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Economic Impact Assessment
of the Cycle Enfield Scheme on
the A1010 South Corridor Town
Centres

A Final Report by
Regeneris Consulting

Enfield Council

Economic Impact Assessment of the Cycle Enfield Scheme on the A1010 South Corridor Town Centres

June 2016

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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, Ponders End, 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 several phases. This report relates to the phase covering Edmonton Green Town Centre.

Town Centres Context

The Economic Role of Town Centres

1.5   Town centres play 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 free 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 Centres Context

1.9 LB Enfield has a relatively large network of town and local centres, including one major centre (Enfield Town), four district centres (of which three are covered in this study: Edmonton Green, Palmers Green, and Angel Edmonton) 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.

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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.

- Introducing Quieter Neighbourhoods to deter rat running and speeding and enable people to get from their homes to the start of a cycle route.

- 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 for A105: Completed July 2015

- Public Consultation on Stage 1, covering Palmers Green and Winchmore Hill: July to October 2015.

- Public Consultation on the A1010 South Scheme: November 2015 to March 2016.

- Production of designs for A1010 South Scheme: Completed May 2016

Economic Impact Assessment Study

1.16   An economic impact assessment was 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 in 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 A1010 South 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.

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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 Measuring 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.**
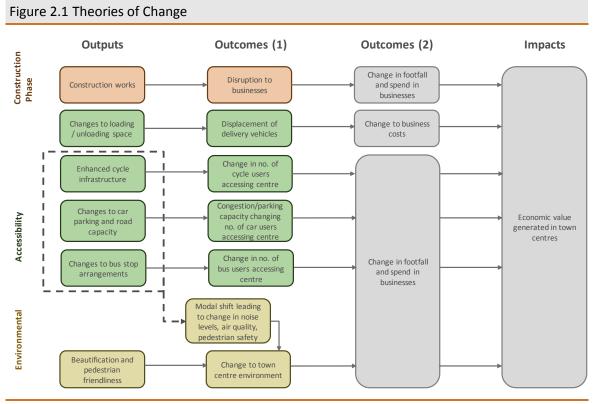
Factors Affecting Economic Vitality and the Theory of Change

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 Surveys[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.

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

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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 450 relevant jobs in the identified Palmers Green area. Over 250 of these are attributed to local supermarkets, some 130 jobs to smaller retail outlets, and almost 70 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.

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Table 2.4 Evidence Used in Assessment of Outcomes	
Factor	**Evidence**
Construction Phase	• Nature of works and anticipated timescales • Perspectives from Design team on construction approach options • Experience of impacts from similar schemes elsewhere • Consultation responses • Distance to competitor retail and service centre locations providing alternatives for local visitors
Cycle Users	• Design changes and benefits for cycling • Visitor survey evidence on proportion of people considering cycling and key constraints to them doing so at present • Journey length to town centre and potential cycleable journeys • Levels of cycling in other areas to benchmark against
Car Users	• Design changes and impacts on road capacity and parking space • Modelling of stopping times throughout centres under new scheme • 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 • Information on where different town centre users park (eg whether people who visit to work / shop / access services are parking on or off street) • Consultation responses
Bus Users	• Design changes and impacts on road capacity and bus stops • Modelling of stopping times throughout centres under new scheme • Consultation feedback • TfL feedback on designs
Loading / Unloading	• Design changes and impacts on number and location of loading bays • Consultation responses
Town Centre Environment	• Design changes and impacts on quality of environment and public realm • Experience of impacts from similar schemes elsewhere • 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

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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.

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[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.

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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: • Lack of detailed footfall counts to help estimate total annual visitors to each centre • 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 • Detailed design plans for each centre (these will be undertaken at the next stage of the work)	All Assessments Changes to Car and Cycle Visits 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.

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3. Consultation Feedback on the A1010 South Scheme

3.1   The scheme design plans for the A1010 South were made available for public consultation over 17 weeks from 20th November 2015 to 20th March 2016. 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 the A1010 South Scheme

Public Consultation Feedback		
Consultees Supporting the Scheme	**Consultees Partially Supporting the Scheme**	**Consultees Not Supporting the Scheme**
45% supported the overall proposals	6% partially supported the overall proposals	47% did not support the overall proposals
Amongst the most common responses made (relevant to this study) were the following (no. of responses in brackets): • Safer for cycling (17%) • More people will cycle (15%) • Better air quality / less pollution (7%) • Create a better area / place to live (6%)	Amongst the most common responses made (relevant to this study) were the following: • Light segregation is not enough • Congestion will worsen	Amongst the most common responses made (relevant to this study) were the following (no. of responses in brackets): • Impact on congestion (15%) • Not enough cyclists to justify the expense (9%) • A waste of money (6%) • Impact on bus passengers (6%) • Impact on pollution / air quality (5%) • Impact on shops and other businesses (5%)

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. • 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 six month construction phase could have a significant impact on businesses reliant on passing trade.
Car Parking	**-**	• There is no net loss in parking, however businesses on Fore Street are concerned that congestion will result in people not choosing to park outside their shops, which may reduce trade (instead shopping in the Shopping Centre).

