total number of customer trips to the town centre or how much is spent in local businesses. It has therefore been necessary to draw from the information and data that is available to estimate total trips and spending. There are three key sources that it is possible to bring together to produce these estimates.

1) The Cycle Enfield Town Centre Survey[1]

2) Estates Gazette

3) ONS Annual Business Survey.

### The Cycle Enfield Town Centre Surveys.

2.12 The Town Centre Surveys provide us with important information on the proportion of town centre visitors by transport modes used to reach the centre; the frequency of trips of visitors by each transport mode; and the average spending per trip by each transport mode.

2.13 As an example, the results from the town centre survey for Palmers Green are presented below.

Table 2.1 Results from Palmers Green Town Centre Survey

| | Car-driver | Car pass. | Bus | Rail | Cycle | Motor-cycle | Walk | Taxi |
|---|---|---|---|---|---|---|---|---|
| Percent share of visitors | 25.1 | 1.3 | 30.4 | 5.2 | 1.1 | 0.3 | 36.2 | 0.3 |
| Average trips per year | 161 | 202 | 166 | 172 | 134 | 52 | 189 | 156 |
| Average spend £s per trip | £27.54 | £9.63 | £19.34 | £22.05 | £23.00 | £5.00 | £15.84 | £5.00 |
| Average spend £s per year | £4,425 | £1,939 | £3,204 | £3,799 | £3,075 | £260 | £2,992 | £780 |
| Percent share of spending | 34.4 | 0.6 | 29.2 | 5.8 | 1.3 | 0.1 | 28.6 | 0.1 |

### The Estates Gazette estimates of employment numbers in local businesses.

2.14 The Estates Gazette database provides a directory of local business units by activity. This includes estimates of the number of employees in those business units.

2.15 The demand for employment in local business is derived from the demand for the goods and services sold by those local businesses ie the number of jobs in food & drink retail is determined by customers' spending on food and drink. This means that the employment numbers provide a means to estimate local spending.

2.16 To correspond with the spending information in the town centre surveys, the approach has identified employment in retail (ie all shops), and in high frequency consumer services such as restaurants, bars, hairdressers, gyms etc. in which people are likely to spend on a daily / weekly / monthly basis, and hence which are more directly affected by levels of footfall in the town centre.

[1] A representative survey of town centre visitors and spend was undertaken in 2015, in development of the Cycle Enfield scheme.

The analysis therefore does not include employment in town centres activities such as estate agents, funeral services, solicitors, dentists etc. in which the frequency of visits is low.

2.17 The results demonstrate almost 800 relevant jobs in the identified Palmers Green area. Over 250 of these are attributed to a local supermarket, some 200 jobs to smaller retail outlets, and almost 300 in restaurants and bars.

### The ONS Annual Business Survey statistics on turnover per employee.

2.18 The ONS Annual Business Survey 2014 provides UK-wide estimates of turnover and annual employment for retail sectors, restaurants, bars, and other local town centre services, and this enables calculations of the average turnover generated per job for each sector. This ranges from relatively low turnover per job activities such as hairdressing and bars, to much higher turnover per job in supermarkets, chemists, and retail of electrical equipment.

2.19 Combining the ONS results for turnover per job with the Estates Gazette estimate of employment means it is possible to provide estimates of total turnover generated for each activity.

2.20 Again, taking Palmers Green as an example, the table below presents the estimates of total annual turnover for these retail and service activities, which sums to £64.9 million.

Table 2.2 Palmers Green estimates of jobs, turnover per job, and total revenues

| | Local Jobs | Turnover per job | Estimate of Total Annual Town Centre Business Turnover |
|---|---|---|---|
| Retail Sale In Non-Specialised Stores | 270 | £135,000 | £36,411,000 |
| Retail Sale Of Bread, Cakes, Flour Confectionery etc. | 11 | £35,000 | £389,000 |
| Retail Sale Of Alcoholic And Other Beverages | 6 | £66,000 | £394,000 |
| Other Retail Sale Of Food, Beverages etc. | 9 | £66,000 | £591,000 |
| Dispensing Chemists | 26 | £126,000 | £3,284,000 |
| Retail Sale Of Cosmetic And Toilet Articles | 4 | £104,000 | £414,000 |
| Retail Sale Of Clothing | 2 | £91,000 | £182,000 |
| Retail Sale Of Footwear And Leather Goods | 16 | £80,000 | £1,287,000 |
| Retail Sale Of Furniture, Lighting Equipment etc. | 15 | £109,000 | £1,634,000 |
| Retail Sale Of Electrical Household Appliances | 11 | £146,000 | £1,606,000 |
| Retail Sale Of Books, Newspapers And Stationery | 38 | £70,000 | £2,642,000 |
| Other Retail Sale In Specialised Stores | 38 | £94,000 | £3,587,000 |
| Retail Sale Of Second-Hand Goods In Stores | 5 | £82,000 | £410,000 |
| Restaurants | 195 | £35,000 | £6,855,000 |
| Bars | 39 | £39,000 | £1,524,000 |
| Washing And Dry Cleaning | 6 | £47,000 | £284,000 |
| Hairdressing And Other Beauty Treatment | 63 | £26,000 | £1,628,000 |
| Physical Well-Being Activities | 34 | £52,000 | £1,781,000 |
| TOTAL | 788 | | £64,903,000 |

Source: Estates Gazette jobs, December 2015, ONS Annual Business Survey turnover per employee

### Setting the baseline

2.21 It is therefore feasible to combine the estimates of local turnover generated with the results of the Town Centre survey - that is to disaggregate the estimates of town centre business turnover by the information on the distribution of visits and spending by mode of transport.

2.22 A simplifying assumption that has been made here is that all turnover for these businesses is generated from physical visitor spend (eg no internet sales). If anything this assumption will lead

the assessment to overstate negative impacts, as any internet sales would be unaffected by physical changes that might affect footfall.

2.23 The results for Palmers Green are presented below.

Table 2.3 Baseline Estimates for Palmers Green

| | Annual Spend by Mode | Annual Trips by Mode |
|---|---|---|
| Car driver | £22,340,000 | 811,000 |
| Car passenger | £400,000 | 41,000 |
| Local bus | £18,960,000 | 981,000 |
| Rail | £3,740,000 | 169,000 |
| Cycle | £830,000 | 36,000 |
| Motorcycle | £50,000 | 10,000 |
| Walk | £18,540,000 | 1,171,000 |
| Taxi | £50,000 | 10,000 |
| **Total** | **£64,900,000** | **3,229,000** |

Source: Regeneris calculations

2.24 Using these baseline estimates, it is possible to assess the impact of changes in numbers of visitors by different mode of transport on overall town centre business turnover.

2.25 The same methodology has been used for each of the town and local centres covered in the study. The key baseline for each is set out in the baseline section for each town and local centre.

## 2. Analysis of Baseline Data and Evidence

2.26 This task involved drawing together further baseline evidence on the following, to aid the assessment of impacts:

- town centre area definition and number and breakdown of units
- performance data including vacancy rates and retail churn
- breakdown of visitors by primary reason for visit, arrival times in the town centre, mode of transport used by visitors and distance travelled to the centre
- competitor retail and service centre destinations.

2.27 These findings are set out in the baseline section for each town and local centre.

## 3. Analysis of Scheme Outputs (ie the design changes)

2.28 A detailed analysis of the design plans was undertaken as well as a site visit and consultation with a representative from the design team.

2.29 The current design plans and a summary of outputs are set out in the analysis for each town and local centre.

## 4. Assessment of Magnitude of Change in Outcomes

2.30 This task involved an assessment of the magnitude of change in key outcome indicators for each of the factors being assessed. The assessment drew on a wide range of available evidence, summarised for each factor in the table below.

Table 2.4 Evidence Used in Assessment of Outcomes

| Factor | Evidence |
|---|---|
| Construction Phase | • Nature of works and anticipated timescales<br>• Perspectives from Design team on construction approach options<br>• Experience of impacts from similar schemes elsewhere<br>• Consultation responses<br>• Distance to competitor retail and service centre locations providing alternatives for local visitors |
| Cycle Users | • Design changes and benefits for cycling<br>• Visitor survey evidence on proportion of people considering cycling and key constraints to them doing so at present<br>• Journey length to town centre and potential cycleable journeys<br>• Levels of cycling in other areas to benchmark against |
| Car Users | • Design changes and impacts on road capacity and parking space<br>• Modelling of stopping times throughout centres under new scheme<br>• Number and availability of car parking space on and off street, daytime and evening, both now and under the proposed schemes, and distribution of these across the town centres – drawing on various sources<br>• Information on where different town centre users park (eg whether people who visit to work / shop / access services are parking on or off street)<br>• Consultation responses |
| Bus Users | • Design changes and impacts on road capacity and bus stops<br>• Modelling of stopping times throughout centres under new scheme<br>• Consultation feedback<br>• TfL feedback on designs |
| Loading / Unloading | • Design changes and impacts on number and location of loading bays<br>• Consultation responses |
| Town Centre Environment | • Design changes and impacts on quality of environment and public realm<br>• Experience of impacts from similar schemes elsewhere<br>• Consultation responses |

2.31 Drawing on all of this evidence, an assessment of magnitude of change was made for each factor. Given the significant uncertainties involved in the scheme (see section below on data limitations), we made a base case assessment as well as 'worse case' and 'better case' assessments, in order to provide a realistic range and test impacts.

2.32 For each factor, and under each scenario (base case, better case and worse case), we provided an assessment of scale of impact based on a seven-point scale. The definition of these assessment levels related back to the impact on business revenues, as follows:

Table 2.5 Assessment Framework

| Assessment | Impact on Total Town Centre Business Turnover |
|---|---|
| Major Positive | Over 7% Increase in total town centre business turnover |
| Medium Positive | 3-7% Increase in total town centre business turnover |
| Minor Positive | 1-3% Increase in total town centre business turnover |
| Neutral / Negligible | +/- 1% of total town centre business turnover |
| Minor Negative | 1-3% Reduction in total town centre business turnover |
| Medium Negative | 3-7% Reduction in total town centre business turnover |
| Major Negative | Over 7% Reduction in total town centre business turnover |

2.33 The rationale for this quantification is as follows:

- On average, the retail sector in London spends 92% of turnover on employment and supply chain costs, leaving a maximum of 8% possible profit (Annual Business Survey, 2013). If town centre businesses on average lost 8% or more of annual turnover as a result of the scheme, many would see reduced profit margins (assuming some costs are fixed) and there is a risk that some may find their business to be no longer viable[2]. An expected decrease in annual turnover of over 7% is therefore set as a major negative impact.
- Medium and minor negative impacts are set at appropriate intervals beneath this (respectively 3-7% and 1-3%).
- Major, medium and minor positive impacts are based on equivalent increases in turnover (respectively an increase in turnover of over 7%, 3-7% and 1-3%).

## 5. Assessment of Impact on Total Annual Town Centre Business Turnover

2.34 This final stage involved drawing together all of the impacts from above to identify the net effect on total annual town centre business turnover.

2.35 To do this, we created a model, using the estimates of total annual town centre business turnover (explained at point 1 above) as the foundation, and adjusted assumptions on the number of visits by each transport user derived from the analysis of outcomes (point 4 above).

2.36 The assessments of the impacts of change are quantified and shown as a summary at the end of the assessment chapter for each town and local centre.

### Displacement

2.37 For the assessment of the spend generated by additional cycle users, it is assumed that the large majority of any change would simply be town centre spend that is displaced from other transport users (ie the majority of any new people cycling to the centre are assumed to be people who were previously visiting the town centre by car, bus, on foot, or by other means). It is assumed that:

- the change in transport mode used would not affect total annual spend in the town centre by those visitors
- as a conservative estimate, only 10% of additional cycle-user spend in the town centre constitutes new spend in the centre (for example people for whom enhanced cycle connectivity encourages them to visit and spend more in the centre).

### Policy On/Off Analysis and Timing of the Assessment

2.38 The assessment is based on how the present day baseline would be affected by changes set out in the Cycle Enfield scheme. It assesses "policy on" (ie Cycle Enfield scheme being in operation), versus "policy off" (the present day baseline). It does not set out impacts at different time periods (other than separating construction and operational stages). As a result the study may underestimate the potential for longer term positive impacts, if there is a significant uplift in the attractiveness of the town centre.

[2] Note: these figures represent the average across retail businesses in London. In practice, some businesses will be operating with a tighter profit margin and be more vulnerable to changes, while some will have higher profit margins and be less vulnerable.

## Limitations of the Analysis

2.39 It is important to highlight at this stage the limitations of this analysis undertaken in this study, and the uncertainties inherent in the assessments. The table below sets out some of these limitations, and which parts of our assessment they primarily impacted upon.

Table 2.6 Limiting Factors in the Assessment

| Factor | Description | Which Assessments Most Affected? |
|---|---|---|
| **Data limitations** | Constraints include:<br>• Lack of detailed footfall counts to help estimate total annual visitors to each centre<br>• Analysis of journeys to the town centre and modelling of how the targeted modal shift from cars to cycles set by Cycle Enfield will be achieved<br>• Detailed design plans for each centre (these will be undertaken at the next stage of the work) | All Assessments<br><br>Changes to Car and Cycle Visits<br><br>Primarily Changes for Car Users |
| **Design plans not yet being fully developed** | The scheme plans are not yet at detailed design stage and so some areas of our assessment have had to rely on best estimates or modelled scenarios. | Construction works |
| **Lack of UK Precedents** | There are no clear comparators for the scale of the mini Holland schemes in outer London boroughs, meaning no direct comparators against which assessments can be made regarding the likely impact on modal shift (particularly from cars to cycles). While schemes exist in other parts of the world, factors such as climate and cultural differences mean that their outcomes are not directly comparable for Cycle Enfield. | Car and cycle users, and town centre environment |
| **Phasing of Study** | The assessments for each road corridor (A105, A110 and A1010) are being undertaken separately, meaning that the assessment has not been able to analyse cumulative effects across all town centres. | Construction works |

### How we Have Responded to the Limitations

2.40 We have responded to the limitations outlined above by incorporating two main approaches in the study:

- Firstly, we have set out **three scenarios for each assessment**: a base case which sets out the most likely impact, as well as better and worse case scenarios, which provide a realistic range of possible impacts and help test findings.
- Secondly, we have employed **conservative assumptions** at each stage, to ensure we are not overstating positive impacts or understating negative impacts.

# 3. Consultation Feedback on the A105 Scheme

3.1 The scheme design plans for the A105, including the corridors through Palmers Green and Winchmore Hill were made available for public consultation from July to October 2015. Participants were invited to state whether they supported the overall proposals, as well as give more detailed feedback. The relevant feedback for this study is shown in the table below.

Table 3.1 Public Feedback on A105 Scheme

| Public Consultation Feedback | | |
|---|---|---|
| **Consultees Supporting the Scheme** | **Consultees Partially Supporting the Scheme** | **Consultees Not Supporting the Scheme** |
| 835 people (51%) supported the overall proposals | 142 people (9%) partially supported the overall proposals | 640 people (39%) did not support the overall proposals |
| Amongst the most common responses made (relevant to this study) were the following (no. of responses in brackets):<br>• It will make cycling safer (201)<br>• It will create more attractive / liveable / improved town centres (99)<br>• It will improve air quality / reduce pollution / be more environmentally friendly (88)<br>• It will have a positive impact on passing trade / local shops / businesses (71)<br>• It will reduce congestion / improve traffic flow (58)<br>• It will be better / safer for pedestrians / more crossings / encourage more walking (51) | Amongst the most common responses made (relevant to this study) were the following (no. of responses in brackets):<br>• Concerns about bus lane arrangements at bus stops - bypasses and bus boarders (18)<br>• Impact on shops and businesses due to lack of parking (12)<br>• Concern about impact on congestion on main road / shopping streets (10) | Amongst the most common responses made (relevant to this study) were the following (no. of responses in brackets):<br>• Negative impact on shops and businesses (238)<br>• Impact on congestion (228)<br>• Concerns about bus stop arrangements – bypasses and boarders (122)<br>• Negative impact on air quality / air pollution (105)<br>• Impact on elderly people, people with a mobility impairment, people with young children (65) |
| **Specific Business Concerns**<br>A number of businesses raised specific concerns about impact on their firm, including:<br>• Concern about no allowance being made for goods to be delivered to the shop from their suppliers<br>• Risk of missing passing trade due to vehicles being unable to park outside, or turn down nearby side streets<br>• Concern that the loss of customer parking could lead to the demise of their business. | | |

3.2 In addition, a number of consultations with key local stakeholders was carried out as part of this study. The key views on the scheme, both positive and negative are shown in the table below.

3.3 A full list of consultees we spoke to directly is set out in Appendix A.

Table 3.2 Stakeholder Consultation Feedback for this Study

| Assessment Factor | Positive / Negative | Feedback |
|---|---|---|
| Construction Phase | + | • Construction phase may present training & employment opportunities for local people.<br>• Cycle route will enable more people to access opportunities by offering cheaper travel to work options. |
| | - | • Business concerns regarding the impact of the construction phase on businesses who already have tight profit margins. A 3-6 month construction phase could have a significant impact on businesses reliant on passing trade. |
| Car Parking | - | • The evening economy could be damaged with the loss of on-street parking (especially current single yellow line areas) and current closure of off-street car parks.<br>• Businesses are concerned that the car park at Winchmore Hill Broadway is used by commuters travelling into London, and therefore |

| Assessment Factor | Positive / Negative | Feedback |
|---|---|---|
| | | unavailable for local shoppers (note: LB Enfield is making changes to constrain use by commuters, freeing up space for town centre users). |
| Congestion | - | • There are concerns about congestion as a result of narrower lanes.<br>• In particular there could be traffic build-up if buses break down or eg the Esso petrol station / Travis Perkins builders merchant have lorries needing to pull in. |
| Bus Stops | - | • Some businesses raised concerns about the safety of pedestrians due to floating bus stops – with particular concerns for children and the elderly. |
| Loading and Unloading | - | • Loading is a concern for certain businesses. In Winchmore Hill Broadway in particular, several trade businesses do a lot of loading / unloading of heavy items into vans every day. Those on the west side of the road have concerns about their ability to transport bulky goods deliveries further away for loading. |
| Public realm changes | + | • An alfresco evening economy could develop, with cafes and restaurants able to open out onto the streets. |

## How Consultation Feedback Has Fed into the Report

3.4 The findings from the consultation set out above has helped to shape:

- The overall framework for the types of outputs and outcomes we should be exploring through the study (leading to the production of the theories of change chart at Figure 2.1).
- Concerns raised through consultation are addressed in the relevant assessment sections.
- Aspects of the individual assessments, for example understanding the perceptions of consultee respondents gives an insight into how the scheme would influence people's use of the town centre in the future.

## Local Survey of Shoppers undertaken by Town Centre Businesses

3.5 As part of the consultation and engagement with local stakeholders, we were provided with findings from a survey undertaken by 37 local retailers in Palmers Green and Winchmore Hill who simply asked customers to state what mode of transport they used to reach the town centre.

3.6 This locally undertaken survey was designed to test an assumption about the proportion of spend secured from car-user visitors, with many local businesses feeling that surveys typically understate the importance of spend from car users.

3.7 The findings show that 89% of all people visiting the shops had arrived in the town centre by car (87% in Palmers Green, 93% in Winchmore Hill): a figure far above that identified in other surveys.

3.8 In the table below, the Palmers Green results of the local survey conducted by town centre businesses are compared with findings from both the Visitor Survey conducted by LB Enfield, and a 2013 study of a range of outer London town centres conducted by TfL.

Table 3.3 Mode of Transport for Accessing Palmers Green

| Data Source | | Car | Bus | Train | Cycle | Walk | Total |
|---|---|---|---|---|---|---|---|
| Cycle Enfield Town Centre Survey | % | 26% | 30% | 5% | 1% | 38% | 100% |
| | No. | 170 | 190 | 30 | 10 | 230 | 630 |
| TfL Town Centre Survey** | % | 21% | 39% | 14% | 2% | 21% | 100% |
| | No. | 320 | 590 | 210 | 30 | 320 | 1,470 |
| Local Survey of Shoppers undertaken by Palmers Green businesses | % | 87% | 4% | 0% | 0% | 9% | 100% |
| | No. | 788 | 35 | 4 | 3 | 77 | 907 |

Source: Cycle Enfield Town Centre Surveys; TfL Town Centre Survey (2013)
N.B. ** = Average for Outer London Town Centres

3.9 While the findings of the surveys by LB Enfield and TfL are broadly comparable, the results of the local survey show an extremely different overview.

3.10 Although the local survey achieved a large sample size, we have significant reservations about the findings from this survey:

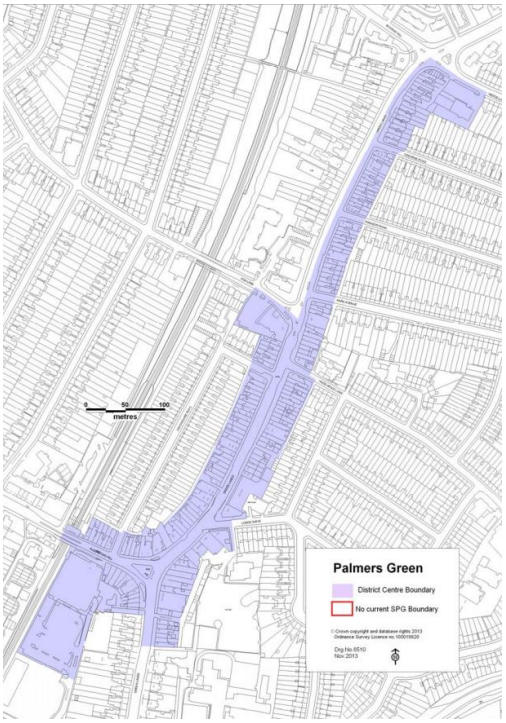
- It is unclear how respondents were selected and whether this may have favoured particular visitors eg visitors by car
- The survey was undertaken with a specific aim to demonstrate a high proportion of shoppers visiting by car, and was administered by individuals with an interest in delivering that outcome
- The extremely low number of shoppers visiting the centre by bus and on foot recorded in the survey findings is entirely at odds with the other survey data presented, and wider survey evidence from Census and the London Travel Demand Survey, which does not appear realistic.

3.11 In light of these concerns, the findings of the local survey have not be incorporated in the modelling of impacts.

# 4. Palmers Green Assessment

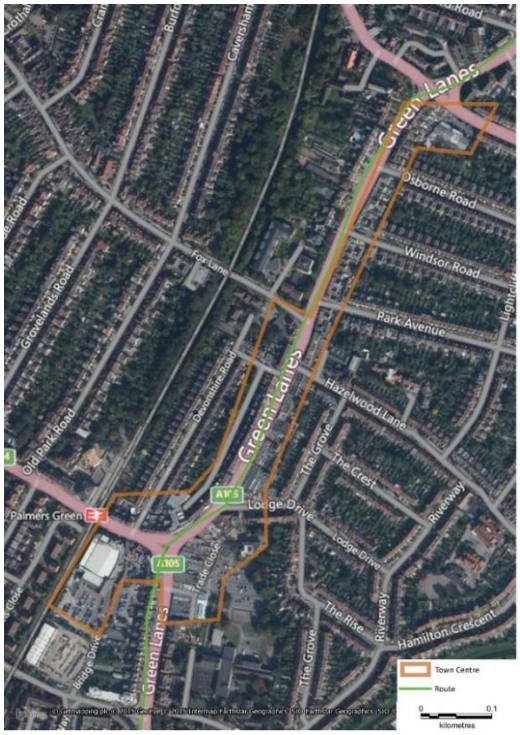
4.1 Palmers Green is designated as a district centre in the London Plan and Enfield's Core Strategy. It is situated in the south west of the borough on the A105 (Green Lanes). The following maps show the outline of the town centre boundary, and therefore the area this assessment will focus on.

Figure 4.1 Town Centre Boundary




Source: Enfield Local Plan: Town Centres Uses and Boundaries Review (2013)

Figure 4.2 Context Map




Source: Regeneris Consulting & Enfield Local Plan: Town Centres Uses and Boundaries Review (2013)

4.2 The table below sets out an overview of the current retail and services provided within the town centre, as well as equivalent data from 2005.

Table 4.1 Breakdown of Units in Palmers Green

| Type of Unit | Number of Units 2014 | Number of Units 2005 |
|---|---|---|
| **Comparison Retail** (includes a number of multiples including WH Smith, Hallmark Cards, Boots, QS Clothing and Clarkes Shoes) | 48 | 53 |
| **Convenience Retail** (includes Morrisons supermarket) | 20 | 14 |
| **A1 Services** (inc hairdressers, travel agents and other class A1 users not selling convenience / comparison goods) | 31 | 18 |
| **A2 Services** | 30 | 28 |
| **A3/A5** | 38 | 33 |
| **A4 Pubs and Bars** | 5 | 4 |
| **Vacant** | 2 | 18 |
| **Total Units** | 174 | 168 |
| **Total Active Units** (ie excluding vacancies) | 172 | 150 |

NLP, Enfield Retail and Town Centres Study, 2014

## Town Centre Performance

4.3 Town centre data reflects that **Palmers Green is a prosperous town centre**:

- **Vacancy rate is very low in the town centre**. Latest data from the Estates Gazette shows that in December 2015 there were 2 vacant units in Palmers Green, representing a vacancy rate of 1.1%. This compares well with the London town centre average of 7.8% and the national rate of 11.8% (Local Data Company, Vacancy Rate Report for Q2 2014).
- **There has been an increase of 22 active units between 2005 and 2014**, including the reduction in vacant units

4.4 The shops and services offered in Palmers Green change regularly. Palmers Green has a churn rate of approximately 12.6% of businesses ie one in eight units change user each year.[3]

## Total Town Centre Business Turnover

4.5 As described in the methodology section in Chapter 2, we have undertaken analysis to estimate the total business turnover generated by town centre businesses and the value of this turnover that is generated by visitors reaching the centre by different transport modes.

4.6 It must be noted that the figures set out here represent a best estimate, and are intended purely to be a sensible estimate of current town centre turnover in order to aid the quantification of impacts. As discussed in the data limitations section of Chapter 2, more accurate data on town centre business turnover is not available. These figures should therefore be regarded as indicative estimates.

4.7 Table 4.2 shows the overall proportion of visitors and spend by mode of transport used to reach the centre.

Table 4.2 Results from Palmers Green Town Centre Survey

| | Car-driver | Car pass. | Bus | Rail | Cycle | Motor-cycle | Walk | Taxi |
|---|---|---|---|---|---|---|---|---|
| Percent share of visitors | 25.1 | 1.3 | 30.4 | 5.2 | 1.1 | 0.3 | 36.2 | 0.3 |
| Percent share of spending | 34.4 | 0.6 | 29.2 | 5.8 | 1.3 | 0.1 | 28.6 | 0.1 |

Source: Palmers Green Town Centre Survey, Regeneris Calculations

4.8 Using the methodology set out in Chapter 2, Table 4.3 sets out an estimate of total town centre jobs supported and total business turnover in Palmers Green.

Table 4.3 Palmers Green estimates of jobs, turnover per job, and total revenues

| | Local Jobs | Estimate of Total Business Turnover |
|---|---|---|
| Palmers Green Businesses | 790 | £64,900,000 |

Source: Estates Gazette, December 2015; Annual Business Survey, 2014.

4.9 Drawing together the data from the two tables above (as set out in the methodology at Chapter 2), the table below sets out an estimated breakdown of total annual spend and annual visits made by mode of transport used to reach the centre.

[3] Based on Estates Gazette data (December 2015) on length of tenancy of businesses in current units.

Table 4.4 Annual Business Turnover and Visits by Mode of Transport

| | Value of Total Annual Business Turnover Spend by Mode | Annual Visits by Mode |
|---|---|---|
| Car driver | £22,340,000 | 811,000 |
| Car passenger | £400,000 | 41,000 |
| Local bus | £18,960,000 | 980,000 |
| Rail | £3,740,000 | 169,000 |
| Cycle | £830,000 | 36,000 |
| Motorcycle | £50,000 | 10,000 |
| Walk | £18,540,000 | 1,170,000 |
| Taxi | £50,000 | 10,000 |
| **Total** | **£64,900,000** | **3,229,000** |

4.10 For Palmers Green, the baseline provides estimates that of the £64.9 million of total annual turnover across all retail and high frequency consumer service businesses in Palmers Green:

- £23 million is derived from 850,000 trips from car users (drivers and some passengers).
- £19 million is derived from almost 1,000,000 trips by bus passengers.
- £18.5 million is derived from almost 1.2 million trips by pedestrians.
- At present, 36,000 cyclist trips account for around £800,000.

## Other Baseline Data to Aid Assessments

4.11 The charts below provide further useful evidence that is drawn on in the analysis in subsequent sections.

### Primary Reason for Visit

4.12 The table below sets out the main reason for visiting the town centre cited by visitors' spending money in the town centre, and a breakdown specifically for bus and car users, which are referred to in the subsequent analysis. The table also shows a sub-set of these trips which can be considered as non-discretionary trips (ie where the visitor could not easily visit an alternative location). The categories shown as non-discretionary are marked in the table.

Table 4.5 Main Reason for Visiting Palmers Green Town Centre

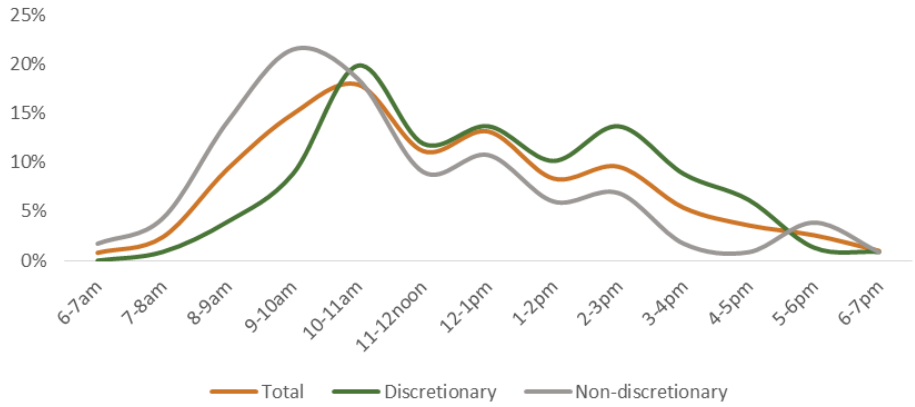
| Reason | Total (%) | Bus Users (%) | Car Users (%) |
|---|---|---|---|
| Shopping | 36% | 36% | 25% |
| Personal Business (eg banking, doctor visit) (*50% non-discretionary*) | 9% | 10% | 13% |
| Eating / Drinking / Recreation | 9% | 6% | 20% |
| Home (*non-discretionary*) | 14% | 6% | 5% |
| Normal Place of Work (*non-discretionary*) | 26% | 28% | 31% |
| Education (*non-discretionary*) | 1% | 2% | 0% |
| Visiting friends/family (*non-discretionary*) | 6% | 12% | 6% |
| Total | 100% | 100% | 100% |
| Total Non-Discretionary trips | 53% | 48% | 52% |

Source: Cycle Enfield Town Centre Surveys

## Arrival Times in the Town Centre

4.13 The chart below gives an indication of the arrival times of visitors to the town centre. While this data is limited by the timing of the survey being undertaken, the visitor survey fieldwork was carried out across all daytime hours, and so gives a useful indicative view of peak arrival times in the centre. It shows that discretionary visitors are much more spread out across the day, whereas discretionary visitors largely visit at the start of the day.

Figure 4.3 Arrival Time of Town Centre Visitors by Discretionary / Non-Discretionary Visits

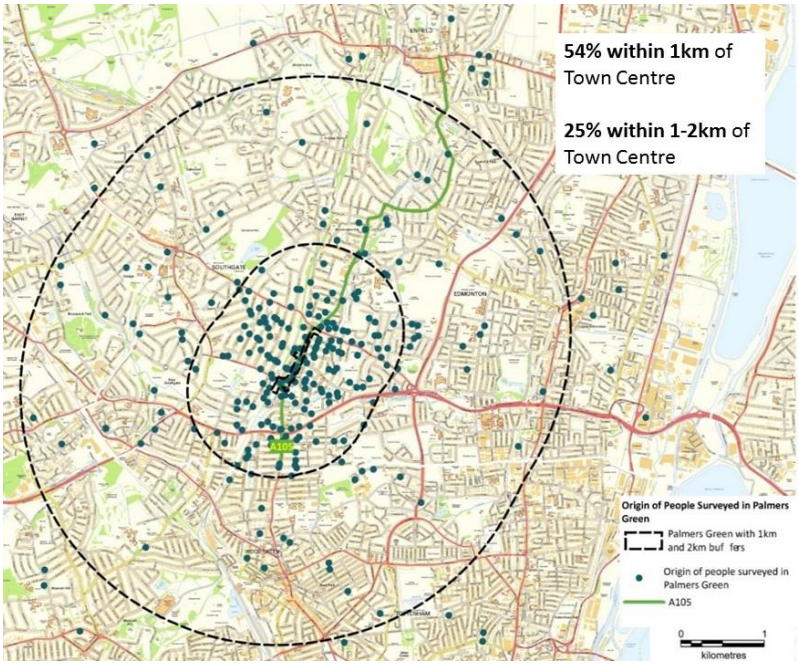



Source: Cycle Enfield Town Centre Surveys

## Distance Travelled to Visit Town Centre

4.14 The map below shows the distance travelled to the town centre by all respondents to the visitor survey.

Figure 4.4 Home location of visitors surveyed in Palmers Green




Source: Cycle Enfield Town Centre Survey

### Town Centre Car Parking

4.15 The table below sets out the breakdown of where car-user visitors parked their cars, broken down by type of visitor.

Table 4.6 Type of Car Park used by Main Reason for Visiting Town Centre

| Reason for Visiting Town Centre | Off Street | On Street |
|---|---|---|
| Shopping | 68% | 32% |
| Personal Business (eg banking, doctor visit) (*50% non-discretionary*) | 50% | 50% |
| Eating / Drinking / Recreation | 69% | 31% |
| Home (*non-discretionary*) | 50% | 50% |
| Normal Place of Work (*non-discretionary*) | 52% | 48% |
| Visiting friends/family (*non-discretionary*) | 37% | 63% |
| Total | **46%** | **54%** |

Source: Cycle Enfield Town Centre Surveys

## Alternative Retail and Service Destinations

4.16 The table below sets out an overview of key retail and service destinations which visitors to Palmers Green might consider as alternatives.

Table 4.7 Nearest Alternative Locations to Palmers Green

| Type | Name | Distance (miles) |
|---|---|---|
| Town centres | Winchmore Hill Broadway (Local Centre) | 1.2 |
| | Southgate (District Centre) | 1.5 |
| | Winchmore Hill Green Dragon (Local Centre) | 1.6 |
| | Wood Green (Major Centre) | 1.7 |
| | Enfield Town (Major Centre) | 2.9 |
| Out-of-Town Shopping Centres | Friern Barnet Retail Park | 2 |
| | Ravenside Retail Park | 3.2 |
| | Palace Gardens Shopping Centre | 3.3 |
| | Tottenham Hale Retail Park | 3.6 |
| | Enfield Retail Park | 4 |

Source: Regeneris Consulting.

N.B. Distances are the shortest walking routes from the Fox Lane / Green Lanes Roundabout

# Outputs – Physical Changes of Cycle Enfield Scheme

4.17 The key outputs of the Cycle Enfield scheme in Palmers Green are shown in the table below.

Table 4.8 Cycle Scheme Deliverables at Palmers Green

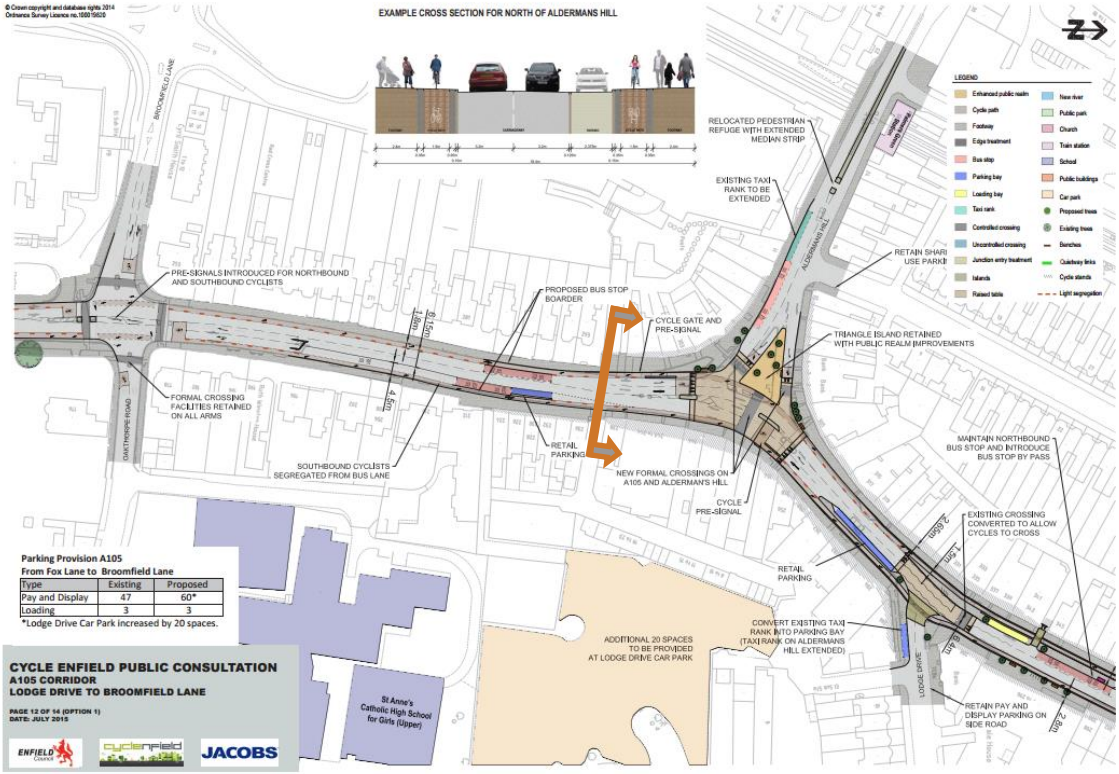
| | Key Output | Detail |
|---|---|---|
| **Construction Phase** | Construction works to deliver the elements of the scheme outlined below and overleaf | • Detailed plans for the construction phase yet to be developed; however, there is a headline expectation that the three A105 schemes will be delivered across a 6 month period, although the phasing of works within each town centre is currently unclear |

| | Key Output | Detail |
|---|---|---|
| Accessibility | Enhanced Cycle Infrastructure | • Segregated cycle lanes<br>• Junctions modified to improve safety for cyclists and pedestrians |
| | Changes to car parking and road capacity | • Loss of 17 parking bays along Green Lanes<br>• Additional 20 spaces to be provided at Lodge Drive Car Park |
| | Changes to bus stop locations | • 2 Northbound bus stops merged between Alderman's Hill and Fox Lane<br>• 1 Southbound bus stop relocated slightly further south. |
| | Changes to loading / unloading space | • 3 loading bays retained, some relocated. |
| Environ -mental | Beautification and Pedestrian Friendliness | • Junction entry treatment to slow cars<br>• Triangle island retained with public realm improvements |

Source: Regeneris Consulting based on Cycle Enfield Consultation Plans

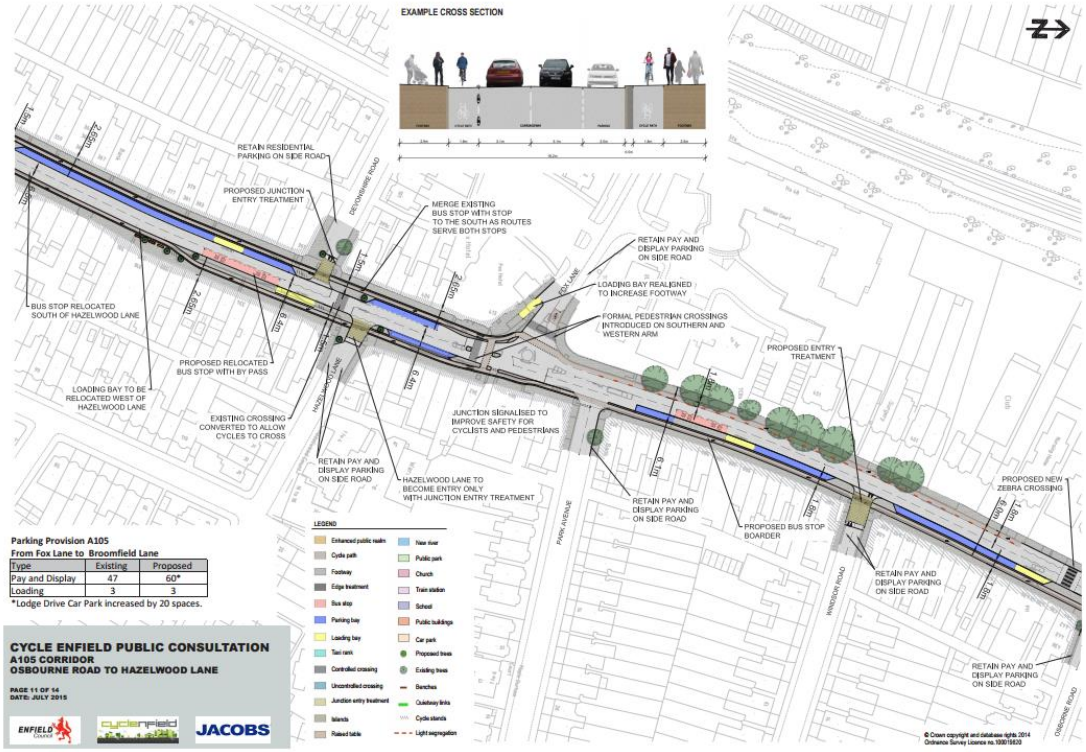
4.18 The diagrams show the original Cycle Enfield proposals for Palmers Green town centre used for consultation. Note: some factors shown in the table above have been updated since these original scheme plans.

Figure 4.5 Proposed Plans for Palmers Green (South)



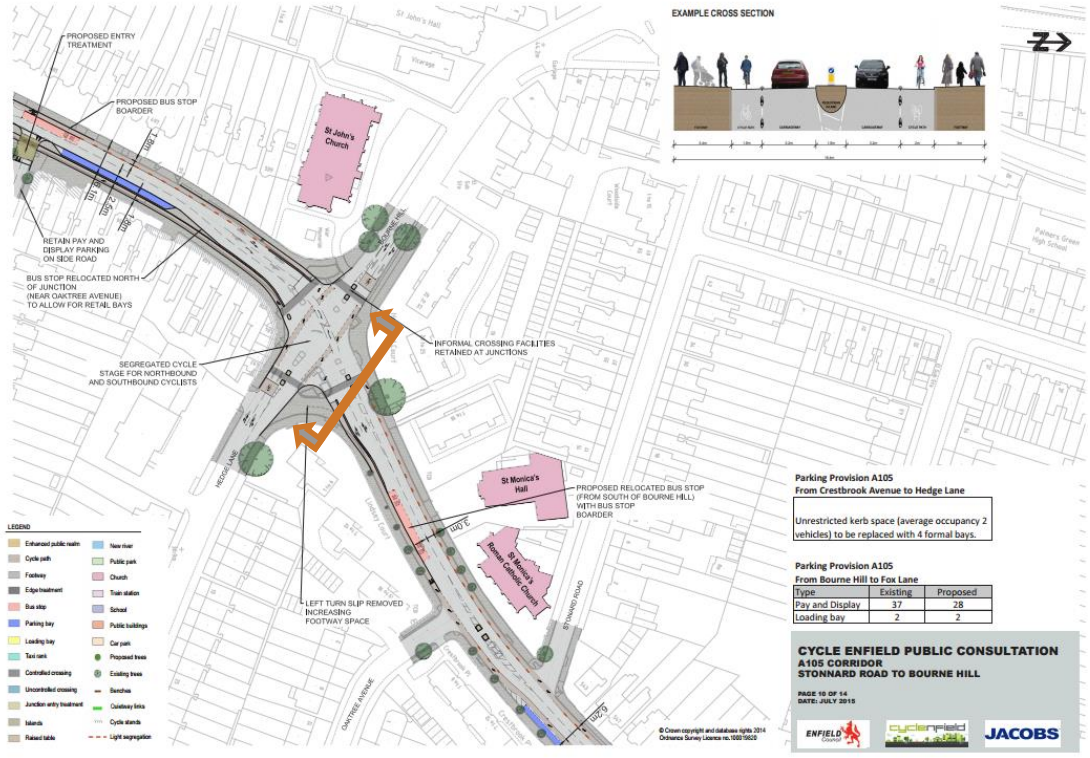

Source: Cycle Enfield Consultation Plans

Figure 4.6 Proposed Plans for Palmers Green (Middle)




Source: Cycle Enfield Consultation Plans

Figure 4.7 Proposed Plans for Palmers Green (North)




Source: Cycle Enfield Consultation Plans

# Construction Phase Impacts

## Overview

4.19 At this stage detailed plans for construction in each of the three A105 town centres are yet to be developed, and as such, the approach to construction phasing and specific approach both across and within the three A105 town centres is not known. The design team estimate the total construction period for the whole of the A105 Corridor Schemes is likely to be around 6 months.

4.20 Drawing on transport engineers within our team, we have modelled possible construction approaches in Palmers Green, summarised in the table below.

Table 4.9 Summary of Construction Options for Palmers Green

| Approach | Details | Possible Congestion Impact | Possible Parking Impact |
|---|---|---|---|
| Approach 1- one-way road access but access to businesses maintained | Modelled at a high level, this could include implementation of traffic management measures in short segments (of between 200 and 400m). This would be across a total length of carriageway of around 1.1km on the approaches and through Palmers Green. Temporary traffic lights would need to be introduced, meaning one-way working through the area of construction. The total duration of works is likely to be up to 12 weeks, with up to five or six different segments of work, including the junctions. | In overall traffic terms, there would be 12 weeks of disruption to north-south movement along Green Lanes, with delays to visitors to the centre, as well as through movements, caused by the signals. A very high level assessment of the impact of putting one-way working over a 200m stretch of road suggests over 1m 45sec 'red time' in either direction – this is quite significant given the flows along Green Lane and would likely result in queues extending back to the previous junctions – with potentially quite significant network wide impacts. | The loss of car parking that would occur in any one section would be for up to 3 weeks, depending upon the stretch of works. Scheme plans show there are 84 existing parking spaces between Broomfield Lane and Bourne Hill, although these are unevenly spread across this section. There could perhaps be up to 30 to 35 lost in the central section from Alderman's Hill to Fox Lane. Over the 12 week period this would be an average loss of around 15 spaces or 20% of spaces across the retail area. |
| Approach 2 - maintain two way access along Green Lanes. | Initial modelling suggests it might be possible to run two-way traffic flows and maintain retail access; however this would be very tight for space and may not ultimately be workable. | Under this approach, roadworks would remain but with 2 lane access retained. Speeds through the roadworks would be reduced, but would not affect journey times significantly. | Under this approach, the duration of individual stages of works, thus parking spaces lost would continue over a longer time period. |

## Nature of Effect

4.21 The main impacts of construction will be:

- temporary increases in congestion
- temporary reductions in parking spaces
- temporary effects on visual amenity (although not significantly obscuring business premises) and some noise and dust blight, in proportion with those typically associated with highways maintenance work.

4.22 These effects can impact on visitor numbers and spend in the town centre, however there is currently no research which provides robust quantifications of the link between these factors and adverse town centre vitality.

4.23 Case study evidence from the London wide OLF programme[4] highlights that extended periods of construction activity can have disruptive effects in town centres where major public realm and highway works resulted in businesses reporting losses of footfall and turnover, however this was mainly the case where construction works were concentrated in one area for a period of over 6 months, or where pedestrian flows were interrupted. Neither of these would be the case in the approaches set out above.

## Impacts on Users

4.24 The analysis below focuses on the impact on three main user groups – people visiting on foot, by car and by bus, which make up 93% of total spend in Palmers Green and are likely to be most affected.

### Pedestrians

4.25 Under both approaches the works are focused on the carriageway, maintaining pedestrian access to all businesses. Given people visiting on foot are typically visiting their closest centre, and there is no impact on their journey times or access to destinations, there is assumed to be negligible impact on these users and no change to the number of people visiting the centre on foot.

### Car Users

4.26 Both congestion and reduced car parking could affect car users:

- The Cycle Enfield Visitor Survey shows that around 48% of car drivers are spending money in the town centre as part of non-discretionary trips (trips for which they could not easily switch to an alternative location eg going to work, visiting the doctor etc).
- The remainder of trips are discretionary and any additional delays and loss of parking may result in a proportion of trips being displaced elsewhere for the duration of construction (there are a number of other centres of comparable or larger size within a small radius – eg Southgate and Wood Green are both within 2 miles).
- However, as Figure 4.3 in the baseline shows, the majority of discretionary trips take place between 10am and 3pm, outside the peak periods when congestion is likely to be greatest.
- As it has not been possible to model the impact of construction works, we have included a broad range of possible impacts within our three scenarios.
  - Our base case is based on the temporary loss of 25% of the discretionary car trips (effectively 13% of all car trips) for the duration of the works
  - This alters to 50% of discretionary car trips (effectively 26% of all car trips) under a worse case scenario, and 12.5% of discretionary car trips (effectively 7% of all car trips) under a better case scenario, for the duration of the works.

### Bus Users

4.27 Congestion impacts and temporary changes to bus stop locations could affect bus users:

- The Cycle Enfield Visitor Survey shows that around 53% of bus users are spending money in the town centre as part of non-discretionary trips. The remainder of trips are

[4] Outer London Fund Round 2 Evaluation, GLA, 2015, accessed at https://www.london.gov.uk/what-we-do/regeneration/funding-opportunities/completed-funds

discretionary and additional delays may result in a proportion of trips being displaced elsewhere for the duration of the construction works. Bus users typically have fewer alternative choices than car users however, due to the limitations of available bus routes they can use.