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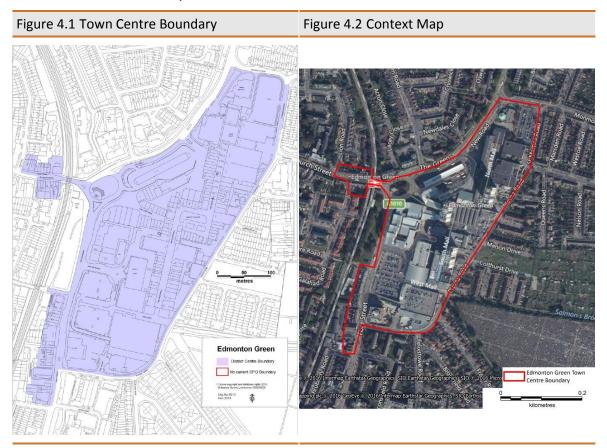| Assessment Factor	Positive / Negative	Feedback
Congestion	**-**	• There are concerns about congestion given the changes to signalling patterns and the proposed changes to the roundabout in Edmonton Green.
Bus Stops	**-**	• Some businesses raised concerns about the safety of pedestrians due to floating bus stops – with particular concerns for children and the elderly.
Loading and Unloading	**-**	• The majority of businesses on Fore Street have rear delivery access to the shops, and so the cycle lanes will not have an impact. • Increased congestion caused by changes to signals/junctions may increase the time taken for deliveries to access the area.
Public realm changes	**+**	• Businesses were positive about potential public realm improvements, however they feel the effect on their business will be limited. There is already a good level of public realm provision at the entrance to the shopping centre and opposite the leisure centre.

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.

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4. Edmonton Green Assessment

4.1 Edmonton Green is designated as a District Centre in the London Plan and Enfield's Core Strategy. It is situated in the South-East of the borough on the A1010. 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	Figure 4.2 Context Map
Source: Enfield Local Plan: Town Centres Uses and Boundaries Review (2013)	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, many of which are within Edmonton Green shopping centre, as well as equivalent data from 2005.

Table 4.1 Breakdown of Units in Edmonton Green

Type of Unit	Number of Units 2014	Number of Units 2005
Comparison Retail	60	45
Convenience Retail	28	17
A1 Services (inc hairdressers, travel agents and other class A1 users not selling convenience / comparison goods)	22	12
A2 Services	15	9
A3/A5	24	12
A4 Pubs and Bars	1	2
Vacant	7	23
Total Units	157	120
Total Active Units (ie excluding vacancies)	150	97

Source: NLP, Enfield Retail and Town Centres Study, 2014

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Town Centre Performance

4.3   Town centre data reflects that **Edmonton Green is performing very well**:

- **Vacancy rate is very low in the town centre**. Latest data from the Estates Gazette shows that in February 2016 there were 7 vacant units in Edmonton Green, representing a vacancy rate of 4.4%. 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 Q2 2014).

- **There has been an increase of 53 active units between 2005 and 2014**, including a significant reduction in number of vacant units (-16 units)

4.4   The shops and services offered in Edmonton Green changes regularly. Edmonton Green has a churn rate of approximately 10.3% of businesses ie one in ten 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 Edmonton Green Town Centre Survey							
	Car-driver	Car pass.	Bus	Rail	Cycle	Motor-cycle	Walk	Taxi
% share of visitors	12%	2%	42%	4%	1%	0%	38%	0%
% share of spending	15%	3%	45%	2%	0%	0%	34%	0%

Source: Cycle Enfield 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 Edmonton Green.

Table 4.3 Edmonton Green estimates of jobs, turnover per job, and total revenues		
	Local Jobs	Estimate of Total Business Turnover
Edmonton Green Businesses	450	£41,434,000

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.

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

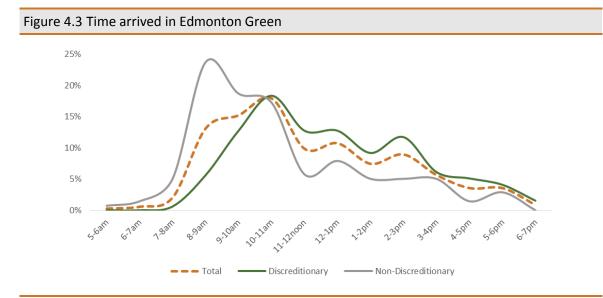| Table 4.4 Annual Business Turnover and Visits by Mode of Transport		
	Value of Total Annual Business Turnover Spend by Mode	Annual Visits by Mode
Car driver	£6,194,000	574,000
Car passenger	£1,394,000	66,000
Local bus	£18,650,000	2,148,000
Rail	£967,000	193,000
Cycle	£71,000	9,000
Motorcycle	-	-
Walk	£14,100,000	1,339,000
Taxi	£59,000	-
Total	**£41,434,000**	**4,329,000**

4.10   For Edmonton Green, the baseline provides estimates that of the £41.4 million of total annual turnover across all retail and high frequency consumer service businesses in Edmonton Green:

- £7.6 million is derived from 640,000 trips from car users (drivers and some passengers).