- As with car users, the impacts are also likely to be reduced due to the fact that the majority of discretionary trips take place between 10am and 3pm, outside the peak periods when congestion is likely to be greatest,
- We have again included a broad range of possible impacts within our three scenarios.
  - Our base case is based on the temporary loss of 10% of the discretionary bus trips (effectively 5% of all bus trips) for the duration of the works
  - This alters to 20% of discretionary bus trips (effectively 9% of all bus trips) under a worse case scenario, and no change under a better case scenario, for the duration of the works.

## Net impact on town centre performance

4.28 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

4.29 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in visits by that transport user group
- % impact on total annual town centre turnover (note: for the construction phase, the change in visits are estimated to only last for 12 weeks, so the impact on *annual* town centre turnover is more limited).

4.30 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 4.10 Summary of Construction Phase Impacts in Palmers Green

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £18.5m | 0% | - | 0% | - | 0% | - |
| Cycling | £0.8m | 0% | - | 0% | - | 0% | - |
| Car | £22.7m | -13% | -1.1% | -7% | -0.5% | -26% | -2.1% |
| Bus | £19.0m | -5% | -0.3% | 0% | 0.0% | -9% | -0.6% |
| Other | £3.8m | 0% | - | 0% | - | 0% | - |
| **Total** | **£64.9m** | **-** | **-1.4%** | **-** | **-0.5%** | **-** | **-2.7%** |

**4.31 Under the base case, the construction phase has a <u>minor negative impact</u> on town centre economic vitality within that single year, with a potential loss of town centre spending of approximately 1.4%.**

4.32 The better and worse case scenarios suggest that the range of possible impacts is expected to be a reduction in town centre spending of between 0.5% and 2.7% (respectively a negligible or minor negative impact).

# Cycle User Impacts

## Overview and Nature of Effect

4.33 Increasing the number of cyclists using the A105 Corridor is at the heart of the Cycle Enfield scheme plans for Palmers Green.

4.34 The changes to cycling infrastructure on the roads include uninterrupted segregated cycle lanes on both sides of the road all of the way along the A105 stretch through Palmers Green. In addition, new cycle parking facilities will be introduced and Enfield Council has introduced a range of measures to support an increase in cycling in the borough.

4.35 The enhanced cycle route connectivity is expected to lead to an increase in cycle users visiting the town centre, both as a result of existing visitors changing their travel mode to bicycle and making more visits to the town centre, and attracting more people to visit the town centre as a result of the enhanced connectivity.

## Impact on Users

4.36 The available evidence points to a significant opportunity to increase cycling across Enfield borough, and within Palmers Green:

- Across the borough, 0.7% of journeys are currently made by cycle. This is lower than most other outer London boroughs, suggesting potential to increase cycling within Enfield borough (TfL LTDS 2009-10 to 2011-12).
- Similarly, Census 2011 data shows that 1.4% of working Enfield residents state that they usually travel to work by cycle, compared with 2.1% across all outer London boroughs, and 2.8% across England and Wales, again reflecting potential to increase cycling in Enfield borough.
- In Palmers Green the town centre visitor survey (Enfield Council, 2015), revealed that 1.1% of visits to the town centre are made by cycle. However 17% of visitors surveyed indicated that they did sometimes cycle, and a further 20% said they do not currently cycle, but would consider it. This points to significant potential to increase cycling visits to Palmers Green.

4.37 The extent to which the scheme leads to increased cycling visits, depends on the extent to which the Cycle Enfield scheme addresses the barriers to more people cycling.

- The Palmers Green visitor survey highlights the main constraints to people cycling more to Palmers Green town centre. Of those who indicated they already sometimes cycle, or might consider cycling in the future, the main barriers to them doing so are currently: too much car traffic (37%), not having a bike (35%), lack of safe routes (28%), and bad weather (18%).
- These factors are similar to those highlighted in the 2010 report 'Delivering the Benefits of Cycling in Outer London' produced by TfL, London Councils London Cycling Campaign, GLA, Sustrans and the Borough Cycling Officers Group. It highlights the key barriers as being both physical (traffic speed, severance of cycle lanes and lack of cycle parking facilities) as well as attitudinal (fear of traffic, convenience of the car, perception of cycling as incompatible with busy lifestyles).

4.38 The Cycle Enfield scheme will substantially address many of these constraints, directly improving feeling of safety through providing fully segregated cycle lanes as well as improved cycle parking facilities, which will directly address the physical barriers to increased cycling.

4.39 It is more difficult to assess the extent to which attitudinal barriers will shift and there is a lack of clear evidence to guide us on this.

4.40 The quantification below is relatively conservative, but based on an analysis of rates of cycling in other outer London boroughs (LTDS, 2009-10 to 2011-12), which demonstrate a realistic rate for an outer London borough, particularly recognising that the key constraints to cycling cited above will be addressed well by the Cycle Enfield scheme:

- Our base case is based on the proportion of cycling trips to the town centre increasing to 2.5%, bringing in closer in line with the average rate of cycling across all outer London boroughs (equivalent to a 127% increase in visitors from the current rate of 1.1% in Palmers Green)
- This assumption alters to an increase to 4% (264% increase from baseline of 1.1%) in the better case scenario (in line with the strongest performing outer London boroughs - Kingston on Thames at 4% and Waltham Forest at 3.8%), and no change under the worse case scenario.

## Net impact on town centre performance

4.41 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

4.42 In assessing the net impact of an increase in cycle visitors, it is necessary to take account of displacement. To ensure the assessment sets out a conservative estimate of change, we have assumed that only 10% of additional cycle journeys constitute net additional visits to the centre (and therefore new spending). We assume that the remaining 90% of additional journeys and related spend would have occurred regardless by people travelling in by different means. As such the table below only captures the net additional impact on town centre annual business turnover of these additional cycle users.

4.43 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in visits by cycle users
- % net additional impact on total annual town centre turnover

4.44 Various measures could be made to enhance the positive impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 4.11 Summary of Impact of Change in Cycle Users in Palmers Green

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £18.5m | 0% | - | 0% | - | 0% | - |
| Cycling | £0.8m | + 127% | +1.6% | + 264% | +3.4% | 0% | 0% |
| Car | £22.7m | 0% | - | 0% | - | 0% | - |
| Bus | £19.0m | 0% | - | 0% | - | 0% | - |
| Other | £3.8m | 0% | - | 0% | - | 0% | - |
| Total | £64.9m | - | +0.2% | - | +0.3% | - | 0% |

**4.45 Under the base case the impact of increased cycle users would have a negligible impact on town centre economic vitality, with a potential increase in town centre spending of around 0.2%.**

4.46 The better and worse case scenarios suggest that the range of possible impacts is expected to be an increase in town centre spending of between 0% and 0.3% (a negligible impact in both cases).

# Car User Impacts

## Overview

4.47 Changes to the capacity and layout of roads and changes to signalised junctions creating extra congestion, and reduction of on-street car parking spaces could affect the number of visits made to the town centre by car.

4.48 On-street parking would be affected by reduction of on-street parking spaces to make way for cycle lanes, as well as reduction in areas with single yellow line markings, which allow evening parking where there are no dropped kerbs. These changes have created particular concerns for convenience stores who believe a large number of their customers prefer to park immediately outside their store and shop quickly, as well as evening economy units (eg bars and restaurants) for whom on-street parking loss will include the loss of on-street parking bays as well as the loss of single yellow line areas.

4.49 As part of Enfield's Retail and Town Centre Study however, a survey of business occupiers was undertaken (NEMS, 2014), interviewing 180 businesses, of which 25 were located in Palmers Green. The Palmers Green respondents ranked overall parking availability as 'good' on a scale of very poor to very good, reflecting a positive baseline position with respect to car parking.

4.50 Figure 4.8 below provides a simplified overview of changes to parking, and their proximity to town centre units, and particularly convenience stores and evening economy units.

## Nature of Effect

### Congestion

4.51 In relation to the existing highway network through the centre of Palmers Green, there are currently three major junctions along Green Lanes, at Alderman's Hill, Fox Lane, and Bourne Hill / Hedge Lane. Two of these (Alderman's Hill and Bourne Hill/Hedge Lane) are currently signalised. The Fox Lane junction is a three-arm roundabout. There are a number of other side roads that join Green Lanes. As part of their preliminary design work, Jacobs have constructed three separate local highway junction models to simulate the current operation of the key junctions during the AM and PM peak periods. These models will have utilised surveys of traffic flows and existing delays / queue lengths on each arm of each of the three junctions. As an overall summary of these models, they predict that traffic travelling along Green Lanes (in a north/south direction) through Palmers Green are currently delayed by an average of around 80 seconds in the AM peak period and 100 seconds in the PM Peak period across the three junctions.

4.52 Some data is available from Jacobs Town Centre Survey relating to the distances travelled by car drivers when accessing the town centre. This indicates that around 50% of car trips are under 2kms

Figure 4.8 Changes in Parking and Shop Types in Palmers Green


Source: Estates Gazette, Cycle Enfield Consultation Plans and Regeneris Consulting.

Note: any post consultation design changes are not incorporated.

with the other 50% over 2kms. Whilst this data does not permit an accurate assessment of trip lengths, it suggests, on average, that trips are relatively short in nature. For the purposes of the analysis below we have assumed an average journey time by car of around 6 minutes, or 12 minutes for a return journey.

4.53 The new scheme will result in a number of changes to the operation of the highway network through the town centre and, in particularly at the three main junctions on Green Lanes, at Alderman's Hill, Fox Lane and Bourne Hill/Hedge Lane. There will be changes to the operation of the existing signalised junctions at Alderman's Hill and Bourne Hill/Hedge Lane.

4.54 As part of their preliminary design work, Jacobs have sought to model the impact of the changes in the operation of each of the three main junctions during the AM and PM peak periods using three separate local highway junction models.

- The results from the Jacobs modelling work indicates that the revised signalisation scheme for **Alderman's Hill** is forecast to enhance the operation of the junction during both the AM and PM peak periods. Whilst delays in a northbound direction remain relatively constant, there are significant reductions in delays to southbound traffic.
- The results from the Jacobs modelling work indicates that the new junction for **Fox Hill** is forecast to introduce additional delay to vehicle movements during both the AM and PM peak periods on all arms, except the northbound approach. The largest delays are on Fox Lane where vehicles may queue for up to an additional 40 seconds during the PM peak period.
- The results from the Jacobs modelling work indicates that the revised signalisation scheme for **Bourne Hill/Hedge Lane** is forecast to introduce additional delay to vehicle movements, during both the AM and PM peak periods. The traffic signals introduce additional delay to all arms of the junction, except Hedge Lane in the AM peak. The largest delays are on Bourne Hill approach where vehicles may queue for up to an additional 1 minute 25 seconds during the AM peak period.

4.55 In assessing the combined impact of the changes to all three junctions the analysis has concluded that, on average, vehicles travelling through the town may experience around 15 seconds additional delay in the AM peak and 25 seconds additional delay in the PM peak. These are the type of delays that would be incurred by a car driving into the centre and back out again, ie a return trip.

4.56 Alongside the delays incurred at the reconfigured junctions, there is also estimated to be some additional delay incurred due to general traffic as a result of the reconfigured bus stop designs. At a number of locations the revised designs require buses to stop within the main carriageway. In many cases this will prevent following general traffic from passing the stationary buses. The extent of these delays will be dependent upon a range of factors, not least how many passengers board/alight the buses at different times of the day. A basic assessment of the potential extent of delays has been undertaken by evaluating the frequency of buses that serve the busiest bus stops within the town centre. Within Palmers Green the 329 and W6 services both call at stops on Green Lanes within the town centre, with around 16 buses per hour across the core of the day. Based on an average bus boarding/alighting time of 45 seconds, drawing on Jacobs survey data, we have estimated a 20% chance of a bus being at a stop at any one time. Assuming a worst case scenario where general traffic is unable to pass the bus due to on-coming traffic, any vehicle travelling behind a bus will, on average, be delayed by 22.5 seconds (half the boarding/alighting time). Combining the probability of delay and the average length of delay gives you an estimate of cars driving into the centre being delayed by around 5 seconds, on average, at one of these central bus stops. On a two-way return trip into and out of town this would equate to 10 seconds delay.

**4.57** In order to put these figures into some form of context we have applied them to our assumed average two-way car journey time into the town centre of 12 minutes. **The combined additional delays (at junctions and bus stops) would, therefore, represent around:**

- **a 3.5% increase in journey times in the AM peak, approximately 24 seconds**
- **a 5% increase in journey times in the PM peak, approximately 36 seconds.**

4.58 These delays could potentially be reduced further with the introduction of further traffic signal control systems, such as SCOOT.

4.59 The Jacobs models only cover the AM and PM peak periods as these are the times when traffic flows are highest and when the scheme is forecast to generate the highest levels of mode shift from car trips to cycle trips. The changes in the junction operations will, however, also impact upon car trips during the inter-peak, evening and weekend periods. Whilst a direct quantitative assessment cannot be undertaken, the peak model data provides an insight into the likely impact.

- For the weekends, the volumes of traffic at the busiest times are not dissimilar to the weekday peaks and so we can assume a similar impact, in terms of additional delay at junctions.
- For the inter-peak and evening periods, the lower volumes of traffic mean there is unlikely to be any significant additional delay at any of the existing junctions.

## Car Parking

4.60 The table below summarises the changes with respect to number of spaces and parking regulations under current and proposed plans.

Table 4.12 Car Parking Summary

| | Current | | Proposed Plans | |
|---|---|---|---|---|
| | Number | Regulations | Number | Regulations |
| On-street | 84 (37 North of Fox Lane; 47 South) | • Maximum Stay<br>• Pay and Display | 67 (26 North of Fox Lane; 41 South) | • Maximum Stay<br>• Pay and Display |
| On-street Single Yellow Line Areas | Unmarked (estimated by Jacobs at 37) | • Available after 6.30pm | 0 | |
| Off-street | 151 at Lodge Drive | • Open 7 Days, 7am-9pm<br>• Pay and Display | 171 at Lodge Drive | • 30 minute free parking area<br>• Improved car park signage<br>• Available for use all evening. |
| Total Daytime | 235 | | 238 | |
| Total Evening | 121 | | 238 | |

Note: Other off street car parks have been excluded at Palmers Green Station (primary use for commuters) and Morrisons (customer only car park)

4.61 The total number of car parking space available (including on and off street), both daytime and in the evening in Palmers Green, will increase as a result of the scheme. The main changes will be in the location of these spaces.

4.62 The distances from Lodge Drive Car Park to Fox Lane and Hedge Lane, the mid way and Northern points of Palmers Green, are respectively 360 and 710 metres. This equates to an estimated 4.25 and 8.5 minutes' walk at regular pace from the entrance to the Lodge Drive Car Park.

4.63 In consultations, the stores particularly concerned about the loss of on-street parking spaces and additional distance were convenience retail stores and evening economy units, such as restaurants. The graphic at Figure 4.8 maps these units against the on-street parking changes:

- 25% of units in Palmers Green are **evening economy units** such as restaurants/cafes, pubs/bars and fast food/takeaway establishments. Business located in the North of Palmers Green are likely to be impacted more by the loss of informal parking due to their further location from the Lodge Drive car park. The main cluster of evening economy units however is towards the South end and central area of Palmers Green.
- The centre has a higher than average representation of **convenience and service units** (11%) vs the England average (8%). However, a high proportion of convenience shops are located towards the southern end of the high street within close proximity to Lodge Drive Car Park. Relatively few are situated to the extreme North furthest away from the car parks

## Impact on Users

4.64 The analysis above shows that the congestion impacts of the scheme should lead to an average additional delay through the centre of around 20-40 seconds at peak times, and less than this between the peak periods. In isolation this is not anticipated to have any significant impact on the number of car users accessing the centre.

4.65 Changes to on-street car-parking could have an impact on car users, for visitors that highly value convenience and might consider alternative retail locations if car parking is less convenient in Palmers Green. To attempt to quantify the impact of this we have considered the following:

- Evening economy services (eg restaurants / takeaways) comprise approximately 25% of town centre units, although many will also operate in the daytime. We have therefore assumed approximately 20% of the town centre economy is comprised of evening economy, and 80% is daytime economy.
- Based on evidence from the town centre survey, 46% of town centre visitors use the off-street parking, while 54% park on-street.
- During the day, 80% of the current number of on-street spaces will remain; in the evening approximately 55% of on-street spaces will remain (taking account of the loss of the single yellow line area).
- Even assuming all parking spaces are always at full capacity, then this means that a maximum of 20% of day time on-street-parkers and 45% of evening on-street parkers (which equates to 25% of all on-street parkers) would be affected, and would need to use the off-street car park instead of on-street parking.
- This therefore affects a maximum of 14% of all visitors to the town centre by car (54% of drivers park on street, of which 25% could be affected). The assessment must therefore assess whether these 14% of visitors would be willing to walk the additional distance from the car park to the shops:
  - The walk to Fox Lane, at the mid-way point of Palmers Green is approximately 4 minutes, but the majority of convenience stores are closer to the car park than this.
  - Around 50% of town centre visitors are on non-discretionary trips (ie for non-flexible purposes such as work or education), and so would be much more unlikely to change destination.
  - The nearest alternative comparable or larger size centres eg Southgate and Wood Green are at least 1.5 miles further away, and so the time taken to travel to these alternative destinations would in many cases be greater than the additional time spent walking from the Lodge Drive car park.

- All of these factors point to there being a limited impact on car users, however the three scenarios are used to set out a range of possible impact scenarios:
  - Our base case assumes an overall 2% reduction in car users (that is, assuming 15% of those displaced on-street-parkers decide not to visit Palmers Green as a result of the minor additional inconvenience.
  - This alters to 4.5% in the worse case (that is one third of all displaced on-street-parkers deciding not to visit Palmers Green as a result), and no change in the better case.

## Net impact on town centre performance

4.66 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

4.67 It is assumed that the reduction in car users to the centre will all be entirely lost spend to Palmers Green (ie no displacement to other modes of transport).

4.68 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in car users
- % impact on total annual town centre turnover

4.69 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 4.13 Summary of Impact of Changes in Car Users in Palmers Green

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £18.5m | 0% | - | 0% | - | 0% | - |
| Cycling | £0.8m | 0% | - | 0% | - | 0% | - |
| Car | £22.7m | - 2% | -0.7% | 0% | 0% | - 4.5% | -1.6% |
| Bus | £19.0m | 0% | - | 0% | - | 0% | - |
| Other | £3.8m | 0% | - | 0% | - | 0% | - |
| Total | £64.9m | - | -0.7% | - | 0% | - | -1.6% |

**4.70 Under the base case, the impact of reduced car users would have a negligible impact on town centre economic vitality, with a potential loss of town centre spending of approximately 0.7%.**

4.71 The better and worse case scenarios suggest that the range of possible impacts is expected to be a reduction in town centre spending of between 0% and 1.6% (respectively a negligible or minor negative impact).

# Bus User Impacts

## Overview

4.72 The proposed changes to bus stops include minor changes to locations, as well as an introduction of bus stop boarder areas and bus stop bypasses, in order to enable the bus stops to operate around the cycle lanes.

4.73 There are currently seven bus stops within the borders of Palmers Green town centre and a further three stops just outside the borders. The bus stops serve the parade of shops and restaurants along the high street as well as two churches towards the North of the Centre.

4.74 The Jacobs Town Centre Survey suggests that travel distances by bus into the centre are relatively short, with 58% less than 1km and a further 20% less than 2kms. On this basis it is likely that most bus journey times into the centre are relatively low.

## Nature of Effect

4.75 The extent to which the scheme leads to a change in the number of bus visits, will depend upon a number of factors:

- **Changes in number and location of bus stops serving the town centre, which could reduce convenience for some users**
  - The scheme loses one northbound bus stop within the town centre and relocates one southbound bus stop slightly further south.
  - The bus stop that will be lost is currently situated to the north of Devonshire Road on the northbound bus route. As a result of this loss, the northbound bus stop has been relocated to the centre of Palmers Green so that there will be no gap of more than 400 metres.
  - The bus stop that is being relocated within the town centre will be less than 100 metres away from the two existing stops.
- **Perceptions of safety of the new bus stops, which could discourage some users from using the bus**
  - Two of the bus stops within the town centre will be designed to have a bus stop boarder, two will have bus bypasses and one will remain in its current state on a side road within a short walking distance of the centre.
  - Consultation feedback suggests that some residents believe bus stop boarders, whereby passengers will alight onto the cycle lane, may be unsafe particularly for the elderly, disabled, visually impaired and young children, and could discourage people from using the bus.
  - TfL have however indicated that this infrastructure is commonplace in continental Europe, a number are now operating across London and have not created any additional issues or collisions, and their use will be monitored, with TfL taking action to mitigate if there is any evidence emerging of a risk to bus passengers.
- **Congestion Impacts which could extend journey times by bus**
  - There is expected to be between 15 seconds additional delays in AM peak and 25 seconds in PM peak at the new signalised junctions in Palmers Green. These

changes will not fundamentally affect bus routes as they are small additional delays across a whole bus route but some minor amendments may need to be made to scheduling. Similar impacts may occur during weekend periods when general traffic volumes are high. There is likely to be minimal impact during the inter-peak and evening periods.

## Impact on Users

4.76 The visitor survey shows that around 53% of bus users are spending money in the town centre as part of non-discretionary trips (ie for non-flexible purposes such as work or education). It is assumed that there would be no impact on these visits.

4.77 The remaining 47% of bus user trips are on discretionary trips and so the changes outlined could lead to a proportion of these trips being displaced to alternative destinations.

4.78 However, the limited impacts and fewer convenient alternative options for bus users is expected to mean the impact is limited. This takes into account the following:

- The disruption to journeys is likely to be minimal – with only a 15-25 second additional journey even at peak travel periods
- Changes to bus stops will ensure that the TfL recommended maximum distance between bus stops of 400m will be retained.
- The success of the new bus stop arrangements, using bus stop boarders and by-passes will be kept under review.
- Bus users are likely to have less flexibility in decision making about retail and service centre destinations, unless they live nearby to alternative bus routes.

4.79 The scenarios therefore include the following:

- Our base case scenario is for no change to bus users as a result of the changes.
- The better case scenario assumes the same, while the worse case scenario assumes a reduction of 2% (based on a 5% reduction of all discretionary trips).

## Net impact on town centre performance

4.80 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

4.81 It is assumed that any reduction in bus users to the centre will all be entirely lost spend to Palmers Green (ie no displacement to other modes of transport).

4.82 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in bus users
- % impact on total annual town centre turnover

4.83 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 4.14 Summary of Impact of Change in Bus Users in Palmers Green

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £18.5m | 0% | - | 0% | - | 0% | - |
| Cycling | £0.8m | 0% | - | 0% | - | 0% | - |
| Car | £22.7m | 0% | - | 0% | - | 0% | - |
| Bus | £19.0m | 0% | 0.0% | 0% | 0.0% | -2% | -0.7% |
| Other | £3.8m | 0% | - | 0% | - | 0% | - |
| Total | £64.9m | - | 0.0% | - | 0.0% | - | -0.7% |

**4.84 Under the base case, there is assumed to be no change in bus users, hence a negligible impact on town centre economic vitality.**

4.85 The better and worse case scenarios suggest that the range of possible impacts is expected to be a reduction in town centre spending of between 0% and 0.7% (in both cases a negligible impact).

# Impacts on Loading & Unloading

4.86 The three loading bays currently in place in Palmers Green town centre will remain as a result of the scheme. The loading bay on the eastern side of Palmers Green has been relocated 60m to accommodate the revised bus stop arrangements, with the loading bay on the western side relocated 25m. The loading bay north of Fox Lane remains in its current position.

4.87 Given overall loading space will remain the same and changing locations is minimal, the impact of changes to delivery vehicle access on town centre business turnover is therefore assessed as **neutral/negligible.**

# Town Centre Environment

## Overview

4.88 The proposed scheme includes a number of elements which have the potential to *directly* enhance the overall town centre environment. These include:

- Improvements to the public realm in certain parts of the town centre, most significantly at the triangle island at the Alderman's Hill junction
- A number of additional and improved crossings targeted at both cyclists and pedestrians
- Side road entry treatments to emphasise pedestrian priority.

4.89 In addition to these direct enhancements to the town centre environment, it is expected by scheme planners that the town centre environment will be *indirectly* enhanced by changes in the volume and nature of traffic flows in the area as a result of the transport specific interventions.

## Nature of Effect

### Ease of Access around the Centre

4.90 There are a number of new and enhanced crossings, which are targeted at improving accessibility for pedestrians, and, in the consultation, 51 responses stated that the scheme would help to make

the town centre better / safer for pedestrian. Conversely, some concerns have also been raised in the consultation regarding potential adverse effects on accessibility caused by the need for pedestrians and bus users to cross the segregated cycle path: 65 consultation responses were concerned about accessibility impacts for elderly people, those with mobility impairments and people with young children, while 122 were concerned with access to bus stops.

4.91 Overall, the provision of designated crossing points and associated signage and the overall volume of cyclists (particularly in the short term) will minimise the risk of adverse accessibility effects.

### Public Realm

4.92 Generally, there is a lack robust evidence on the impact of public realm improvements. However, case study evidence collated across a range of research studies suggest some evidence of a link between public realm improvement and enhanced town centre performance:

- UK case study evidence cited by Association of Town Centre Managers[5] suggests that public realm improvements such as pedestrianisation or adding seating and greenery, can increase retail footfall by about 30% and retail turnover by an average of 17%.
- Evidence cited by Living Streets[6] and based on a range of international case studies suggests that public realm improvements can improve footfall by 10-25%
- Evidence referenced by BIS and DfT[7], has suggested that turnover for businesses in a high street location increased by between 5 and 15% following investment in public realm developments.

4.93 Evidence from the recent Outer London Fund R2 programme provides further evidence on the link between public realm / environmental improvement and town centre performance. The programme saw public realm improvement projects delivered across 26 outer London town centres, and, while the projects varied in their scale and scope, there is strong evidence[8] that the investments are starting to result in improvements in town centre vitality as measured across a range of indicators including visitor satisfaction, vacancy rates, footfall and employment. However, emerging evidence from the programme suggests that impact is greatest where enhancements are relatively concentrated and where they are 'transformational' in the way the people perceive and use a specific town centre.

4.94 The public realm impacts in Palmers Green however are limited and not directly transformational. Specific public realm improvements are mainly limited to the proposed improvements to the triangle island at the junction with Alderman's Hill at the south end of the town centre. While this will provide a localised improvement in the environment to the benefit of all town centre users, it is unlikely to have a significant impact on town centre vitality, in isolation.

### Town Centre Environment

4.95 It is anticipated that the town centre environment will be further enhanced by changes in the volume and nature of traffic flows in the area as a result of the transport specific interventions. Many consultation responses suggested that this could be a major positive of the scheme: 99

[5] https://www.atcm.org/townteamuploads/why_great_spaces_matter

[6] http://www.livingstreets.org.uk/sites/default/files/content/library/Reports/PedestrianPound_fullreport_web.pdf

[7] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/3890/making-sustainable-local-transport-happen-whitepaper.pdf

[8] Outer London Fund Round 2 Evaluation, GLA, 2015, accessed at https://www.london.gov.uk/what-we-do/regeneration/funding-opportunities/completed-funds

responses noted that the scheme will create "more attractive / liveable / improved town centres", while 88 suggested that it will improve air quality. Conversely, some consultees raised concerns about additional congestion (228) and consequent effects on air quality (105), however the modelling by Jacobs suggests that this is unlikely to have a significant impact on congestion levels through the centre.

4.96 The OLF programme highlights that economic benefit is likely to be strongest if environmental improvements help to diversify town centre uses, encourage more people to spend leisure and recreation time there. It should be noted, however, that the capacity for significant short term economic gain in Palmers Green is perhaps limited by the fact that town centre performance is already comparatively strong (with a low vacancy level) and that the town centre is already comparatively diverse (there is evidence of a strong evening restaurant economy for example).

## Impact on Users

4.97 In the assessment of impacts we have taken into account the range of factors analysed above to consider overall environmental effects of the scheme on town centre users. While in isolation the public realm and accessibility effects are unlikely to impact on town centre performance, when considered cumulatively *alongside* the anticipated changes in car usage and cycling, there is a stronger argument that the overall town centre environment and image could be enhanced in a way that is transformational.

4.98 Given the significant uncertainties and lack of clear precedents however we have made conservative assumptions about these impacts:

- Our base case assumes no change in overall footfall as a result of the town centre environment changes.
- This assumptions is the same for the worse case scenario, but increases to 2% overall footfall and spend across all users in the better case scenario.

## Net impact on town centre performance

4.99 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

4.100 It is assumed that the increases in visitors to the town centre and corresponding spend assessed here would all be net additional, not displaced from other transport modes.

4.101 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in visits by each transport user group
- % impact on total annual town centre turnover

4.102 Various measures could be made to enhance the positive impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 4.15 Summary of Town Centre Environment Impacts in Palmers Green

| Transport Mode | Town Centre Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change | Value change | % change | Value change | % change | Value change |
| Walking | £18.5m | 0% | 0.0% | + 2% | + 0.6% | 0% | 0.0% |
| Cycling | £0.8m | 0% | 0.0% | + 2% | +0.0% | 0% | 0.0% |
| Car | £22.7m | 0% | 0.0% | + 2% | +0.7% | 0% | 0.0% |
| Bus | £19.0m | 0% | 0.0% | + 2% | +0.6% | 0% | 0.0% |
| Other | £3.8m | 0% | 0.0% | + 2% | +0.0% | 0% | 0.0% |
| Total | £64.9m | - | 0.0% | - | +2.0% | - | 0.0% |

**4.103 Under the base case there is assumed to be no change in town centre users, hence a negligible impact on town centre economic vitality.**

4.104 There is similarly no change under the worse case scenarios, but an increase in town centre spending of 2% under the better case scenario (a minor positive impact),

## Summary and Assessment of Net Impacts

4.105 The table below draws together the net additional impacts set out under each of the assessment areas above. The table shows the overall impact both in terms of value and proportion of total annual town centre business turnover for Palmers Green. This is broken down to show:

- Construction phase impacts, only occurring within a single year
- Operational phase impacts, which would be annual effects and which are broken down by the net effects of changes to visitors by different transport mode, and the town centre environment impacts.

4.106 In each case we show three scenarios. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts, recognising the inherent uncertainties in this assessment.

Table 4.16 Summary of Net Impacts in Palmers Green

| Impacts | | Base Case | Better Case | Worse Case |
|---|---|---|---|---|
| **Construction Phase** | **£** | **-£890,000** | **-£340,000** | **-£1,780,000** |
| | **%** | **-1.4%** | **-0.5%** | **-2.7%** |
| Transport Shifts (Bus, Car & Cycle Users) | £ | -£ 370,000 | + £220,000 | -£1,490,000 |
| | % | -0.6% | + 0.3% | -2.3% |
| Town Centre Environment | £ | £0 | + £1,300,000 | £0 |
| | % | 0.0% | +2.0% | 0.0% |
| **Total Operational Phase** (Transport Shift & Town Centre Environment) | **£** | **-£ 370,000** | **£1,520,000** | **-£1,490,000** |
| | **%** | **-0.6%** | **+2.3%** | **-2.3%** |

4.107 Under the base case:

- The construction phase would have a **minor negative impact on town centre economic vitality within that single year**, with a potential loss of town centre spending of approximately 1.4%.

- The operational phase would have a **negligible impact on town centre economic vitality on an ongoing basis**, with a potential loss of town centre spending of approximately 0.6% per annum.

4.108 For both the construction and operational phases, various measures could be made to reduce the negative impacts and enhance the positive impacts. These measures are summarised in Chapter 7 of the report.

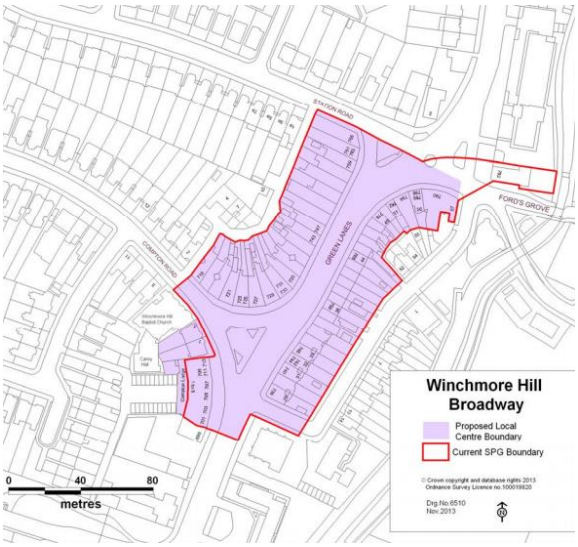
4.109 **By implementing these, we believe the impact of the operational phase can reach a neutral or positive level**.

4.110 The lack of UK precedents makes it difficult to predict the extent to which the scheme will have the transformational effect on town centre attractiveness and liveability which scheme planners seek. As such, this has not been modelled in the figures above. However, based on evidence of the impact of transformational public realm projects (set out at Section 4.92), if this is achieved, then there could be a longer term uplift in town centre spend of up to 10-15%.

# 5. Winchmore Hill Broadway Assessment

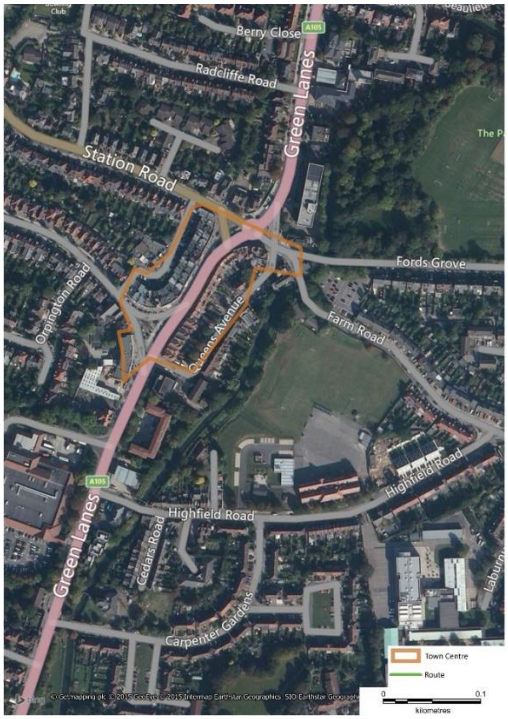
5.1 Winchmore Hill Broadway is designated as a large local centre under Enfield's Local Plan. It is situated towards the centre of the borough. The following maps show the outline of the town centre boundary, and therefore the area this assessment will focus on.

Figure 5.1 Town Centre Boundary




Source: Enfield Local Plan: Town Centres Uses and Boundaries Review (2013)

Figure 5.2 Context Map




Source: Regeneris Consulting & Enfield Local Plan: Town Centres Uses and Boundaries Review (2013)

5.2 The table below sets out the diversity of units present in Winchmore Hill Broadway, and provides a comparison with data from 2005.

Table 5.1 Breakdown of Units in Winchmore Hill Broadway

| Type of Unit | Number of Units 2014 | Number of Units 2005 |
|---|---|---|
| Comparison Retail | 13 | 18 |
| Convenience Retail | 5 | 5 |
| A1 Services (inc hairdressers, travel agents and other class A1 users not selling convenience / comparison goods) | 11 | 6 |
| A2 Services | 7 | 9 |
| A3/A5 | 10 | 9 |
| A4 Pubs and Bars | 2 | 2 |
| Vacant | 2 | 3 |
| Total Units | 50 | 52 |
| Total Active Units (ie excluding vacancies) | 48 | 49 |

NLP, Enfield Retail and Town Centres Study, 2014

## Town Centre Performance

5.3 The town centre data reflects that Winchmore Hill Broadway **is a prosperous town centre**:

- **The vacancy rate is very low in the town centre**, with the latest data from the Estates Gazette showing there were two vacant units in Winchmore Hill Broadway, representing a vacancy rate of 4.0% (in December 2015).
- This compares well with the London town centre average of 7.8% and the national rate of 11.8% (Local Data Company, Vacancy Rate Report for H2 2014).

5.4 Shops in the town centre change frequently, and Winchmore Hill Broadway has a churn rate of 11.4%, with approximately one in nine businesses leaving the town centre each year[9].

## Total Town Centre Business Turnover

5.5 As described in the methodology section in Chapter 2, we have undertaken analysis to estimate the total business turnover generated by town centre businesses and the value of this turnover that is generated by visitors reaching the centre by different transport modes.

5.6 It must be noted that the figures set out here represent a best estimate, and are intended purely to be a sensible estimate of current town centre turnover in order to aid the quantification of impacts. As discussed in the data limitations section of Chapter 2, more accurate data on town centre business turnover is not available. These figures should therefore be regarded as indicative estimates.

5.7 Table 5.2 shows the overall proportion of visitors and spend by mode of transport used to reach the centre.

Table 5.2 Results from Winchmore Hill Broadway Town Centre Survey

| | Car-driver | Car pass. | Bus | Rail | Cycle | Motor-cycle | Walk | Taxi |
|---|---|---|---|---|---|---|---|---|
| Percent share of visitors | 20.4 | 1.6 | 30.4 | 2.6 | 1.9 | 0.0 | 43.1 | 0.0 |
| Percent share of spending | 44.2 | 0.9 | 20.8 | 0.4 | 1.2 | 0.0 | 32.5 | 0.0 |

Source: Winchmore Hill Town Centre Survey, Regeneris Calculations

5.8 Using the methodology set out in Chapter 2, Table 5.3 sets out an estimate of total town centre jobs supported and total business turnover in Winchmore Hill Broadway.

Table 5.3 Winchmore Hill Broadway estimates of jobs, turnover per job, and total revenues

| | Local Jobs | Estimate of Total Business Turnover |
|---|---|---|
| Winchmore Hill Broadway Businesses | 190 | £9,299,000 |

Source: Estates Gazette, December 2015; Annual Business Survey, 2014.

5.9 Drawing together the data from the two tables above (as set out in the methodology at Chapter 2), the table below sets out an estimated breakdown of total annual spend and annual visits made by mode of transport used to reach the centre.

[9] Based on Estates Gazette data (December 2015) on length of tenancy of businesses in current units.

Table 5.4 Annual Business Turnover and Visits by Mode of Transport

| | Vale of Total Annual Business Turnover Spend by Mode | Annual Visits by Mode |
|---|---|---|
| Car driver | £4,111,000 | 132,000 |
| Car passenger | £83,000 | 10,000 |
| Local bus | £1,932,000 | 197,000 |
| Rail | £40,000 | 17,000 |
| Cycle | £114,000 | 12,000 |
| Motorcycle | N/A | N/A |
| Walk | £3,018,000 | 279,000 |
| Taxi | N/A | N/A |
| **Total** | **£9,299,000** | **647,000** |

5.10 For Winchmore Hill Broadway, the baseline provides estimates that of the £9.3 million of total annual turnover across all retail and high frequency consumer service businesses in the town centre:

- £4.2 million is derived from 142,000 trips from car users (drivers and some passengers);
- £1.9 million is derived from almost 200,000 trips by bus passengers;
- £3.0 million is derived from almost 280,000 trips by pedestrians.
- At present, 12,000 cyclist trips account for around £114,000.

## Other Baseline Data to Aid Assessment

5.11 The data below provides useful evidence that is drawn upon in the analysis in subsequent sections.

### Primary Reason for Visit

5.12 The table below sets out the main reason for visiting the town centre cited by visitors' spending money in the town centre, and a breakdown specifically for bus and car users, which are referred to in the subsequent analysis. The table also shows a sub-set of these trips which can be considered as non-discretionary trips (ie where the visitor could not easily visit an alternative location). The categories shown as non-discretionary are marked in the table.

Table 5.5 Reason for Visiting Winchmore Hill Town Centre

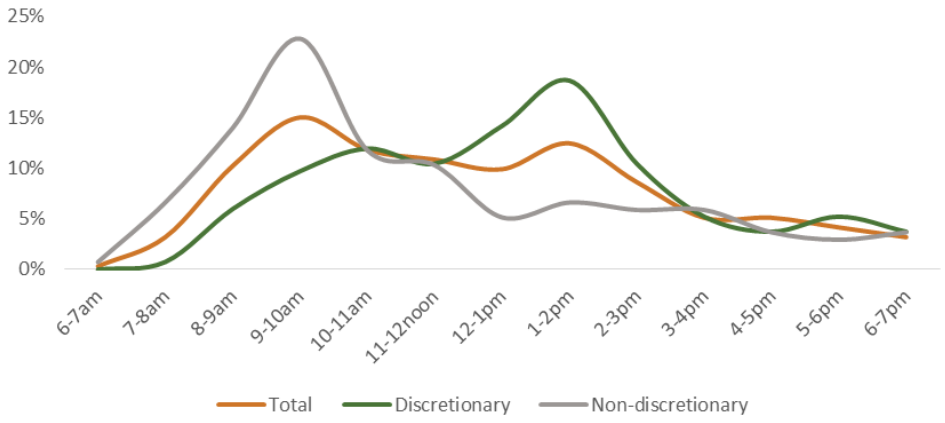
| Reason | Total (%) | Bus Users (%) | Car Users (%) |
|---|---|---|---|
| Shopping | 30% | 19% | 26% |
| Personal Business (eg banking, doctor visit) (*50% non-discretionary*) | 14% | 11% | 23% |
| Eating / Drinking / Recreation | 13% | 6% | 25% |
| Home (*non-discretionary*) | 13% | 8% | 5% |
| Normal Place of Work (*non-discretionary*) | 24% | 46% | 18% |
| Education (*non-discretionary*) | 2% | 3% | 0% |
| Visiting friends/family (*non-discretionary*) | 4% | 5% | 3% |
| Total | 100% | 100% | 100% |
| Total Non-Discretionary trips | 50% | 69% | 37% |

Source: Cycle Enfield Town Centre Surveys

## Arrival Times in the Town Centre

5.13 The chart below gives an indication of the arrival times of visitors to the town centre. While this data is limited by the timing of the survey being undertaken, the visitor survey fieldwork was carried out across all daytime hours, and so gives a useful indicative view of peak arrival times in the centre. It shows that discretionary visitors are much more spread out across the day, whereas discretionary visitors largely visit at the start of the day.

Figure 5.3 Arrival Time of Town Centre Visitors by Discretionary / Non-Discretionary Visits

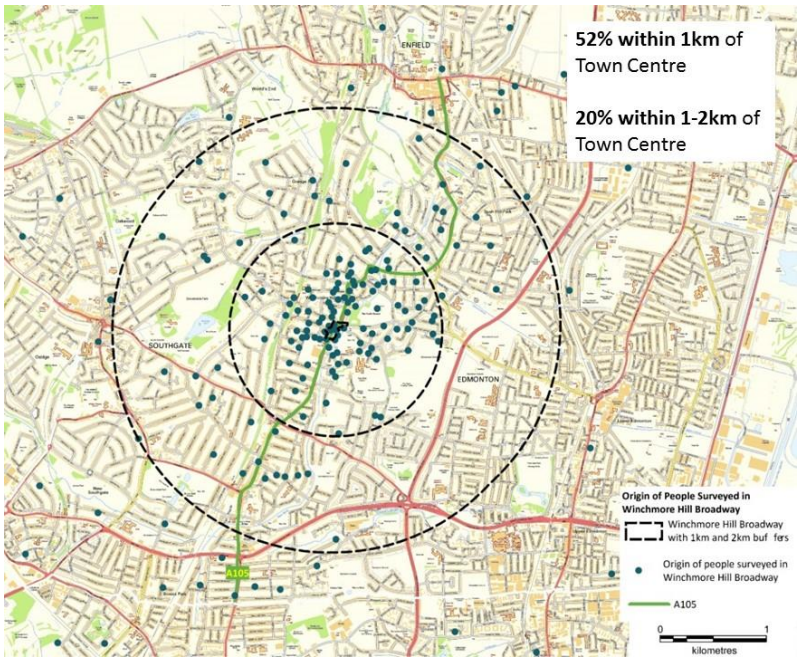



Source: Cycle Enfield Town Centre Surveys

## Distance Travelled to Visit Town Centre

5.1 The map below shows the distance travelled to the town centre by all respondents to the visitor survey.

Figure 5.4 Home location of people surveyed in Winchmore Hill Broadway




Source: Cycle Enfield Town Centre Survey

### Town Centre Car Parking

5.2 The table below sets out the breakdown of where car-user visitors parked their cars, broken down by type of visitor.

Table 5.6 Type of Car Park used by Main Reason for Visiting Town Centre

| Reason for Visiting Town Centre | Off Street | On Street |
|---|---|---|
| Shopping | 55% | 45% |
| Personal Business (eg banking, doctor visit) (*50% non-discretionary*) | 24% | 76% |
| Eating / Drinking / Recreation | 49% | 51% |
| Home (*non-discretionary*) | 53% | 47% |
| Normal Place of Work (*non-discretionary*) | 46% | 54% |
| Education (*non-discretionary*) | N/A | N/A |
| Visiting friends/family (*non-discretionary*) | 18% | 82% |
| **Total** | **44%** | **56%** |

Source: Cycle Enfield Town Centre Surveys

## Alternative Retail and Service Destinations

5.3 The table below sets out an overview of key retail and service destinations which visitors to Winchmore Hill Broadway might consider as alternatives.

Table 5.7 Nearest Alternative Locations to Winchmore Hill Broadway

| Type | Name | Distance (miles) |
|---|---|---|
| Town centres | Winchmore Hill Green Dragon (Local Centre) | 0.4 |
| | Palmers Green (District Centre) | 1.2 |
| | Southgate (District Centre) | 1.6 |
| | Bush Hill (Local Centre) | 1.6 |
| | Enfield Town (Major Centre) | 1.7 |
| Out-of-Town Shopping Centres | Palace Gardens Shopping Centre | 2.2 |
| | Enfield Retail Park | 2.8 |
| | Ravenside Retail Park | 3.2 |
| | Friern Barnet Retail Park | 3.2 |
| | Tottenham Hale Retail Park | 4.8 |

Source: Regeneris Consulting
N.B. Distances are the shortest walking routes from the Station Road / Green Lanes Roundabout

# Outputs – Physical Changes of Cycle Enfield Scheme

5.4 The key outputs of the Cycle Enfield scheme in Winchmore Hill Broadway are shown below.

Table 5.8 Cycle Scheme Deliverables at Winchmore Hill Broadway

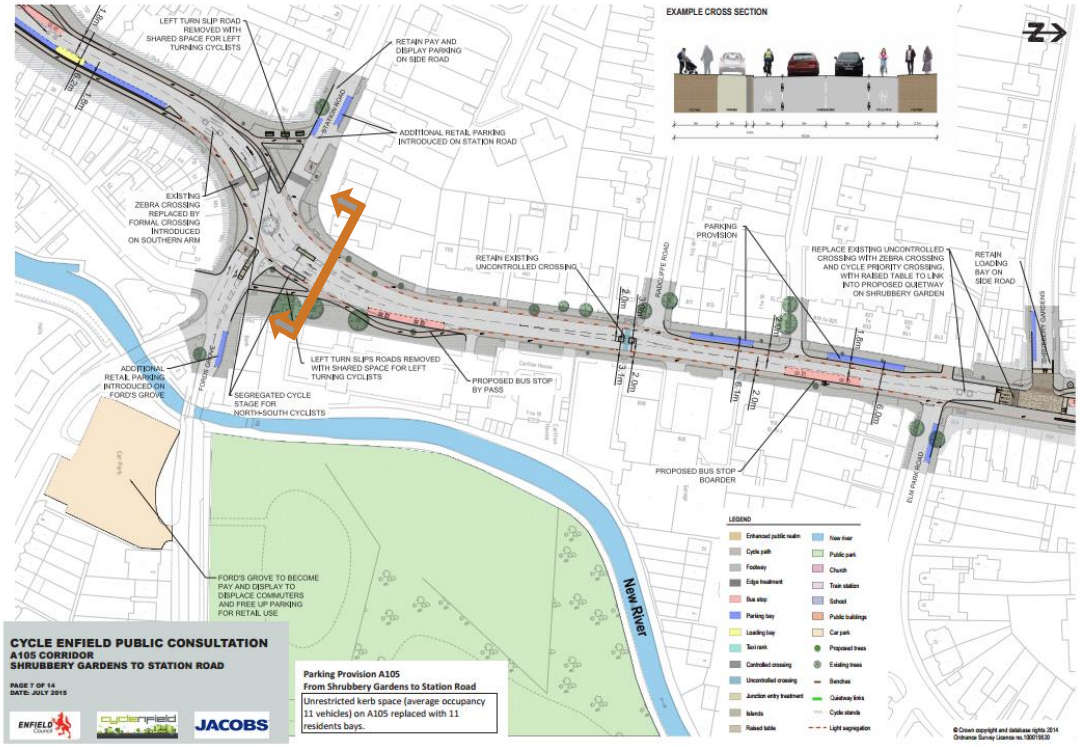
| | Key Output | Detail |
|---|---|---|
| **Construction Phase** | Construction works to deliver the elements of the scheme outlined below and overleaf | • Detailed plans for the construction phase yet to be developed; however, there is a headline expectation that the three A105 schemes will be delivered across a 6 month period, although the phasing of works within each town centre is currently unclear |

| | Key Output | Detail |
|---|---|---|
| Accessibility | Enhanced Cycle Infrastructure | • Segregated cycle lanes |
| | Changes to car parking and road capacity | • 59 on-street parking bays reduced to 45 bays.<br>• Fords Grove car park (71 spaces) to be converted to Pay and Display to discourage commuter parking. |
| | Changes to bus stop locations | • Northbound bus stop relocated slightly further north, away from centre of Compton Road junction |
| | Changes to loading / unloading space | • 2 loading bays retained, but slightly relocated, within 30m of their existing locations. |
| Environmental | Beautification and Pedestrian Friendliness | • Compton Road junction redesigned to increase public realm<br>• Existing zebra crossing replaced by formal crossing at Station Road junction an zebra crossing introduced south of Compton Road. |

Source: Regeneris Consulting based on Cycle Enfield Consultation Plans

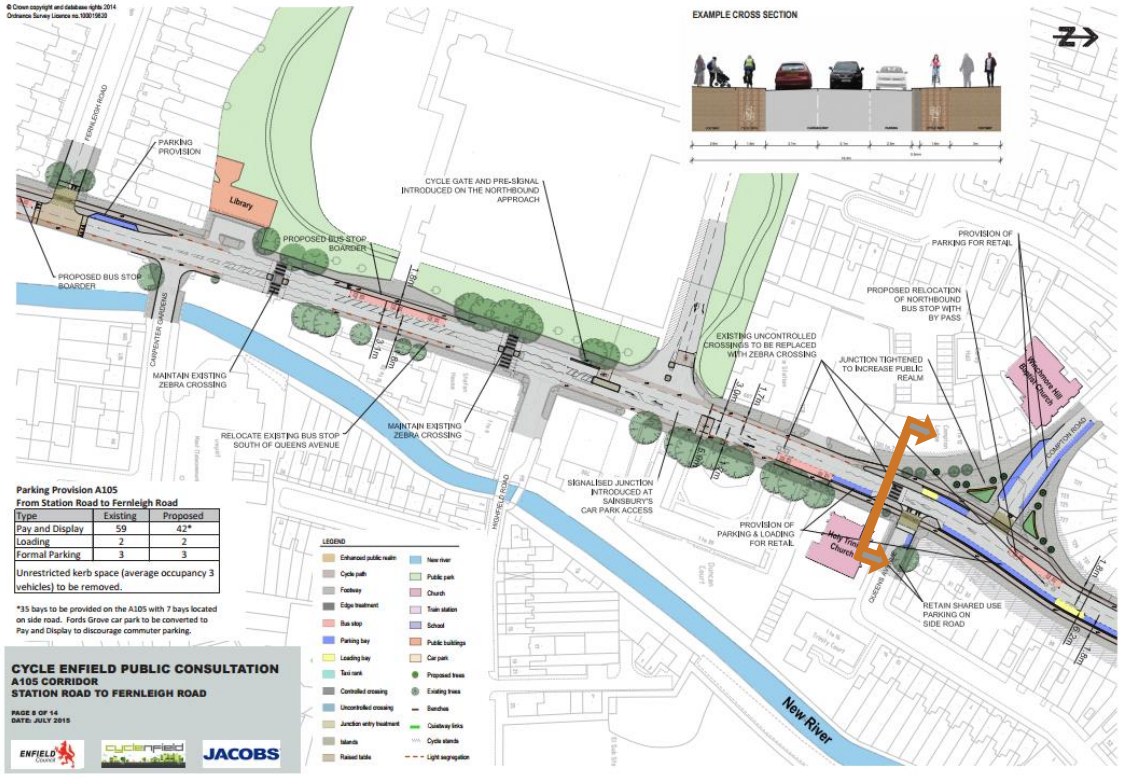
5.5 The diagrams show the original Cycle Enfield proposals for Winchmore Hill Broadway centre used for consultation. Note: some factors shown in the table above have been updated since these original scheme plans.

Figure 5.5 Proposed Plans for Winchmore Hill Broadway (North)




Source: Cycle Enfield Consultation Plans

Figure 5.6 Proposed Plans for Winchmore Hill Broadway (South)




Source: Cycle Enfield Consultation Plans

# Construction Phase Impacts

## Overview

5.6 At this stage detailed plans for construction in each of the three A105 town centres are yet to be developed, and as such, the approach to construction phasing and specific approach both across and within the three A105 town centres is not known. The design team estimate the total construction period for the whole of the A105 Corridor Schemes is likely to be around 6 months.

5.7 Drawing on transport engineers within our team, we have modelled possible construction approaches in Winchmore Hill Broadway, summarised in the table below.

| Scenario | Details | Possible Congestion Impact | Possible Parking Impact |
|---|---|---|---|
| Scenario 1 – one-way road access but access to businesses maintained | The length of carriageway is estimated to be around 400 metres; however, the central section is more complicated than Palmers Green in traffic terms due to the close proximity of the Compton Road | Under Scenario 1, maintaining good access to the retail units by deploying one-way working, it would be challenging to develop operational traffic management measures in order to undertake the required construction work in the section from Compton Road to Station Road as there is insufficient space to provide signals between the junctions. The result could be a situation with 5-way working across both junctions, with inevitably long traffic signal cycle times. Traffic signal modelling work would be required to obtain an optimum signal arrangement but 'red times' of up to 2 minutes may occur. This would have | There could be a loss of 15 parking spaces outside the retail properties between Compton Road and Station Road whilst the construction work took place. Up to 40 spaces could be lost |

| | | | |
|---|---|---|---|
| | Junction and the Station Road Junctions on the A105. | considerable network wide impacts. The work could feasibly be carried out in 4 phases, with an overall duration of around 6 weeks, depending upon the extent of the public realm works at the Compton Road Junction. | during the re-construction of the A105/Compton Road Junction. |
| Scenario 2 – approach prioritises maintaining Green Lanes 2 way access | Modelling by JMP suggests that Scenario 2, with two-way working maintained but more restricted access to retail properties, would be preferable in traffic management terms *but may not be implementable from a construction viewpoint*. | | |

## Nature of Effect

5.8 The main impacts of construction will be:

- temporary increases in congestion
- temporary reductions in parking spaces
- temporary effects on visual amenity (although not significantly obscuring business premises) and some noise and dust blight, in proportion with those typically associated with highways maintenance work.

5.9 These effects can impact on visitor numbers and spend in the town centre, however there is currently no research which provides robust quantifications of the link between these factors and adverse town centre vitality.

5.10 Case study evidence from the London wide OLF programme[10] highlights that extended periods of construction activity can have disruptive effects in town centres where major public realm and highway works resulted in businesses reporting losses of footfall and turnover, however this was mainly the case where construction works were concentrated in one area for a period of over 6 months, or where pedestrian flows were interrupted. Neither of these would be the case in the approaches set out above.

## Impacts on Users

5.11 The analysis below focuses on the impact on three main user groups – people visiting on foot, by car and by bus, which make up 98% of total spend in Winchmore Hill Broadway and are likely to be most affected.

### Pedestrians

5.12 Under both approaches the works are focused on the carriageway, maintaining pedestrian access to all businesses. Given people visiting on foot are typically visiting their closest centre, and there is no impact on their journey times or access to destinations, there is assumed to be negligible impact on these users and no change to the number of people visiting the centre on foot.

### Car Users

5.13 Both congestion and reduced car parking could affect car users:

[10] Outer London Fund Round 2 Evaluation, GLA, 2015, accessed at https://www.london.gov.uk/what-we-do/regeneration/funding-opportunities/completed-funds

- The Cycle Enfield Visitor Survey shows that around 37% of car drivers are spending money in the town centre as part of non-discretionary trips (trips for which they could not easily switch to an alternative location eg going to work, visiting the doctor etc).
- The remainder of trips are discretionary and any additional delays and loss of parking may result in a proportion of trips being displaced elsewhere for the duration of construction (there are a number of other centres of comparable or larger size within a small radius of Broadway). However, as Figure 5.3 in the baseline shows, the majority of discretionary trips take place between 10am and 3pm, outside the peak periods when congestion is likely to be greatest.
- As it has not been possible to model the impact of construction works, we have included a broad range of possible impacts within our three scenarios.
    - Our base case is based on the temporary loss of 25% of the discretionary car trips (effectively 16% of all car trips) for the duration of the works
    - This alters to 50% of discretionary car trips (effectively 32% of all car trips) under a worse case scenario, and 12.5% of discretionary car trips (effectively 8% of all car trips) under a better case scenario, for the duration of the works.

### Bus Users

5.14 Congestion impacts and temporary changes to bus stop locations could affect bus users:

- The Cycle Enfield Visitor Survey shows that around 69% of bus users are spending money in the town centre as part of non-discretionary trips. The remainder of trips are discretionary and additional delays may result in a proportion of trips being displaced elsewhere for the duration of the construction works. Bus users typically have fewer alternative choices than car users however, due to the limitations of available bus routes they can use.
- As with car users, the impacts are also likely to be reduced due to the fact that the majority of discretionary trips take place between 10am and 3pm, outside the peak periods when congestion is likely to be greatest,
- We have again included a broad range of possible impacts within our three scenarios.
    - Our base case is based on the temporary loss of 10% of the discretionary bus trips (effectively 3% of all bus trips) for the duration of the works
    - This alters to 20% of discretionary bus trips (effectively 6% of all bus trips) under a worse case scenario, and no change under a better case scenario, for the duration of the works.

## Net impact on town centre performance

5.15 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

5.16 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in visits by that transport user group

- % impact on total annual town centre turnover (note: for the construction phase, the change in visits are estimated to only last for 6 weeks, so the impact on *annual* town centre turnover is more limited)

5.17 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 5.9 Summary of Construction Phase Impacts in Winchmore Hill Broadway

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £3.0m | 0% | - | 0% | - | 0% | - |
| Cycling | £0.1m | 0% | - | 0% | - | 0% | - |
| Car | £4.2m | -16% | -0.8% | -8% | -0.4% | -32% | -1.6% |
| Bus | £1.9m | -3% | -0.1% | 0% | -0.0% | -6% | -0.1% |
| Other | £0.2m | 0% | - | 0% | - | 0% | - |
| **Total** | **£9.3m** | **-** | **-0.9%** | **-** | **-0.4%** | **-** | **-1.8%** |

**5.18 Under the base case, the construction phase has a negligible impact on town centre economic vitality within that single year, with a potential loss of town centre spending of approximately 0.9%.**

5.19 The better and worse case scenarios suggest that the range of possible impacts is expected to be a reduction in town centre spending of between 0.4% and 1.8% (respectively a negligible or minor negative impact).

# Cycle User Impacts

## Overview and Nature of Effect

5.20 Increasing the number of cyclists using the A105 Corridor is at the heart of the Cycle Enfield scheme plans for Winchmore Hill Broadway.

5.21 The changes to cycling infrastructure on the roads include uninterrupted segregated cycle lanes on both sides of the road all of the way along the A105 stretch through the centre. In addition, new cycle parking facilities will be introduced and Enfield Council has introduced a range of measures to support an increase in cycling in the borough.

5.22 The enhanced cycle route connectivity is expected to lead to an increase in cycle users visiting the town centre, both as a result of existing visitors changing their travel mode to bicycle and making more visits to the town centre, and attracting more people to visit the town centre as a result of the enhanced connectivity.

## Impact on Users

5.23 The available evidence points to a significant opportunity to increase cycling across Enfield borough, and within Winchmore Hill Broadway:

- Across the borough, 0.7% of journeys are currently made by cycle. This is lower than most other London boroughs, suggesting potential to increase cycling within Enfield borough TfL LTDS 2009-10 to 2011-12).
- Similarly, Census 2011 data shows that 1.4% of working Enfield residents state that they usually travel to work by cycle, compared with 2.1% across all outer London boroughs, and 2.8% across England and Wales, again reflecting potential to increase cycling in Enfield borough.
- In Winchmore Hill the town centre visitor survey (Enfield Council, 2015) revealed that 1% of visits to the town centre are made by cycle. However 26% of visitors surveyed indicated that they did sometimes cycle, and a further 10% said they do not currently cycle, but would consider it. This points to significant potential to increase cycling visits to Winchmore Hill.

5.24 The extent to which the scheme leads to increased cycling visits, depends on the extent to which the Cycle Enfield scheme addresses the barriers to more people cycling.

- The Winchmore Hill visitor survey highlights the main constraints to people cycling more to the Winchmore Hill centres. Of those who indicated they already sometimes cycle, or might consider cycling in the future, the main barriers to them doing so are currently: not having a bike (31%), lack of safe routes (22%), too much car traffic (20%), and bad weather (15%).
- These factors are similar to those highlighted in the 2010 report 'Delivering the Benefits of Cycling in Outer London' produced by TfL, London Councils London Cycling Campaign, GLA, Sustrans and the Borough Cycling Officers Group. It highlights the key barriers as being both physical (traffic speed, severance of cycle lanes and lack of cycle parking facilities) as well as attitudinal (fear of traffic, convenience of the car, perception of cycling as incompatible with busy lifestyles).

5.25 The Cycle Enfield scheme will substantially address many of these constraints, directly improving feeling of safety through providing fully segregated cycle lanes as well as improved cycle parking facilities, which will directly address the physical barriers to increased cycling.

5.26 It is more difficult to assess the extent to which attitudinal barriers will shift and there is a lack of clear evidence to guide us on this.

5.27 The quantification below is relatively conservative, but based on an analysis of rates of cycling in other outer London boroughs (LTDS, 2009-10 to 2011-12), which demonstrate a realistic rate for an outer London borough, particularly recognising that the key constraints to cycling cited above will be addressed well by the Cycle Enfield scheme:

- Our base case is based on the proportion of cycling trips to the town centre increasing to 2.5%, bringing in closer in line with the average rate of cycling across all outer London boroughs (equivalent to a 32% increase in visitors from the current rate of 1.9% in Winchmore Hill Broadway)
- This assumption alters to an increase to 4% (111% increase from baseline of 1.9%) in the better case scenario (in line with the strongest performing outer London boroughs - Kingston on Thames at 4% and Waltham Forest at 3.8%), and no change under the worse case scenario.

## Net impact on town centre performance

5.28 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

5.29 In assessing the net impact of an increase in cycle visitors, it is necessary to take account of displacement. To ensure the assessment sets out a conservative estimate of change, we have assumed that only 10% of additional cycle journeys constitute net additional visits to the centre (and therefore new spending). We assume that the remaining 90% of additional journeys and related spend would have occurred regardless by people travelling in by different means. As such the table below only captures the net additional impact on town centre annual business turnover of these additional cycle users.

5.30 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in visits by cycle users
- % net additional impact on total annual town centre turnover

5.31 Various measures could be made to enhance the positive impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 5.10 Summary of Change in Cycle Users Impacts in Winchmore Hill Broadway

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £3.0m | 0% | - | 0% | - | 0% | - |
| Cycling | £0.1m | + 32% | +0% | + 111% | +0.1% | 0% | 0% |
| Car | £4.2m | 0% | - | 0% | - | 0% | - |
| Bus | £1.9m | 0% | - | 0% | - | 0% | - |
| Other | £0.2m | 0% | - | 0% | - | 0% | - |
| Total | £9.3m | - | +0% | - | +0.1% | - | 0% |

**5.32 Under the base case the impact of increased cycle users would have a negligible impact on town centre economic vitality, with negligible change in town centre spending.**

5.33 The better and worse case scenarios suggest that the range of possible impacts is expected to be an increase in town centre spending of between 0% and 0.1% (a negligible impact in both cases).

# Car User impacts

## Overview

5.34 Changes to the capacity and layout of roads and changes to signalised junctions creating extra congestion, and reduction of on-street car parking spaces could affect the number of visits made to the town centre by car.

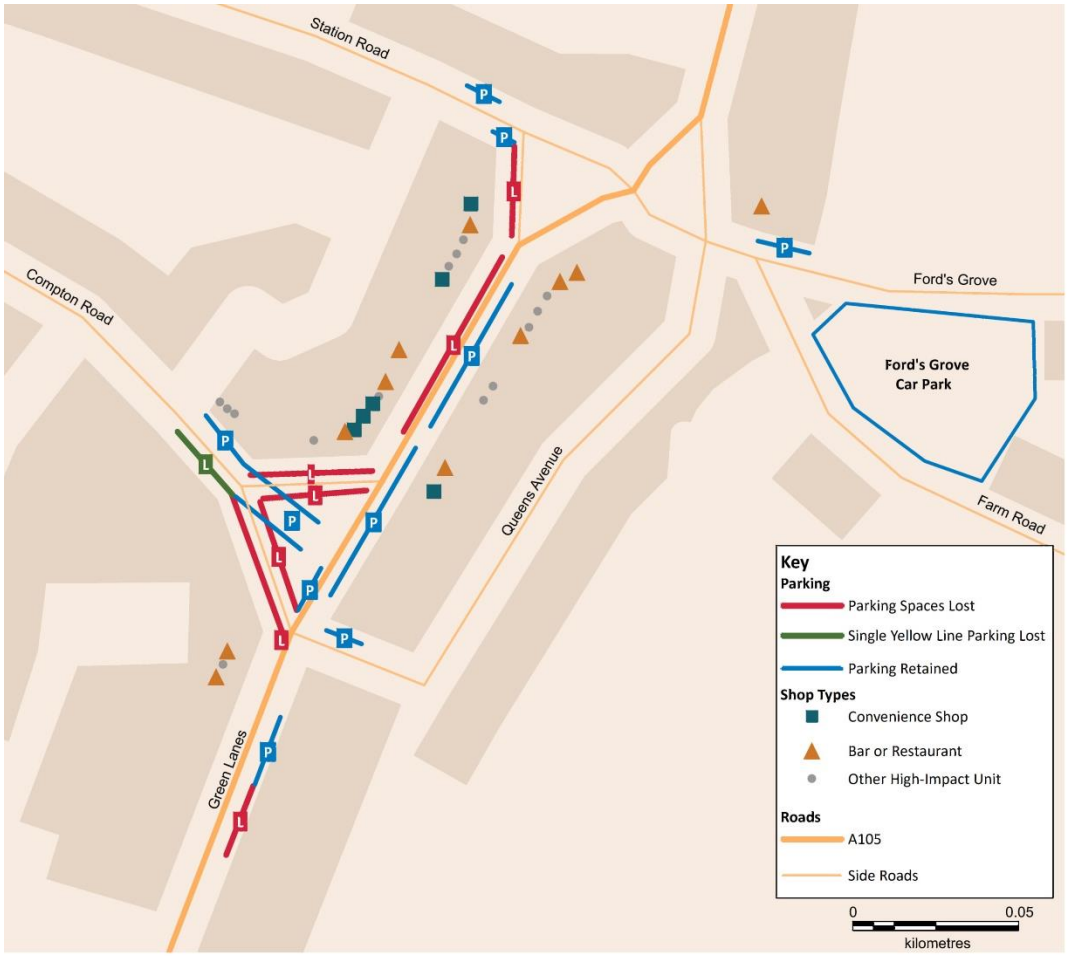
5.35 On-street parking would be affected by reduction of on-street parking spaces to make way for cycle lanes. There is a limited amount of informal on street car parking space in Winchmore Hill

Broadway therefore loss of ability to park on single yellow lines during the evenings is unlikely to be a negative factor in this location.

5.36 In Winchmore Hill these changes have created particular concerns for convenience stores who identify a large number of their customers as wanting to park immediately outside their store and shop quickly. They have also concerned businesses relying on business to business (B2B) trade who serve a significant number of customers per day.

5.37 The graphic below provides a simplified overview of changes to parking, and their proximity to town centre units, and particularly convenience stores and evening economy units.

Figure 5.7 Changes in Parking and Shop Types in Winchmore Hill Broadway




Source: Estates Gazette, Cycle Enfield Consultation Plans and Regeneris Consulting Note: There will be a changed road layout at the Green Lanes/Compton Road junction

Note: any post consultation design changes are not incorporated.

## Nature of Effect

### Congestion

5.38 In relation to the existing highway network through the centre of Winchmore Hill Broadway, there are currently two major junctions along Green Lanes, at Compton Road and Station Road/Ford's Grove. Neither of these junctions are signalised, with the former a priority T-junction, and the latter a 4-arm roundabout. There are a number of other side roads that join Green Lanes. One of these

to the south of the centre provides access to the Sainsbury's. As part of their preliminary design work, Jacobs have constructed two separate local highway junction models to simulate the current operation of two of the junctions where significant changes will occur, including the Station Road/Ford's Grove junction and the Sainsbury's junction. The two models are built for the AM and PM peak periods, utilising surveys of traffic flows and existing delays / queue lengths on each arm of each of the two junctions. As an overall summary of these models, they predict that traffic travelling along Green Lanes (in a north/south direction) through Winchmore Hill Broadway are currently delayed by an average of around 20 seconds in the AM peak period and 30 seconds in the PM Peak period across the three junctions.

5.39 Some data is available from Jacobs Town Centre Survey relating to the distances travelled by car drivers when accessing the town centre. This indicates that around 55% of car trips are under 2kms with the other 45% over 2kms. Whilst this data does not permit an accurate assessment of trip lengths, it suggests, on average, that trips are relatively short in nature. For the purposes of the analysis below we have assumed an average journey time by car of around 5.5 minutes or 11 minutes for a return journey.

5.40 The new scheme will result in a number of changes to the operation of the highway network through the town centre and, in particularly at two junctions on Green Lanes. The existing roundabout at Station Road/Ford's Grove will be replaced with a 4-arm signalised junction, whilst a 3-arm signalised junction will be introduced at the entrance to Sainsbury's.

5.41 As part of their preliminary design work, Jacobs have sought to model the impact of the changes in the operation of each of the two junctions during the AM and PM peak periods using two separate local highway junction models.

- The results from the Jacobs modelling work indicates that the introduction of a 4-arm signalised junction at **Station Road/Ford's Grove** is forecast to introduce additional delay to vehicle movements during both the AM and PM peak periods. The traffic signals introduce additional delay to all arms of the junction, with the largest delays on Station Road where vehicles may queue for up to an additional 70 seconds during the AM peak period.
- The results from the Jacobs modelling work indicates that the signalisation of the **Sainsbury's junction** is, not surprisingly, forecast to introduce additional delay to vehicle movements during both the AM and PM peak periods. The traffic signals introduce additional delay to traffic on all arms of the junction, with the largest delays on the northbound approach where vehicles may queue for up to an additional 45 seconds during the PM peak period.

5.42 In assessing the combined impact of the changes to both junctions the analysis has concluded that, on average, vehicles travelling through the town may experience around 40 seconds additional delays in both the AM and PM peak periods**.** These are the type of delays that would be incurred by a car driving into the centre and back out again, ie the equivalent of a return trip.

5.43 Alongside the delays incurred at the reconfigured junctions, there is also estimated to be some additional delay incurred to general traffic as a result of the reconfigured bus stop designs. On the northbound approach to Winchmore Hill Broadway the revised design requires buses to stop within the main carriageway. This will prevent following general traffic from passing the stationary buses. The extent of these delays will be dependent upon a range of factors, not least how many passengers board/alight the buses at different times of the day. A basic assessment of the potential extent of delays has been undertaken by evaluating the frequency of buses that serve the northbound bus stop within the town centre. The 329 service is the only one which will utilise this stop on Green Lanes within the town centre with around 10 buses per hour across the core of the day. Based on an average bus boarding/alighting time of 45 seconds, based on Jacobs survey data,

we have estimated a 13% chance of a bus being at a stop at any one time. Assuming a worst case scenario where general traffic is unable to pass the bus due to on-coming traffic, any vehicle travelling behind a bus will, on average, be delayed by 22.5 seconds (half the boarding/alighting time). Combining the probability of delay and the average length of delay gives you an estimate of cars driving into the centre being delayed by 3 seconds, on average, at one of these central bus stops. On a two-way return trip into and out of town this would equate to 6 seconds delay.

**5.44** In order to put these delay figures into some form of context we have applied them to our assumed average two-way car journey time into the town centre of 11 minutes. **The combined additional delays (at junctions and bus stops) would, therefore, represent around a 7% increase in journey times in both the AM and PM peak periods, approximately 46 seconds.**

5.45 These delays could potentially be reduced further with the introduction of further traffic signal control systems, such as SCOOT.

5.46 The Jacobs models only cover the AM and PM peak periods as these are the times when traffic flows are highest and when the scheme is forecast to generate the highest levels of mode shift from car trips to cycle trips. The changes in the junction operations will, however, also impact upon car trips during the inter-peak, evening and weekend periods. Whilst a direct quantitative assessment cannot be undertaken, the peak model data provides an insight into the likely impact.

- For the weekends, the volumes of traffic at the busiest times are not dissimilar to the weekday peaks and so we can assumed a similar impact, in terms of additional delay at junctions.
- For the inter-peak and evening periods, there will, inevitably, be additional delays at the both junctions as a result of the introduction of signals; however, it would be expected that these would result in no more than a 5% increase in journey times into the centre.

## Car Parking

5.47 The table below summarises the position with respect to number of spaces and parking regulations under current and proposed plans.

Table 5.11 Car Parking Summary

| | Current | | Proposed Plans | |
|---|---|---|---|---|
| | Number | Regulations | Number | Regulations |
| On-street | 59 (between Fords Grove and Sainsburys) | • Maximum Stay<br>• Pay and Display | 45 | • Maximum Stay<br>• Pay and Display |
| Off-street | 71 at Fords Grove | • Open 7 Days, 24 hours<br>• Free (usually fully occupied by commuters) | 71 at Fords Grove | • Fords Grove converted to maximum stay Pay and Display<br>• A 30 minute free parking zone in Fords Grove |
| Total | 130 | | 116 | |

5.48 The number of car parking spaces in Winchmore Hill Broadway will decrease as a result of the scheme, however with planned changes to reduce commuter parking at Fords Grove, this is expected to make far more of these spaces available for town centre shopping, therefore effectively increasing overall car parking space for town centre users.

5.49 The distance from Fords Grove car park to the South end of Winchmore Hill Broadway is around 300 metres, which equates to approximately 3 minutes' walk from the car park.

5.50 In consultations, the stores particularly concerned about the loss of on-street parking spaces and additional distance in Winchmore Hill Broadway were convenience retail stores. The majority of on-street parking bays lost will be on the northbound side of the road between Compton Road and Station Road although these areas are well served by the Fords Grove car park.

## Impact on Users

5.51 The analysis above shows that the congestion impacts of the scheme should lead to an average additional delay through the centre of less than 50 seconds at peak times, and less than this between the peak periods. In isolation this is not anticipated to have any significant impact on the number of car users accessing the centre.

5.52 Changes to on-street car-parking could have an impact on car users, for visitors that highly value convenience and might consider alternative retail locations if car parking is less convenient in Winchmore Hill. This may be particularly true for shops which offer similar goods to those found in Sainsbury's which is located 0.1 mile away from the centre of Winchmore Hill Broadway and offers free parking. To attempt to quantify the impact of the reduced parking we have considered the following

- Almost 90% of the current number of car parking spaces will remain. If visitors cannot currently use Fords Grove car park due to its use as a commuter car park, the conversion of the car park to pay and display will almost double the available visitor parking space in the town centre.
- Based on evidence from the town centre survey, 44% of town centre visitors use the off-street parking, while 56% park on-street.
- Overall 76% of current on-street parking spaces will remain.
- Even assuming all parking spaces are always at full capacity, then this means that a maximum of 24% of all on-street parkers would be affected, and would need to use the off-street car park instead of on-street parking.
- This therefore affects a maximum of 13% of all visitors to the town centre by car (56% of drivers park on street, of which 24% could be affected). The assessment must therefore assess whether these 13% of visitors would be willing to walk the additional distance from the car park to the shops:
  - The walk to Compton Road at the far end of the Broadway from Fords Grove is approximately 3 minutes, but the majority of convenience stores are closer to the car park than this.
  - Around 37% of town centre visitors are on non-discretionary trips (ie for non-flexible purposes such as work or education), and so would be much more unlikely to change destination
  - A Sainsbury's superstore with free parking located just outside the centre's borders (less than a minutes' drive) could pose competition for some of the convenience stores on the Broadway.
- Overall, these factors point to there being a limited impact on car users, however the three scenarios are used to set out a range of possible impact scenarios:

- Our base case assumes an overall 1.3% reduction in car users (that is, assuming 10% of those displaced on-street-parkers decide not to visit Winchmore Hill Broadway as a result of the minor additional inconvenience.
- This alters to 2.7% in the worse case (that is 20% of all displaced on-street-parkers deciding not to visit Winchmore Hill Broadway as a result), and no change in the better case.

## Net impact on town centre performance

5.53 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

5.54 It is assumed that the reduction in car users to the centre will all be entirely lost spend to Winchmore Hill Boradway (ie no displacement to other modes of transport).

5.55 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in car users
- % impact on total annual town centre turnover

5.56 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 5.12 Summary of Change in Car Usage Impacts in Winchmore Hill Broadway

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £3.0m | 0% | - | 0% | - | 0 | - |
| Cycling | £0.1m | 0% | - | 0% | - | 0 | - |
| Car | £4.2m | - 1.3% | -0.6% | 0% | 0.0% | - 2.7% | -1.2% |
| Bus | £1.9m | 0% | - | 0% | - | 0 | - |
| Other | £0.2m | 0% | - | 0% | - | 0 | - |
| Total | £9.3m | - | -0.6% | | 0.0% | - | -1.2% |

**5.57 Under the base case, the impact of reduced car users would have a negligible impact on town centre economic vitality, with a potential loss of town centre spending of approximately 0.6%.**

5.58 The better and worse case scenarios suggest that the range of possible impacts is expected to be a reduction in town centre spending of between 0% and 1.2% (respectively a negligible or minor negative impact).

# Bus User Impacts

## Overview

5.59 The proposed changes to bus stops include minor changes to location, as well as an introduction of bus stop boarder areas and bus stop bypasses, in order to enable the bus stops to operate around the cycle lanes.

5.60 There is currently one bus stop within the borders of Winchmore Hill Broadway and a further two bus stops just outside the borders. The bus stops serve the parade of shops in Winchmore Hill Broadway as well as a large Sainsbury's superstore to the South of the town centre.

5.61 The Jacobs Town Centre Survey suggests that travel distances by bus into the centre are generally relatively short, with 45% less than 1km and a further 19% less than 2kms. On this basis it is likely that most bus journey times into the centre are relatively low.

## Nature of Effect

5.62 The extent to which the scheme leads to a change in the number of bus visits, will depend upon a number of factors:

- **Changes in number and location of bus stops serving the town centre, which could reduce convenience for some users**
  - Within the town centre the northbound bus stop is to be moved marginally north, away from the centre of Compton Road as the junction is to be redesigned to increase public realm. This move will only be a few metres north and is unlikely to have any impact on users.
  - The Southbound bus stop to the North of the Broadway is to remain in place.
  - The northbound and southbound bus stops serving Sainsbury's are to be relocated within 40m of their existing locations.
- **Perceptions of safety of the new bus stops, which could discourage some users from using the bus**
  - The bus stop within the town centre will be designed to have a bus stop boarder, two will be bus bypasses. The bus stop to the north of the Broadway will also have a bus stop bypass.
  - TfL have indicated that this infrastructure is commonplace in continental Europe, a number are now operating across London and have not created any additional issues or collisions, and their use will be monitored, with TfL taking action to mitigate if there is any evidence emerging of a risk to bus passengers.
- **Congestion Impacts which could extend journey times by bus**
  - There is expected to be around 40 seconds additional delays in both the AM and PM peak periods at the new signalised junctions in Winchmore Hill Broadway. These changes will not fundamentally affect bus routes as they are small additional delays across a whole bus route but some minor amendments may need to be made to scheduling. Similar impacts may occur during weekend periods when general traffic volumes are high. There is likely to be minimal impact during the

inter-peak and evening periods, although the additional signals will create some extra journey time.

## Impact on Users

5.63 The visitor survey shows that around 69% of bus users are spending money in the town centre as part of non-discretionary trips (ie for non-flexible purposes such as work or education). It is assumed that there would be no impact on these visits.

5.64 The remaining 31% of bus user trips are on discretionary trips and so the changes outlined could lead to a proportion of these trips being displaced to alternative destinations.

5.65 However, the limited impacts and fewer convenient alternative options for bus users is expected to mean the impact is limited. This takes into account the following:

- The disruption to journeys is likely to be minimal – with only an estimated 40 second additional journey time even at peak travel periods
- Changes to bus stops will ensure that the TfL recommended maximum distance between bus stops of 400m will be retained.
- The success of the new bus stop arrangements, using bus stop boarders and by-passes will be kept under review.
- Bus users are likely to have less flexibility in decision making about retail and service centre destinations, unless they live nearby to alternative bus routes.

5.66 The scenarios therefore include the following:

- Our base case scenario is for no change to bus users as a result of the changes.
- The better case scenario assumes the same, while the worse case scenario assumes a reduction of 1.6% (based on a 5% reduction of all discretionary trips).

## Net impact on town centre performance

5.67 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

5.68 It is assumed that any reduction in bus users to the centre will all be entirely lost spend to Winchmore Hill Broadway (ie no displacement to other modes of transport).

5.69 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in bus users
- % impact on total annual town centre turnover

5.70 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 5.13 Summary of Change in Bus Users Impacts in Winchmore Hill Broadway

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £3.0m | 0% | - | 0% | - | 0% | - |
| Cycling | £0.1m | 0% | - | 0% | - | 0% | - |
| Car | £4.2m | 0% | - | 0% | - | 0% | - |
| Bus | £1.9m | 0% | 0.0% | 0% | 0.0% | -2% | -0.3% |
| Other | £0.2m | 0% | - | 0% | - | 0% | - |
| Total | £9.3m | - | 0.0% | - | 0.0% | - | -0.3% |

**5.71 Under the base case, there is assumed to be no change in bus users, hence a negligible impact on town centre economic vitality.**

5.72 The better and worse case scenarios suggest that the range of possible impacts is expected to be a reduction in town centre spending of between 0% and 0.3% (in both cases a negligible impact).

# Impacts on Loading & Unloading

5.73 The two loading bays currently in place in Winchmore Hill Broadway will remain but have been slightly relocated, within 30m of their existing locations.

5.74 The loss of 14 pay and display bays may also impact loading/unloading that occurs outside of loading bays. This has been highlighted as a concern by three businesses located in the Broadway who feel they are already constrained by lack of loading/unloading space (official and unofficial).

5.75 These businesses are the Keymakers locksmiths, The Brassware Company and the Broadway Butchers. The locksmiths and Brassware Company primarily trade B2B and have a significant amount of deliveries and pick-ups per day. The Brassware Company estimates it receives up to seven different deliveries per day loading/unloading up to 40 boxes. These shops face increasing competition from both Wickes (13 minute drive away in Edmonton) and B&Q in Enfield (14 minute drive away in Enfield) where there is plentiful free parking.

5.76 The butchers located on the northbound side of the street is also concerned by future loading/unloading space due to the loss of parking on this side of the street.

5.77 Because these issues primarily affect only a small number of businesses, the overall impact of changes to loading / unloading on town centre business turnover as whole is assessed as **neutral / negligible**. However, for the small number of firms who this does affect, mitigation measures may be required. These are set out in more detail in Chapter 7 of the report

# Town Centre Environment

## Overview

5.78 A number of elements are proposed as part of the Winchmore Hill Broadway scheme which have the potential to directly enhance the town centre environment, including:

- changes to the Compton Road junction to provide additional public realm space
- enhancement to a number of pedestrian crossings.

5.79 In addition to these direct enhancements to the town centre environment, it is expected by scheme planners that the town centre environment will be *indirectly* enhanced by changes in the volume and nature of traffic flows in the area as a result of the transport specific interventions.

## Nature of Effect

### Ease of Access around the Centre

5.80 While there are a number of crossing improvements proposed there are also concerns from consultees about impact of the scheme on accessibility for certain groups. However, we believe that the provision of designated crossing points and associated signage and the low overall volume of cyclists will minimise the risk of adverse accessibility effects. On balance, we consider overall effects on access and movement within town centre to be relatively minor, and, when considered in isolation, are unlikely to have any impact on town centre vitality

### Public Realm

5.81 As highlighted within the Palmers Green assessment, there is a lack of comprehensive and robust intelligence on the impact of public realm investments. That said, there is a large amount of case study evidence citing specific instances where environmental and public realm enhancements have impacted positively on town centre performance – including helping to strengthen footfall and turnover.

5.82 Specific public realm improvement within the Winchmore Hill Broadway scheme is limited to the proposed improvements at the junction of Green Lanes with Compton Road. Again, while this will provide a localised environmental improvement, taken in isolation, it is unlikely that this will have any impact on town centre vitality

### Town Centre Environment

5.83 It is anticipated that the town centre environment will be further enhanced by changes in the volume and nature of traffic flows in the area as a result of the transport specific interventions. Many consultation responses suggested that this could be a major positive of the scheme: 99 responses noted that the scheme will create “more attractive / liveable / improved town centres”, while 88 suggested that it will improve air quality. Conversely, some consultees raised concerns about additional congestion (228) and consequent effects on air quality (105), however the modelling by Jacobs suggests that this is unlikely to have a significant impact on congestion levels through the centre.

5.84 The OLF programme highlights that economic benefit is likely to be strongest if environmental improvements help to diversify town centre uses, encourage more people to spend leisure and recreation time there. It should be noted, however, that the capacity for significant short term economic gain in Winchmore Hill is perhaps limited by the fact that town centre performance is already comparatively strong (with a low vacancy level) and that the town centre is already comparatively diverse.

## Impact on Users

5.85 In the assessment of impacts we have taken into account the range of factors analysed above to consider overall environmental effects of the scheme on town centre users. While in isolation the public realm and accessibility effects are unlikely to impact on town centre performance, when considered cumulatively *alongside* the anticipated changes in car usage and cycling, there is a

stronger argument that the overall town centre environment and image could be enhanced in a way that is transformational.

5.86 Given the significant uncertainties and lack of clear precedents however we have made conservative assumptions about these impacts:

- Our base case assumes no change in overall footfall as a result of the town centre environment changes.
- This assumptions is the same for the worse case scenario, but increases to 2% overall footfall and spend across all users in the better case scenario.

## Net impact on town centre performance

5.87 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

5.88 It is assumed that the increases in visitors to the town centre and corresponding spend assessed here would all be net additional, not displaced from other transport modes.

5.89 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in visits by each transport user group
- % impact on total annual town centre turnover

5.90 Various measures could be made to enhance the positive impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 5.14 Summary of Environmental Impacts in Winchmore Hill Broadway

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £3.0m | 0% | 0.0% | + 2% | +0.6% | 0% | 0.0% |
| Cycling | £0.1m | 0% | 0.0% | + 2% | +0.0% | 0% | 0.0% |
| Car | £4.2m | 0% | 0.0% | + 2% | +0.9% | 0% | 0.0% |
| Bus | £1.9m | 0% | 0.0% | + 2% | +0.4% | 0% | 0.0% |
| Other | £0.2m | 0% | 0.0% | + 2% | +0.0% | 0% | 0.0% |
| Total | £9.3m | - | 0% | - | + 2% | - | 0% |

**5.91 Under the base case there is assumed to be no change in town centre users, hence a negligible impact on town centre economic vitality.**

5.92 There is similarly no change under the worse case scenarios, but an increase in town centre spending of 2% under the better case scenario (a minor positive impact).

# Summary and Assessment of Net Impacts

5.93 The table below draws together the net additional impacts set out under each of the assessment areas above. The table shows the overall impact both in terms of value and proportion of total annual town centre business turnover for Winchmore Hill Broadway. This is broken down to show:

- Construction phase impacts, only occurring within a single year
- Operational phase impacts, which would be annual effects and which are broken down by the net effects of changes to visitors by different transport mode, and the town centre environment impacts.

5.94 In each case we show three scenarios. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts, recognising the inherent uncertainties in this assessment

Table 5.15 Summary of Net Impacts in Winchmore Hill Broadway

| | | Base Case | Better Case | Worse Case |
|---|---|---|---|---|
| **Construction Phase** | **£** | **-£80,000** | **-£40,000** | **-£170,000** |
| | **%** | **-0.9%** | **-0.4%** | **-1.8%** |
| Transport Shifts (Bus, Car & Cycle Users) | £ | -£50,000 | £10,000 | -£140,000 |
| | % | -0.6% | 0.1% | -1.5% |
| Town Centre Environment | £ | £0 | £190,000 | £0 |
| | % | 0.0% | 2.0% | 0.0% |
| **Net Operational Phase** (Transport Shift & Town Centre Environment) | **£** | **-£50,000** | **£200,000** | **-£140,000** |
| | **%** | **-0.6%** | **2.1%** | **-1.5%** |

5.95 Under the base case:

- The construction phase would have a **negligible impact on town centre economic vitality within that single year**, with a potential loss of town centre spending of approximately 0.9%.
- The operational phase would have a **negligible impact on town centre economic vitality on an ongoing basis**, with a potential loss of town centre spending of approximately 0.6% per annum.

5.96 For both the construction and operational phases, various measures could be made to reduce the negative impacts and enhance the positive impacts. These measures are summarised in Chapter 7 of the report.

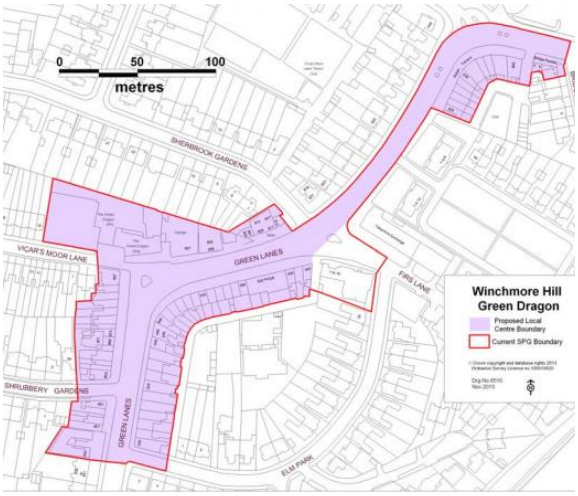
5.97 **By implementing these, we believe the impact of the operational phase can reach a neutral or positive level**.

5.98 The lack of UK precedents makes it difficult to predict the extent to which the scheme will have the transformational effect on town centre attractiveness and liveability which scheme planners seek. As such, this has not been modelled in the figures above. However, based on evidence of the impact of transformational public realm projects (set out at Section 4.92), if this is achieved, then there could be a longer term uplift in town centre spend of up to 10-15%.

# 6. Winchmore Hill Green Dragon Assessment

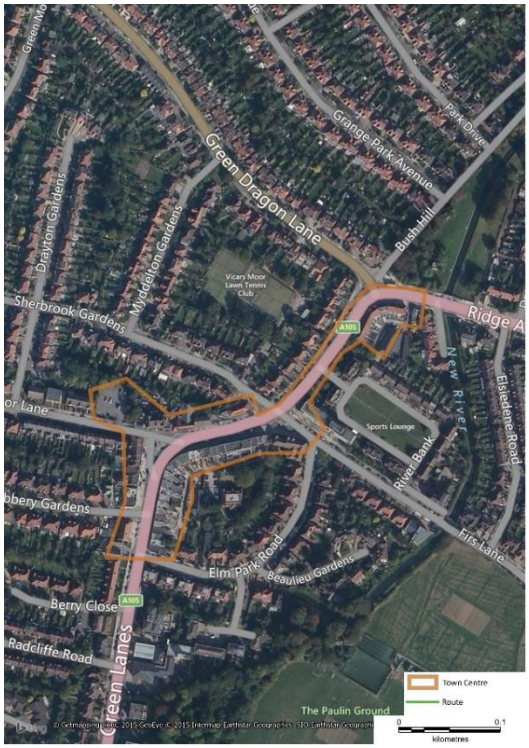
6.1 Winchmore Hill Green Dragon is designated as a large local centre under Enfield's Local Plan. It is situated towards the centre of the borough. The following maps show the outline of the town centre boundary, and therefore the area this assessment will focus on.

Figure 6.1 Town Centre Boundary




Source: Enfield Local Plan: Town Centres Uses and Boundaries Review (2013)

Figure 6.2 Context Map




Source: Regeneris Consulting & Enfield Local Plan: Town Centres Uses and Boundaries Review (2013)

6.2 The table below sets out the diversity of units present in Winchmore Hill Green Dragon, and provides a comparison with data from 2005.

Table 6.1 Breakdown of Units in Winchmore Hill Green Dragon

| Type of Unit | Number of Units 2014 | Number of Units 2005 |
|---|---|---|
| Comparison Retail | 13 | 12 |
| **Convenience Retail** | 4 | 6 |
| A1 Services (inc hairdressers, travel agents and other class A1 users not selling convenience / comparison goods) | 13 | 11 |
| A2 Services | 6 | 5 |
| A3/A5 | 15 | 12 |
| A4 Pubs and Bars | 1 | 0 |
| Vacant | 3 | 2 |
| Total Units | 55 | 48 |
| Total Active Units (ie excluding vacancies) | 52 | 46 |

NLP, Enfield Retail and Town Centres Study, 2014

## Town Centre Performance

6.3 The town centre data reflects that **Winchmore Hill Green Dragon is a prosperous town centre**:

- **Vacancy rates in Winchmore Hill Green Dragon are fairly low**, with the latest data from the Estates Gazette showing that there were three vacant units in Winchmore Hill Green Dragon (December 2015), representing a vacancy rate of 5.4%. This compares well with the London town centre average of 7.8% and the national rate of 11.8% (Local Data Company, Vacancy Rate Report for H2 2014).
- There has also been **a 15% increase in the number of active units** in the town centre (7 units) between 2005 and 2014.

6.4 The shops and services offered in Winchmore Hill Green Dragon change frequently. The town centre has a churn rate 11.4%, with an average of one in nine businesses leaving the town centre each year.

## Total Town Centre Business Turnover

6.5 As described in the methodology section in Chapter 2, we have undertaken analysis to estimate the total business turnover generated by town centre businesses and the value of this turnover that is generated by visitors reaching the centre by different transport modes.

6.6 It must be noted that the figures set out here represent a best estimate, and are intended purely to be a sensible estimate of current town centre turnover in order to aid the quantification of impacts. As discussed in the data limitations section of Chapter 2, more accurate data on town centre business turnover is not available. These figures should therefore be regarded as indicative estimates.

6.7 Table 6.2 shows the overall proportion of visitors and spend by mode of transport used to reach the centre.

Table 6.2 Results from Winchmore Hill Green Dragon Town Centre Survey

| | Car-driver | Car pass. | Bus | Rail | Cycle | Motor-cycle | Walk | Taxi |
|---|---|---|---|---|---|---|---|---|
| Percent share of visitors | 20.4 | 1.6 | 30.4 | 2.6 | 1.9 | 0.0 | 43.1 | 0.0 |
| Percent share of spending | 44.2 | 0.9 | 20.8 | 0.4 | 1.2 | 0.0 | 32.5 | 0.0 |

Source: Winchmore Hill Green Dragon Town Centre Survey, Regeneris Calculations

6.8 Using the methodology set out in Chapter 2, Table 6.3 sets out an estimate of total town centre jobs supported and total business turnover in Winchmore Hill Green Dragon.

Table 6.3 Winchmore Hill Green Dragon estimates of jobs, turnover per job, and total revenues

| | Local Jobs | Estimate of Total Business Turnover |
|---|---|---|
| Winchmore Hill Green Dragon Businesses | 110 | £5,699,000 |

Source: Estates Gazette, December 2015; Annual Business Survey, 2014.

6.9 Drawing together the data from the two tables above (as set out in the methodology at Chapter 2), the table below sets out an estimated breakdown of total annual spend and annual visits made by mode of transport used to reach the centre.

Table 6.4 Annual Business Turnover and Visits by Mode of Transport

| | Value of Total Annual Business Turnover Spend by Mode | Annual Visits by Mode |
|---|---|---|
| Car driver | £2,520,000 | 81,000 |
| Car passenger | £51,000 | 6,000 |
| Local bus | £1,184,000 | 121,000 |
| Rail | £25,000 | 10,000 |
| Cycle | £70,000 | 8,000 |
| Motorcycle | N/A | N/A |
| Walk | £1,850,000 | 171,000 |
| Taxi | N/A | N/A |
| **Total** | **£5,699,000** | **397,000** |

6.10 For Winchmore Hill Green Dragon, the baseline provides estimates that of the £5.7 million of total annual turnover across all retail and high frequency consumer service businesses in the town centre:

- £2.6 million is derived from 87,000 trips from car users (drivers and some passengers);
- £1.2 million is derived from almost 121,000 trips by bus passengers;
- £1.8 million is derived from almost 171,000 million trips by pedestrians.
- At present, 8,000 cyclist trips account for around £70,000.

## Other Baseline Data to Aid Assessments

6.11 The data below provides useful evidence that is drawn on in the analysis in subsequent sections.

### Primary Reason for Visit

6.12 The table below sets out the main reason for visiting the town centre cited by visitors' spending money in the town centre, and a breakdown specifically for bus and car users, which are referred to in the subsequent analysis. The table also shows a sub-set of these trips which can be considered as non-discretionary trips (ie where the visitor could not easily visit an alternative location). The categories shown as non-discretionary are marked in the table.

Table 6.5 Main Reason for Visiting Winchmore Hill Green Dragon Town Centre

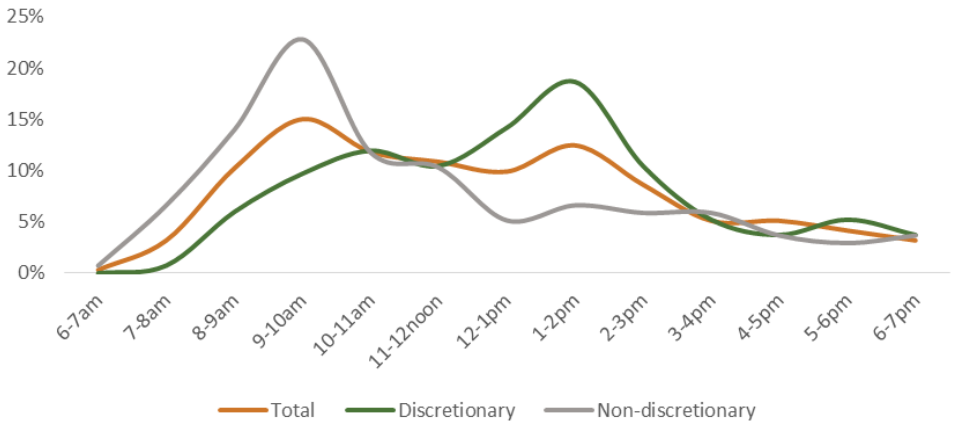
| Reason | Total (%) | Bus Users (%) | Car Users (%) |
|---|---|---|---|
| Shopping | 30% | 19% | 26% |
| Personal Business (eg banking, doctor visit) (*50% non-discretionary*) | 14% | 11% | 23% |
| Eating / Drinking / Recreation | 13% | 6% | 25% |
| Home (*non-discretionary*) | 13% | 8% | 5% |
| Normal Place of Work (*non-discretionary*) | 24% | 46% | 18% |
| Education (*non-discretionary*) | 2% | 3% | 0% |
| Visiting friends/family (*non-discretionary*) | 4% | 5% | 3% |
| Total | 100% | 100% | 100% |
| Total Non-Discretionary trips | 50% | 69% | 37% |

Source: Cycle Enfield Town Centre Surveys

## Arrival Times in the Town Centre

6.13 The chart below gives an indication of the arrival times of visitors to the town centre. While this data is limited by the timing of the survey being undertaken, the visitor survey fieldwork was carried out across all daytime hours, and so gives a useful indicative view of peak arrival times in the centre. It shows that discretionary visitors are much more spread out across the day, whereas discretionary visitors largely visit at the start of the day.

Figure 6.3 Arrival Time of Town Centre Visitors by Discretionary / Non-Discretionary Visits

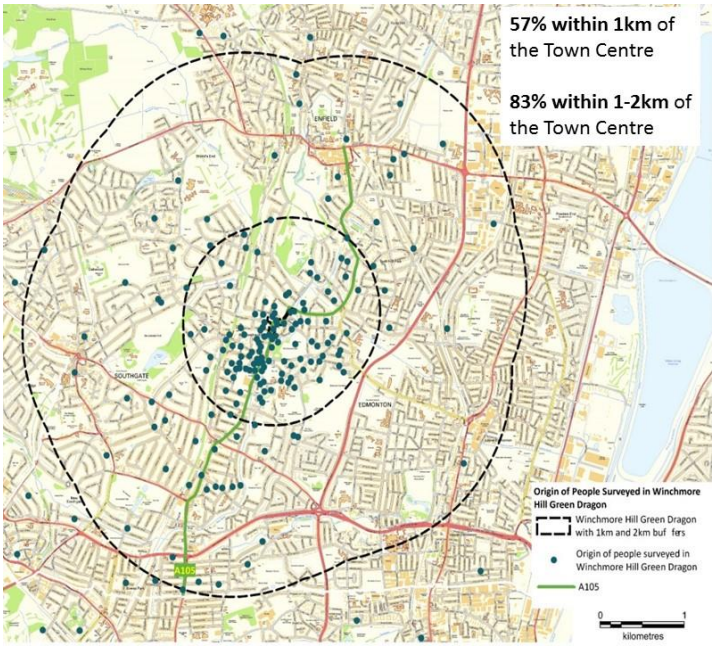



Source: Cycle Enfield Town Centre Surveys

## Distance Travelled to Visit Town Centre

6.14 The map below show the distance travelled to the town centre by all respondents to the visitor survey.

Figure 6.4 Home location of people surveyed in Winchmore Hill Green Dragon




Source: Cycle Enfield Town Centre Survey

## Alternative Retail and Service Destinations

6.15 The table below sets out an overview of key retail and service destinations which visitors to Winchmore Hill Green Dragon might consider as alternatives.

Table 6.6 Nearest Alternative Locations to Winchmore Hill Green Dragon

| Type | Name | Distance (miles) |
|---|---|---|
| Town centres | Winchmore Hill Broadway (Local Centre) | 0.4 |
| | Enfield Town (Major Centre) | 1.3 |
| | Bush Hill (Local Centre) | 1.3 |
| | Palmers Green (District Centre) | 1.6 |
| | Southgate (District Centre) | 1.9 |
| Out-of-Town Shopping Centres | Palace Gardens Shopping Centre | 1.8 |
| | Enfield Retail Park | 2.5 |
| | Ravenside Retail Park | 3.2 |
| | Friern Barnet Retail Park | 3.6 |
| | Tottenham Hale Retail Park | 5.2 |

Source: Regeneris Consulting
N.B. Distances are the shortest walking routes from the Green Dragon Lane / Green Lanes Junction

# Outputs – Physical Changes of Cycle Enfield Scheme

6.16 The key outputs of the Cycle Enfield scheme in Winchmore Hill Green Dragon are shown below.

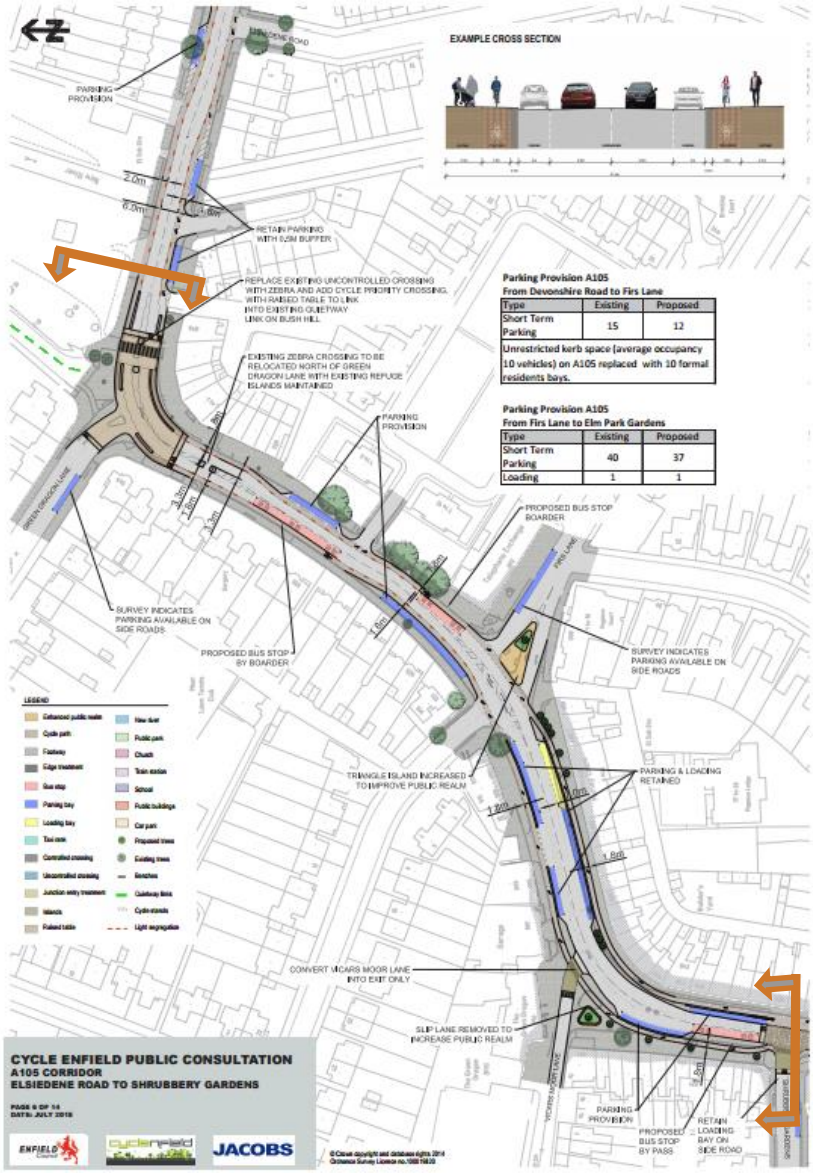
Table 6.7 Cycle Scheme Deliverables at Winchmore Hill Green Dragon

| | Key Output | Detail |
|---|---|---|
| **Construction Phase** | Construction works to deliver the elements of the scheme outlined below and overleaf | • Detailed plans for the construction phase yet to be developed; however, there is a headline expectation that the three A105 schemes will be delivered across a 6 month period, although the phasing of works within each town centre is currently unclear |
| **Accessibility** | Enhanced Cycle Infrastructure | • Segregated cycle lanes |
| | Changes to car parking and road capacity | • 55 on-street parking bays increased to 59 bays<br>• Unrestricted kerb space (average occupancy 10 vehicles) removed |
| **Environmental** | Beautification and Pedestrian Friendliness | • Triangle at Firs Lane junction increased to improve public realm<br>• Replace existing uncontrolled crossing with zebra crossing south of Shrubbery Gardens<br>• An existing zebra crossing relocated and add cycle priority crossing<br>• Vicars Moor Lane slip road removed to increase public realm. |

Source: Regeneris Consulting based on Cycle Enfield Consultation Plans

6.17 The diagrams show the original Cycle Enfield proposals for Winchmore Hill Green Dragon centre used for consultation. Note: some factors shown in the table above have been updated since these original scheme plans.

Figure 6.5 Proposed Plans for Winchmore Hill Green Dragon




Source: Cycle Enfield Consultation Plans

# Construction Phase Impacts

## Overview

6.18 At this stage detailed plans for construction in each of the three A105 town centres are yet to be developed, and as such, the approach to construction phasing and specific approach both across and within the three A105 town centres is not known. The design team estimate the total construction period for the whole of the A105 Corridor Schemes is likely to be around 6 months.

6.19 Drawing on transport engineers within our team, we have modelled possible construction approaches in Winchmore Hill Green Dragon, summarised in the table below.

| Scenario | Details | Possible Congestion Impact | Possible Parking Impact |
|---|---|---|---|
| Scenario 1 – one-way road access but access to businesses maintained | For Winchmore Green Dragon, the length of carriageway is estimated to be around 300 metres. The works could feasible be undertaken in three sections, with a duration of 5 weeks. | Under Scenario 1, maintaining good access to the retail units by deploying one-way working, delays at red signals could be up to around 1½ minutes. The structure of local highway network should mean that these delays should be more contained within the localised area, rather than impacting across the strategic network. | It is anticipated that up 20 parking spaces may be lost during the construction phase at any one time. |
| Scenario 2 – approach which prioritises maintaining 2 way access along Green Lanes | The width of the carriageway through parts of Winchmore Green Dragon should mean that implementing Scenario 2, maintaining two-way working, should be more feasible than is the case in Winchmore Hill Broadway. This would reduce congestion compared to scenario 1 but would result in some reduction to pavement access. | | |

## Nature of Effect

6.20 The main impacts of construction will be:

- temporary increases in congestion
- temporary reductions in parking spaces
- temporary effects on visual amenity (although not significantly obscuring business premises) and some noise and dust blight, in proportion with those typically associated with highways maintenance work.

6.21 These effects can impact on visitor numbers and spend in the town centre, however there is currently no research which provides robust quantifications of the link between these factors and adverse town centre vitality.

6.22 Case study evidence from the London wide OLF programme[11] highlights that extended periods of construction activity can have disruptive effects in town centres where major public realm and highway works resulted in businesses reporting losses of footfall and turnover, however this was mainly the case where construction works were concentrated in one area for a period of over 6 months, or where pedestrian flows were interrupted. Neither of these would be the case in the approaches set out above.

## Impacts on Users

6.23 The analysis below focuses on the impact on three main user groups – people visiting on foot, by car and by bus, which make up 98% of total spend in Winchmore Hill Green Dragon and are likely to be most affected.

### Pedestrians

6.24 Under both approaches the works are focused on the carriageway, maintaining pedestrian access to all businesses. Given people visiting on foot are typically visiting their closest centre, and there is no impact on their journey times or access to destinations, there is assumed to be negligible impact on these users and no change to the number of people visiting the centre on foot.

[11] Outer London Fund Round 2 Evaluation, GLA, 2015, accessed at https://www.london.gov.uk/what-we-do/regeneration/funding-opportunities/completed-funds

### Car Users

6.25 Both congestion and reduced car parking could affect car users:

- The Cycle Enfield Visitor Survey shows that around 37% of car drivers are spending money in the town centre as part of non-discretionary trips (trips for which they could not easily switch to an alternative location eg going to work, visiting the doctor etc).
- The remainder of trips are discretionary and any additional delays and loss of parking may result in a proportion of trips being displaced elsewhere for the duration of construction (there are a number of other centres of comparable or larger size within a small radius of Broadway). However, as Figure 6.3 in the baseline shows, the majority of discretionary trips take place between 10am and 3pm, outside the peak periods when congestion is likely to be greatest.
- As it has not been possible to model the impact of construction works, we have included a broad range of possible impacts within our three scenarios.
  - Our base case is based on the temporary loss of 25% of the discretionary car trips (effectively 16% of all car trips) for the duration of the works
  - This alters to 50% of discretionary car trips (effectively 32% of all car trips) under a worse case scenario, and 12.5% of discretionary car trips (effectively 8% of all car trips) under a better case scenario, for the duration of the works.

### Bus Users

6.26 Congestion impacts and temporary changes to bus stop locations could affect bus users:

- The Cycle Enfield Visitor Survey shows that around 69% of bus users are spending money in the town centre as part of non-discretionary trips. The remainder of trips are discretionary and additional delays may result in a proportion of trips being displaced elsewhere for the duration of the construction works. Bus users typically have fewer alternative choices than car users however, due to the limitations of available bus routes they can use.
- As with car users, the impacts are also likely to be reduced due to the fact that the majority of discretionary trips take place between 10am and 3pm, outside the peak periods when congestion is likely to be greatest,
- We have again included a broad range of possible impacts within our three scenarios.
  - Our base case is based on the temporary loss of 10% of the discretionary bus trips (effectively 3% of all bus trips) for the duration of the works
  - This alters to 20% of discretionary bus trips (effectively 6% of all bus trips) under a worse case scenario, and no change under a better case scenario, for the duration of the works.

## Net impact on town centre performance

6.27 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

6.28 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in visits by that transport user group
- % impact on total annual town centre turnover (note: for the construction phase, the change in visits are estimated to only last for 5 weeks, so the impact on *annual* town centre turnover is more limited)

6.29 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 6.8 Summary of Construction Phase Impacts in Winchmore Hill Green Dragon

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £1.8m | 0% | - | 0% | - | 0% | - |
| Cycling | £0.1m | 0% | - | 0% | - | 0% | - |
| Car | £2.6m | -16% | -0.7% | -8% | -0.3% | -32% | -1.4% |
| Bus | £1.2m | -3% | -0.1% | 0% | -0.0% | -6% | -0.1% |
| Other | £0.1m | 0% | - | 0% | - | 0% | - |
| Total | £5.7m | - | -0.7% | - | -0.3% | - | -1.5% |

**6.30 Under the base case, the construction phase has a negligible impact on town centre economic vitality within that single year, with a potential loss of town centre spending of approximately 0.7%.**

6.31 The better and worse case scenarios suggest that the range of possible impacts is expected to be a reduction in town centre spending of between 0.3% and 1.5% (respectively a negligible or minor negative impact).

# Cycle User Impacts

## Overview and Nature of Effect

6.32 Increasing the number of cyclists using the A105 Corridor is at the heart of the Cycle Enfield scheme plans for Winchmore Hill Green Dragon.

6.33 The changes to cycling infrastructure include uninterrupted segregated cycle lanes on both sides of the road all of the way along the A105 stretch through Winchmore Hill Green Dragon. In addition, new cycle parking facilities will be introduced and Enfield Council has introduced a range of measures to support an increase in cycling in the borough.

6.34 The enhanced cycle route connectivity is expected to lead to an increase in cycle users visiting the town centre, both as a result of existing visitors changing their travel mode to bicycle and making more visits to the town centre, and attracting more people to visit the town centre as a result of the enhanced connectivity.

## Impact on Users

6.35 The available evidence points to a significant opportunity to increase cycling across Enfield borough, and within Winchmore Hill Green Dragon:

- Across the borough, 0.7% of journeys are currently made by cycle. This is lower than in most other outer London boroughs, suggesting potential to increase cycling within Enfield borough TfL LTDS 2009-10 to 2011-12).
- Similarly, Census 2011 data shows that 1.4% of working Enfield residents state that they usually travel to work by cycle, compared with 2.1% across all outer London boroughs, and 2.8% across England and Wales, again reflecting potential to increase cycling in Enfield borough.
- In Winchmore Hill the town centre visitor survey revealed that 1% of visits to the town centre are made by cycle. However 26% of visitors surveyed indicated that they did sometimes cycle, and a further 10% said they do not currently cycle, but would consider it. This points to significant potential to increase cycling visits to Winchmore Hill.

6.36 The extent to which the scheme leads to increased cycling visits, depends on the extent to which the Cycle Enfield scheme addresses the barriers to more people cycling.

- The Winchmore Hill visitor survey highlights the main constraints to people cycling more to the Winchmore Hill centres. Of those who indicated they already sometimes cycle, or might consider cycling in the future, the main barriers to them doing so are currently: not having a bike (31%), lack of safe routes (22%), too much car traffic (20%), and bad weather (15%).
- These factors are similar to those highlighted in the 2010 report 'Delivering the Benefits of Cycling in Outer London' produced by TfL, London Councils London Cycling Campaign, GLA, Sustrans and the Borough Cycling Officers Group. It highlights the key barriers as being both physical (traffic speed, severance of cycle lanes and lack of cycle parking facilities) as well as attitudinal (fear of traffic, convenience of the car, perception of cycling as incompatible with busy lifestyles).

6.37 The Cycle Enfield scheme will substantially address many of these constraints, directly improving feeling of safety through providing fully segregated cycle lanes as well as improved cycle parking facilities, which will directly address the physical barriers to increased cycling.

6.38 It is more difficult to assess the extent to which attitudinal barriers will shift and there is a lack of clear evidence to guide us on this.

6.39 The quantification below is relatively conservative, but based on an analysis of rates of cycling in other outer London boroughs (LTDS, 2009-10 to 2011-12), which demonstrate a realistic rate for an outer London borough, particularly recognising that the key constraints to cycling cited above will be addressed well by the Cycle Enfield scheme:

- Our base case is based on the proportion of cycling trips to the town centre increasing to 2.5%, bringing in closer in line with the average rate of cycling across all outer London boroughs (equivalent to a 32% increase in visitors from the current rate of 1.9% in Winchmore Hill Broadway)
- This assumption alters to an increase to 4% (111% increase from baseline of 1.9%) in the better case scenario (in line with the strongest performing outer London boroughs - Kingston on Thames at 4% and Waltham Forest at 3.8%), and no change under the worse case scenario.

## Net impact on town centre performance

6.40 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

6.41 In assessing the net impact of an increase in cycle visitors, it is necessary to take account of displacement. To ensure the assessment sets out a conservative estimate of change, we have assumed that only 10% of additional cycle journeys constitute net additional visits to the centre (and therefore new spending). We assume that the remaining 90% of additional journeys and related spend would have occurred regardless by people travelling in by different means. As such the table below only captures the net additional impact on town centre annual business turnover of these additional cycle users.

6.42 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in visits by cycle users
- % net additional impact on total annual town centre turnover

6.43 Various measures could be made to enhance the positive impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 6.9 Summary of Change in Cycle Users Impacts in Winchmore Hill Green Dragon

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £1.8m | 0% | - | 0% | - | 0% | - |
| Cycling | £0.1m | + 32% | 0% | + 111% | +0.1% | 0% | 0% |
| Car | £2.6m | 0% | - | 0% | - | 0% | - |
| Bus | £1.2m | 0% | - | 0% | - | 0% | - |
| Other | £0.1m | 0% | - | 0% | - | 0% | - |
| Total | £5.7m | - | 0% | - | +0.1% | - | 0% |

**6.44 Under the base case the impact of increased cycle users would have a negligible impact on town centre economic vitality, with negligible change in town centre spending.**

6.45 The better and worse case scenarios suggest that the range of possible impacts is expected to be an increase in town centre spending of between 0% and 0.1% (a negligible impact in both cases).

# Car User Impacts

## Overview

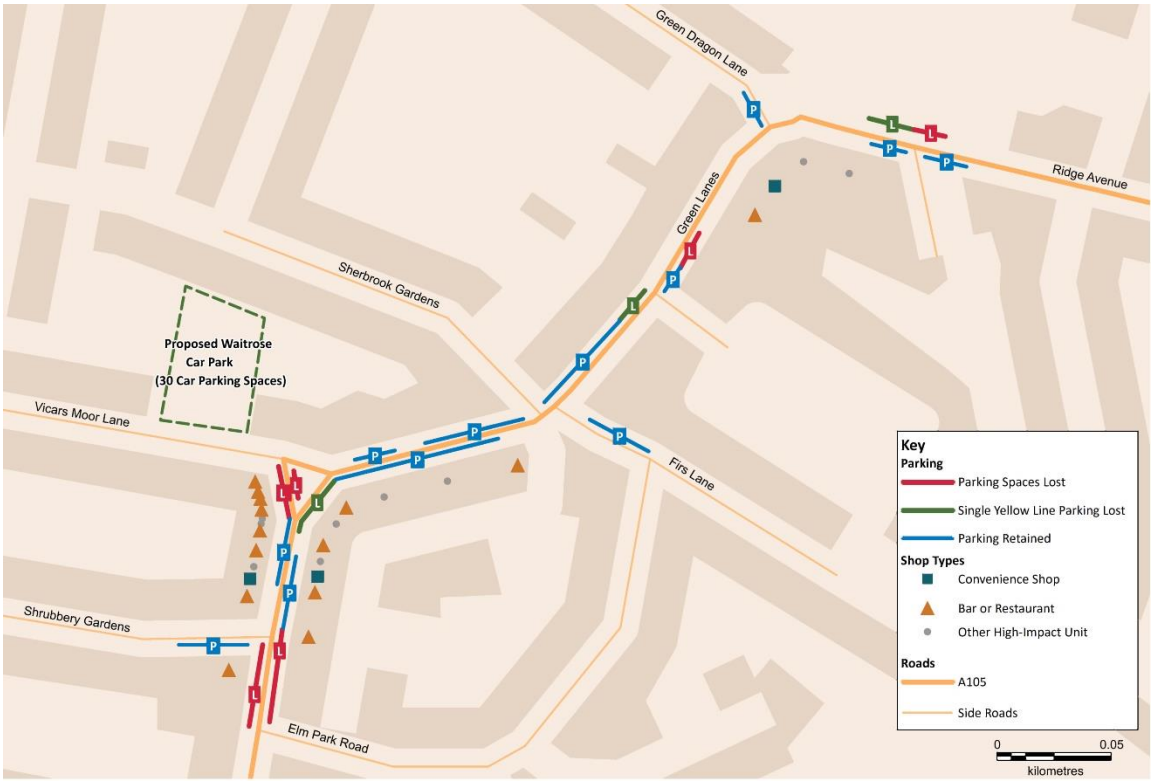
6.46 Changes to the capacity and layout of roads and changes to signalised junctions creating extra congestion, and reduction of on-street car parking spaces could affect the number of visits made to the town centre by car.

6.47 On-street parking would be affected by reduction of on-street parking bays to make way for cycle lanes, as well as reduction in areas with single yellow line markings, which allow evening parking where there are no dropped kerbs.

6.48 These changes have created particular concerns for convenience stores who identify a large number of their customers as wanting to park immediately outside their store and shop quickly, as well as bars and restaurants for whom on-street parking loss will include the loss of on-street parking bays as well as the loss of single yellow line areas.

6.49 The graphic below provides a simplified overview of changes to parking, and their proximity to town centre units, and particularly convenience stores and evening economy units.

Figure 6.6 Changes in Parking and Shop Types in Winchmore Hill Green Dragon




Source: Estates Gazette, Cycle Enfield Consultation Plans and Regeneris Consulting Note: There will be a changed road layout at the Green Lanes/Compton Road junction

Note: any post consultation design changes are not incorporated.

## Nature of Effect

### Congestion

6.50 In relation to the existing highway network through the centre of Winchmore Green Dragon, there is a single 4-arm junction to the northern end of the town where Green Lanes passes Firs Lane/Sherbrook Gardens. Green Lanes has priority over both other arms of the junction. There are a number of other side roads that join Green Lanes, all without priority, including Vicars Moor Lane, Shrubbery Gardens and Elm Park Road, all of which are expected to operate efficiently with minimal delays.

6.51 Some data is available from Jacobs Town Centre Survey relating to the distances travelled by car drivers when accessing the town centre. This indicates that around 75% of car trips are under 2kms

with the other 25% over 2kms. Whilst this data does not permit an accurate assessment of trip lengths, it suggests, on average, that trips are relatively short in nature.

6.52 The new scheme does not incorporate any major changes to any of the junctions through Winchmore Green Dragon that will affect the flow of traffic along Green Lanes. Formalised crossing arrangements to the south of the town may introduce some minimal delay to general traffic; however, it is not anticipated that this will have any significant impact on traffic flows

6.53 Some changes to the layout of junctions will occur at Firs Lanes and Vicars Moore Lane. The Firs Lane junction will have a larger central reservation for pedestrians. This will result in the loss of one lane on the approach to the junction from Firs Lane and so left and right-turning traffic will need to queue back in the same lane. This might create some delay for left-turning traffic if they are required to queue behind a right-turning vehicle. We understand the arrangements for Vicars Moore Lane remain under consideration due nearby re-development proposals; however, it is likely that two-way traffic movements at the junction will be maintained.

6.54 Whilst delays incurred at the reconfigured junctions will be minimal, there is also estimated to be some delay incurred to general traffic as a result of the reconfigured bus stop designs. At two locations on the north and southbound approaches to Winchmore Green Dragon the reconfigured designs require buses to stop within the main carriageway. This will prevent following general traffic from passing the stationary buses. The extent of these delays will be dependent upon a range of factors, not least how many passengers board/alight the buses at different times of the day. A basic assessment of the potential extent of delays has been undertaken by evaluating the frequency of buses that serve the busiest bus stop within the town centre. Within Winchmore Green Dragon the 125 and 329 services both call at stops along Green Lanes within the town centre with around 15.5 buses per hour across the core of the day. Based on an average bus boarding/alighting time of 45 seconds, based on Jacobs survey data, we have estimated a 20% chance of a bus being at a stop at any one time. Assuming a worst case scenario where general traffic is unable to pass the bus due to on-coming traffic, any vehicle travelling behind a bus will, on average, be delayed by 22.5 seconds (half the boarding/alighting time). Combining the probability of delay and the average length of delay gives you an estimate of cars driving into the centre being delayed by around 5 seconds, on average, at one of these central bus stops. On a two-way return trip into and out of town this would equate to 10 seconds delay.

6.55 In order to put these delay figures into some form of context we have applied them to our assumed average two-way car journey time into the town centre of 11 minutes. **The delays would, therefore, represent around a 1.5% increase in journey times, approximately 10 seconds.**

## Car Parking

6.56 The table below summarises the position with respect to number of spaces and parking regulations under current and proposed plans.

Table 6.10 Car Parking Summary

| | Current | | Proposed Plans | |
|---|---|---|---|---|
| | Number | Regulations | Number | Regulations |
| On-street | 55 | • Maximum Stay<br>• Pay and Display | 59 | • Maximum Stay<br>• Pay and Display |
| On-street Single Yellow Line Areas | 10 | Yellow line area between Shrubbery Gardens and Vicars Moore Lane | 0 | |

| | | | | |
|---|---|---|---|---|
| Off-street | N/A | • No car park at Winchmore Hill Green Dragon | • N/A | |
| Total Daytime | 55 | | 59 | |
| Total Evening | 65 | | 59 | |

6.57 The number of car parking space available will slightly increase in the daytime but reduce in the evening as a result of the scheme.

6.58 The Fords Grove car park is located around 500 metres from the south end of Winchmore Hill Green Dragon, a 6 minute walk at regular pace.

6.59 There are currently initial plans to convert the vacant Green Dragon public house into a Waitrose store. This could potentially provide additional car parking spaces for approximately 26 cars. Even if this parking space is for dedicated customers only, it should still provide a boost to the number of shoppers visiting the centre with consequential benefits for local businesses.

6.60 In consultations, the stores particularly concerned about the loss of on-street parking spaces and additional distance were convenience retail stores and evening economy units, such as restaurants. The graphic at Figure 6.6 maps these units against the on-street parking changes:

- Winchmore Hill Green Dragon has a total of 55 retail/service units within its centre. 16 of these units (29%) are comprised of restaurants/cafes, pubs/bars and fast food/takeaway establishments which serve the evening economy.
- The centre has a lower than average representation of convenience units (7%) vs an England average of 8%. The loss in car parking space is distributed fairly evenly throughout the centre and as a result the impacts on local businesses are likely to be fairly equal.

## Impact on Users

6.61 The analysis above shows that the congestion impacts of the scheme should lead to an average additional delay through the centre of around 10 seconds at peak times, and less than this between the peak periods. In isolation this is not anticipated to have any significant impact on the number of car users accessing the centre.

6.62 Changes to overall car-parking capacity could have an impact on car users, and potential visitors might consider alternative retail locations if there is less car parking space available in Winchmore Hill Green Dragon. To attempt to quantify the impact of this we have considered the following:

- Evening economy services (eg restaurants / takeaways) comprise approximately 29% of town centre units, although many will also operate in the daytime. We have therefore assumed approximately 20% of the town centre economy is comprised of evening economy, and 80% is daytime economy.
- With no current public off-street car park in close proximity, we have assumed that 100% of car user visitors to Winchmore Hill Green Dragon park on-street.
- During the day, all on-street spaces will remain; in the evening approximately 91% of on-street spaces will remain (taking account of the loss of the single yellow line area).
- Even assuming all parking spaces are always at full capacity, then this means that a maximum of 2% of drivers will be affected (20% of visitors are assumed to be evening economy visitors, and 9% of evening spaces lost).

- The assessment must therefore assess what proportion of these 2% of displaced on-street-parker visitors would be lost to the town centre:
  - There is no immediate off-street car parking alternative in Winchmore Hill Green Dragon
  - Analysis by the design team suggests that there is some spare parking capacity on side streets
  - The majority of evening economy units are based at the south end of Winchmore Hill Green Dragon, which is approximately 6 minutes' walk from the Fords Grove car park.
- All of these factors point to there being a relatively limited impact on car users, however the three scenarios are used to set out a range of possible impact scenarios:
  - Our base case assumes an overall 0.5% reduction in car users (that is, assuming 25% of those displaced on-street-parkers decide not to visit Winchmore Hill Green Dragon as a result of the additional inconvenience).
  - This alters to 0.9% in the worse case (that is 50% of all displaced on-street-parkers deciding not to visit Green Dragon as a result), and 0.2% reduction (that is 10% of all displaced on-street parkers deciding not to visit Green Dragon) in the better case.

## Net impact on town centre performance

6.63 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

6.64 It is assumed that the reduction in car users to the centre will all be entirely lost spend to Winchmore Hill Green Dragon (ie no displacement to other modes of transport).

6.65 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in car users
- % impact on total annual town centre turnover

6.66 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 6.11 Summary of Change in Car Usage Impacts in Winchmore Hill Green Dragon

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £1.8m | 0% | - | 0% | - | 0 | - |
| Cycling | £0.1m | 0% | - | 0% | - | 0 | - |
| Car | £2.6m | - 0.5% | -0.2% | -0.2% | -0.1% | - 0.9% | -0.4% |
| Bus | £1.2m | 0% | - | 0% | - | 0 | - |
| Other | £0.1m | 0% | - | 0% | - | 0 | - |
| Total | £5.7m | - | -0.2% | | -0.1% | - | -0.4% |

**6.67 Under the base case, the impact of reduced car users would have a negligible impact on town centre economic vitality, with a potential loss of town centre spending of approximately 0.2%.**

6.68 The better and worse case scenarios suggest that the range of possible impacts is expected to be a reduction in town centre spending of between 0.1% and 0.4% (in both cases a negligible impact).

# Bus User Impacts

## Overview

6.69 The proposed changes to bus stops include the introduction of bus stop boarder areas and bus stop bypasses, in order to enable the bus stops to operate around the cycle lanes.

6.70 There are currently three bus stop within the borders of Winchmore Hill. The bus stops serve the parade of shops in Winchmore Hill.

6.71 The Jacobs Town Centre Survey suggests that travel distances by bus into the centre are generally relatively short, with 46% less than 1km and a further 31% less than 2kms. On this basis it is likely that most bus journey times into the centre are relatively low.

## Nature of Effect

6.72 The extent to which the scheme leads to an increase or decrease in the number of bus visits, will depend upon a number of factors:

- **Changes in number and location of bus stops serving the town centre**
  - The three bus stops within the town centre will remain in their current positions.
- **Perceptions of safety of the new bus stops, which could discourage some users from using the bus**
  - Two of the bus stops will be bus stop boarders, one will be a bus stop bypass.
  - TfL have indicated that this infrastructure is commonplace in continental Europe, a number are now operating across London and have not created any additional issues or collisions, and their use will be monitored, with TfL taking action to mitigate if there is any evidence emerging of a risk to bus passengers.
- **Congestion Impacts which could extend journey times by bus**
  - The new scheme incorporates no additional signalised junctions that will affect bus movements, with only the additional of formalised crossings likely to have any impacts upon bus journey times; however, these are considered likely to be minimal.

## Impact on Users

6.73 The visitor survey shows that around 69% of bus users are spending money in the town centre as part of non-discretionary trips (ie for non-flexible purposes such as work or education). It is assumed that there would be no impact on these visits.

6.74 The remaining 31% of bus user trips are on discretionary trips and so the changes outlined could lead to a proportion of these trips being displaced to alternative destinations.

6.75 However, the limited impacts and fewer convenient alternative options for bus users is expected to mean the impact is limited. This takes into account the following:

- The disruption to journeys is likely to be minimal – with no significant additional journey time even at peak travel periods
- Changes to bus stops will ensure that the TfL recommended maximum distance between bus stops of 400m will be retained.
- The success of the new bus stop arrangements, using bus stop boarders and by-passes will be kept under review.
- Bus users are likely to have less flexibility in decision making about retail and service centre destinations, unless they live nearby to alternative bus routes.

6.76 The scenarios therefore include the following:

- Our base case scenario is for no change to bus users as a result of the changes.
- The better case scenario assumes the same, while the worse case scenario assumes a reduction of 1.6% (based on a 5% reduction of all discretionary trips).

## Net impact on town centre performance

6.77 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

6.78 It is assumed that any reduction in bus users to the centre will all be entirely lost spend to Winchmore Hill Green Dragon (ie no displacement to other modes of transport).

6.79 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in bus users
- % impact on total annual town centre turnover

6.80 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 6.12 Summary of Change in Bus Users Impacts in Winchmore Hill Green Dragon

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £1.8m | 0% | - | 0% | - | 0% | - |
| Cycling | £0.1m | 0% | - | 0% | - | 0% | - |
| Car | £2.6m | 0% | - | 0% | - | 0% | - |
| Bus | £1.2m | 0% | 0.0% | 0% | 0.0% | -2% | -0.3% |
| Other | £0.1m | 0% | - | 0% | - | 0% | - |
| Total | £5.7m | - | 0.0% | - | 0.0% | - | -0.3% |

**6.81 Under the base case, there is assumed to be no change in bus users, hence a negligible impact on town centre economic vitality.**

6.82 The better and worse case scenarios suggest that the range of possible impacts is expected to be a reduction in town centre spending of between 0% and 0.3% (in both cases a negligible impact).

# Impacts on Loading & Unloading

6.83 There are currently 2 loading bays within the borders of Winchmore Hill, one of Green Lanes and one on Shrubbery Gardens side road.

6.84 The loading bay on Shrubbery Gardens will be retained as part of the scheme.

6.85 The loading bay currently located just south of Vicars Moor Lane will be moved to just South of Firs Lane outside the Pounds white goods shop. This is likely to ease loading for this heavy goods shop whilst not detracting from the bays in Vicars Moore lane which primarily served takeaway shops.

6.86 The impact on delivery vehicles accessing the town centre immediately after scheme completion is therefore assessed as **neutral/negligible.**

# Town Centre Environment

## Overview

6.87 A number of elements are proposed as part of the Winchmore Hill Green Dragon scheme which have the potential to directly enhance the town centre environment, including:

- changes to the Vicars Moor Lane and Firs Lane junctions to provide additional public realm space
- enhancement to a number of pedestrian crossings.

6.88 In addition to these direct enhancements to the town centre environment, it is expected by scheme planners that the town centre environment will be *indirectly* enhanced by changes in the volume and nature of traffic flows in the area as a result of the transport specific interventions.

## Nature of Effect

### Ease of Access around the Centre

6.89 While there are a number of crossing improvements proposed there are also concerns from consultees about impact of the scheme on accessibility for certain groups. However, we believe that the provision of designated crossing points and associated signage and the low overall volume of cyclists will minimise the risk of adverse accessibility effects. On balance, we consider overall effects on access and movement within town centre to be relatively minor, and, when considered in isolation, are unlikely to have any impact on town centre vitality.

### Public Realm

6.90 As highlighted within the Palmers Green assessment, there is a lack of comprehensive and robust intelligence on the impact of public realm investments. That said, there is a large amount of case study evidence citing specific instances where environmental and public realm enhancements have impacted positively on town centre performance – including helping to strengthen footfall and turnover.

6.91 Specific public realm improvements are expected at the Vicars Moor Lane and Fir Lane Junctions. While this will provide a localised environmental improvement, taken in isolation, it is unlikely that this will have any impact on town centre vitality

### Town Centre Environment

6.92 It is anticipated that the town centre environment will be further enhanced by changes in the volume and nature of traffic flows in the area as a result of the transport specific interventions. Many consultation responses suggested that this could be a major positive of the scheme: 99 responses noted that the scheme will create "more attractive / liveable / improved town centres", while 88 suggested that it will improve air quality. Conversely, some consultees raised concerns about additional congestion (228) and consequent effects on air quality (105), however the modelling by Jacobs suggests that this is unlikely to have a significant impact on congestion levels through the centre.

6.93 The OLF programme highlights that economic benefit is likely to be strongest if environmental improvements help to diversify town centre uses, encourage more people to spend leisure and recreation time there. It should be noted, however, that the capacity for significant short term economic gain in Winchmore Hill is perhaps limited by the fact that town centre performance is already comparatively strong (with a low vacancy level) and that the town centre is already comparatively diverse.

## Impact on Users

6.94 In the assessment of impacts we have taken into account the range of factors analysed above to consider overall environmental effects of the scheme on town centre users. While in isolation the public realm and accessibility effects are unlikely to impact on town centre performance, when considered cumulatively *alongside* the anticipated changes in car usage and cycling, there is a stronger argument that the overall town centre environment and image could be enhanced in a way that is transformational.

6.95 Given the significant uncertainties and lack of clear precedents however we have made conservative assumptions about these impacts:

- Our base case assumes no change in overall footfall as a result of the town centre environment changes.
- This assumptions is the same for the worse case scenario, but increases to 2% overall footfall and spend across all users in the better case scenario.

## Net impact on town centre performance

6.96 The overall outcome of these effects on town centre annual business turnover is summarised in the table below. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts.

6.97 It is assumed that the increases in visitors to the town centre and corresponding spend assessed here would all be net additional, not displaced from other transport modes.

6.98 The table shows a summary of the net additional impacts broken down by transport users. For the base, better and worse case scenarios, it shows:

- % change in visits by each transport user group
- % impact on total annual town centre turnover

6.99 Various measures could be made to enhance the positive impacts set out in the base case. These are summarised in Chapter 7 of the report.

Table 6.13 Summary of Environmental Impacts in Winchmore Hill Green Dragon

| Transport Mode | Town Centre Annual Spend | Base Case | | Better Case | | Worse Case | |
|---|---|---|---|---|---|---|---|
| | | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover | % change in no. of trips | Impact on annual TC turnover |
| Walking | £1.8m | 0% | 0.0% | 2% | 0.6% | 0% | 0.0% |
| Cycling | £0.1m | 0% | 0.0% | 2% | 0.0% | 0% | 0.0% |
| Car | £2.6m | 0% | 0.0% | 2% | 0.9% | 0% | 0.0% |
| Bus | £1.2m | 0% | 0.0% | 2% | 0.4% | 0% | 0.0% |
| Other | £0.1m | 0% | 0.0% | 2% | 0.0% | 0% | 0.0% |
| Total | £5.7m | - | 0% | - | 2% | - | 0% |

**6.100 Under the base case there is assumed to be no change in town centre users, hence a negligible impact on town centre economic vitality.**

6.101 There is similarly no change under the worse case scenarios, but an increase in town centre spending of 2% under the better case scenario (a minor positive impact).

## Summary and Assessment of Net Impacts

6.102 The table below draws together the net additional impacts set out under each of the assessment areas above. The table shows the overall impact both in terms of value and proportion of total annual town centre business turnover for Winchmore Hill Green Dragon. This is broken down to show:

- Construction phase impacts, only occurring within a single year
- Operational phase impacts, which would be annual effects and which are broken down by the net effects of changes to visitors by different transport mode, and the town centre environment impacts.

6.103 In each case we show three scenarios. The base case is what we assess to be the most likely outcome. The better and worse case scenarios set out a realistic upper and lower benchmarks, to provide a range of impacts, recognising the inherent uncertainties in this assessment.

Table 6.14 Summary of Impacts in Winchmore Hill Green Dragon

| | | Base Case | Better Case | Worse Case |
|---|---|---|---|---|
| **Construction Phase** | **£** | **-£40,000** | **-£20,000** | **-£80,000** |
| | **%** | **-0.7%** | **-0.3%** | **-1.5%** |
| Transport Shifts (Bus, Car & Cycle Users) | £ | -£10,000 | £3,000 | -£40,000 |
| | % | -0.2% | 0.1% | -0.7% |
| Town Centre Environment | £ | £0 | £110,000 | £0 |
| | % | 0.0% | 2.0% | 0.0% |
| **Net Operational Phase** (Transport Shift & Town Centre Environment) | **£** | **-£10,000** | **120,000** | **-£40,000** |
| | **%** | **-0.2%** | **2.1%** | **-0.7%** |

6.104 Under the base case:

- The construction phase would have a **negligible impact on town centre economic vitality within that single year**, with a potential loss of town centre spending of approximately 0.7%.
- The operational phase would have a **negligible impact on town centre economic vitality on an ongoing basis**, with a potential loss of town centre spending of approximately 0.2% per annum.

6.105 For both the construction and operational phases, various measures could be made to reduce the negative impacts and enhance the positive impacts. These measures are summarised in Chapter 7 of the report.

6.106 **By implementing these, we believe the impact of the operational phase can reach a neutral or positive level**.

6.107 The lack of UK precedents makes it difficult to predict the extent to which the scheme will have the transformational effect on town centre attractiveness and liveability which scheme planners seek. As such, this has not been modelled in the figures above. However, based on evidence of the impact of transformational public realm projects (set out at Section 4.92), if this is achieved, then there could be a longer term uplift in town centre spend of up to 10-15%.

# 7. Mitigation Measures, Support for Town Centre Prosperity and Performance Monitoring

7.1 In response to the impacts set out in the preceding chapters, a number of possible responses have been identified; these include impact specific mitigation measures, along with a number of wider measures which could be implemented to support town centre vitality.

7.2 The mitigation measures respond directly to the impacts identified above, and draw on best practice from elsewhere in London and the UK.

## Construction Phase Mitigation

7.3 As highlighted in the previous chapters, there is potential for the construction of the scheme to result in temporary adverse impacts largely as a result of the potential for disruption to pedestrian flow and vehicle movement and the effects of this on business trading.

7.4 Delivery planning is still at a very early stage, with the precise timetable and approach to construction yet to be decided. Realistically, construction works of this nature will always lead to a degree of disruption and it will never be possible to totally eliminate this; that said, a range of mitigation measure can be put in place to manage and reduce disruption and minimise adverse local economic impacts:

### Overarching Mitigation Options for the A105 Scheme

The ongoing design and planning process provides an opportunity to develop and refine a number of important pre-construction mitigation approaches. These are valid across all three A105 town centres:

- **Design of construction works** – as demonstrated by impact assessment in the preceding chapters, the design of the construction works and programme can have a significant impact on the scale of disruption; the analysis has shown for example that, if possible, maintaining two-way access for the duration of construction could help to reduce additional congestion and hence disruption. As such, in designing the construction programme it is imperative that the engineers bear town centre vitality in mind and do as much as possible to limit disruption to businesses and users. This should include carefully planning the phasing and timing of the works and doing as much as possible to minimise access disruption both on the road and pavement
- **Traffic management plan** – linked to the above, modelling by JMP suggests there is potential for additional congestion during the construction process. A detailed traffic management plan could help to scope out these effects and ensure that alternative provisions are put in place where possible
- **Publicity and business liaison** – once the delivery plans have been developed, it is important that these are widely published to ensure that both town centre businesses and users are aware of what the work entails, how they might be impacted and when. This should be via the usual communication and publicity channels, but also via direct liaison with high street businesses adjacent to planned works.

7.5 Once the construction work is underway, a range of additional mitigation measures can be deployed to help reduce disruption:

- **Approach to construction** – while construction activity will inevitably lead to a certain amount of disruption, efforts should be made to ensure that in is undertaken in a way which is considerate to local businesses and town centre users. In the event that sightlines to business premises are affected temporary 'business as usual' or and or wayfinding signs should be considered.
- **Ongoing business liaison** – explore the potential for the contractors to employ a specific business liaison officer for the duration of the construction period. This individual should be located on site and should be responsible for liaising with local businesses on a day to day basis regarding the construction process. This will ensure there is a 'go to person' for local businesses and will help to identify any issues swiftly as they emerge. This approach was deployed in several of the larger Outer London Fund projects and was reportedly successful in helping to build dialogue and trust
- **Proactive efforts to maintain footfall flows** to local shops during construction. This could include a range of approaches including:
  - Temporary review of town centre parking restrictions, particularly during more disruptive phases of construction as part of efforts to maintain and encourage footfall
  - local wayfinding to guide pedestrians if necessary
  - where construction works are lengthy, explore possibility of holding town centre events to encourage stronger footfall to area
  - efforts to create a stronger brand for the town centre via wider marketing efforts tied in with longer term aspirations for the town centre once the scheme is complete.

# Operational Phase Mitigation

7.6 Once the scheme is operational, there is potential to deploy a number of additional measures to mitigate negative impacts, or maximise positive impacts of the scheme on town centre economic vitality.

## Car Parking Approaches

7.7 The main negative impacts relating to the loss in car users relates to a number of parking bays being relocated from on-street to off-street. The challenge is therefore to ensure current on-street parkers are easily able to park off-street instead.

- **Ensuring clear signage to** the off-street car parks, and safe and attractive routes from these car parks into the town centres is key.
- Going ahead with plans to introduce some **30-minute free spaces** within these car parks will also be an important step, helping to retain those visitors seeking to stop and shop quickly, by removing the need to purchase a parking ticket for short stay visits.
- To further mitigate potential loss of trade by stop and shop car travellers, **on-street parking policy could be reviewed** to consider providing 30 minutes free parking and potentially a shorter maximum stay period for on-street parking in the centre. This would allow a more rapid churn of cars using these spaces, and could mitigate for the loss of on-street spaces.

### Traffic flow

7.8 Although additional congestion delays throughout the centres are not anticipated to have a major impact on car users, these impacts could be further reduced by the introduction of additional traffic management measures.

7.9 Scheme planners have suggested that SCOOT is expected to be introduced as part of the scheme, to optimise the flow of traffic between signalised junctions and reduce congestion, and this would be supported as a mitigation measure.

### Loading / unloading

7.10 Although loading and unloading effects are not expected to impact on overall economic vitality of the centres, it is recognised, particularly in Winchmore Hill Broadway that a number of individual businesses could be more affected by this. Where this is the case, LB Enfield could offer to work with these individual businesses to explore alternative loading and unloading solutions that would minimise cost impacts for their businesses.

## Maximising Prosperity

7.11 While not direct mitigation responses there are also a number of additional measures that could be considered to help to support town centre vitality and maximise any benefits generated by the schemes:

- **Town centre management** – evidence form the Outer London Fund Programme has highlighted the important role that town centre management can play in supporting town centre vitality, particularly given increasing resource constraints within councils. It is understood that LB Enfield has aspirations to establish town teams for the larger town centres within the Borough: if established these could play a valuable role in helping to build relationships between stakeholders in each of the town centres, providing a stronger mechanism to both identify and respond to issues, while also offering potential to be proactive in developing future schemes and initiatives to enhance town centre vitality.
- **Employment and training** – the council could explore the potential to engage local residents – particularly young people – in the delivery process. This could include involving engaging with local schools (either on construction or cycling aspects or both), and by ensuring the construction process includes training, work experience and apprenticeship opportunities for local residents.

## The Need for Ongoing Monitoring

7.12 Given the scale and complexity of the proposals, it is important that LB Enfield closely monitors the impacts of delivery activity – both during the construction period and over the short-medium term period once the schemes are operational. This will help to ensure that potential adverse effects are identified if and where they emerge and, where necessary enable appropriate mitigation responses to be developed and deployed.

7.13 Monitoring should include:

- **Ongoing renewal of town centre health check intelligence** which provides a quantitative overview of town centre performance and vitality. The 2014 health check data collected as part of the Retail Study and updated for this impact assessment provides the baseline against which future changes in performance can be measured.

- **Ongoing liaison with the town centre stakeholders** to maintain an up to date picture of more qualitative aspects of town centre vitality. Again, this will help to identify specific issues or concerns as they emerge and help to inform mitigation responses. Liaison should be approached both informally (eg ad hoc walk arounds and conversations with local businesses and residents) and formally (eg piggybacking onto wider town team or business association activities).
- **Ongoing monitoring system** to assess the use and effectiveness of bus stop boarders and bypasses to ensure they are being used correctly and safely by bus drivers, cyclists and pedestrians. If there are any weaknesses in the current design these could be quickly addressed
- **Ongoing monitoring of parking provision and congestion** to establish any significant and detrimental effect of delivery. Again, monitoring will ensure that if there are any weaknesses in the current design these could be quickly addressed.

# Appendix A - Consultees

A.1 A series of consultations were carried out with key stakeholders and local businesses to support our findings.

A.2 Official consultations were carried out with:

- Helen Osmon (founder of N21 on line and leader of 'Save our Green Lanes' Campaign)
- Costas Georgiou (chairman of Green Lanes Business Association)
- Huw Jones (Chief Executive North London Chamber of Commerce)
- Olly Prigmore (Chairman of Enfield Business and Retailers Association and owner of G Johns and Sons Ltd)
- Lovelace Poku (Regeneration Manager, Enfield Council)
- Anna Loughlin (Interim Head of Business and Economic Development Service, Enfield Council)
- Leon Thorne (Principal Strategy Planner (Cycling), Transport for London)
- Alex Sexton (Borough Cycling Programme Officer, Transport for London)

A.3 Short discussions were also carried out with representatives from:

- De Graf (brand designers located in Winchmore Hill Green Dragon)
- The Mens Room (clothing store located in Winchmore Hill Green Dragon)
- Winchmore Hill Post Office
- Peter Graff (estate agent located in Winchmore Hill Broadway)
- G Johns and Sons Ltd (ironmongery company located in Winchmore Hill Broadway)
- Keymakers (locksmiths located in Winchmore Hill Broadway)

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