- £18.6 million is derived from over 2 million trips by bus passengers.

- £14.1 million is derived from over 1 million pedestrians.

- At present, an estimated 9,000 cyclist trips account for around £71,000.

Other Baseline Data to Aid Assessments

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

4.12   An analysis of Edmonton Green town centre survey data, shows that 42% of trips to town centres were non-discretionary trips (ie where the visitor could not easily visit an alternative location). This includes categories such as visiting friends and family, travelling to and from home, education and some personal trips such as to medical services. This varies by transport user, with 40% of bus users being non-discretionary and 62% of car users being non-discretionary.

4.13   The Cycle Enfield Town Centre survey for Edmonton Green also shows 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 non-discretionary visitors largely visit at the start of the day (between 8am and 10am).

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Figure 4.3 Time arrived in Edmonton Green

Source: Cycle Enfield Survey

Distance Travelled to Visit Town Centre

4.14   The map below shows the distance travelled to the town centre by all respondents to the Cycle Enfield Survey in Edmonton Green and Angel Edmonton.
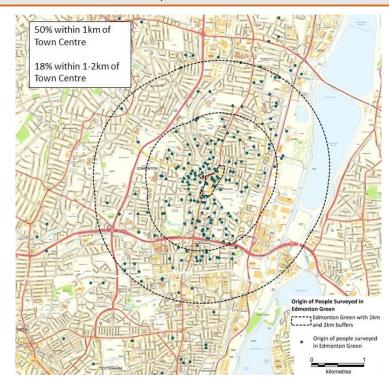
Figure 4.4 Home location of visitors surveyed in Edmonton Green

Source: Cycle Enfield Survey

Town Centre Car Parking

4.15 Data collected by Jacobs shows the occupancy of car parking spaces along the A1010 in Edmonton Green. Of the 35 spaces between Smythe Close and Shrubbery Road, the maximum occupancy during the AM peak is 74% and 73% in the PM peak.

Alternative Retail and Service Destinations

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

Table 4.5 Nearest Alternative Locations to Edmonton Green		
Type	**Name**	**Distance (miles)**
Town centres	Angel Edmonton	0.6
	White Hart Lane (Tottenham)	1.6
	Ponders End	1.7
	Winchmore Hill (Broadway and Green Dragon)	2.0
	Palmers Green	2.3
	Enfield Town	2.5
Out-of-Town Shopping Centres	Ravenside Retail Park	1.6
	Palace Exchange	2.5

Source: Regeneris Consulting.

N.B. Distances are the shortest walking routes from the Edmonton Green roundabout

Outputs – Physical Changes of Cycle Enfield Scheme

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

Table 4.6 Cycle Scheme Deliverables at Edmonton 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 it will be delivered across a 6 month period, although the phasing of works within Edmonton Green is currently unclear
Accessibility	Enhanced Cycle Infrastructure	• Lightly segregated cycle lanes • Junctions modified to improve safety for cyclists and pedestrians
	Changes to car parking and road capacity	• No loss of car parking along the A1010 within the Edmonton Green town centre boundary. • Changes to the junction layout will impact on the road capacity • New Four Armed Signalised Junction (option 1) • Signalised roundabout using similar layout to present (option 2)
	Changes to bus stop locations	• Bus stops remaining in same locations, with cycle lane running between footway and stationary bus at two bus stops at police station • No change to Edmonton Green bus station
	Changes to loading / unloading space	• No designated loading bays at present. Situation will be unchanged with proposals

Key Output	Detail
Environ-mental Beautification and Pedestrian Friendliness	• Junction entry treatment to slow cars • Signalisation of the pedestrian crossing between Edmonton Green train station and the shopping centre • Public realm improvements at entrance to Edmonton Green shopping centre. Relocation of war memorial (option 1). War memorial retained in existing location (option 2).

Source: Regeneris Consulting based on Cycle Enfield Consultation Plans

4.18   The diagrams show the original Cycle Enfield proposals for Edmonton Green town centre used for consultation. Note: some factors shown in the table above have been updated since these original scheme plans.
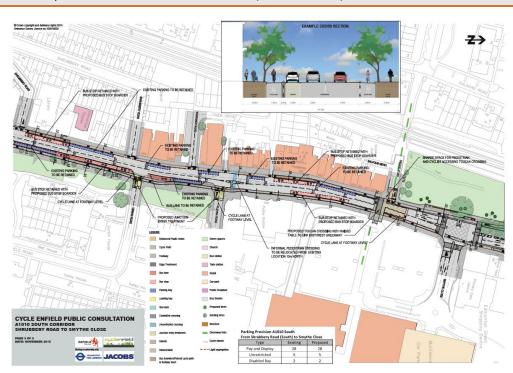
Figure 4.5 Proposed Plans for Edmonton Green (Southern End)

Source: Cycle Enfield Consultation Plans

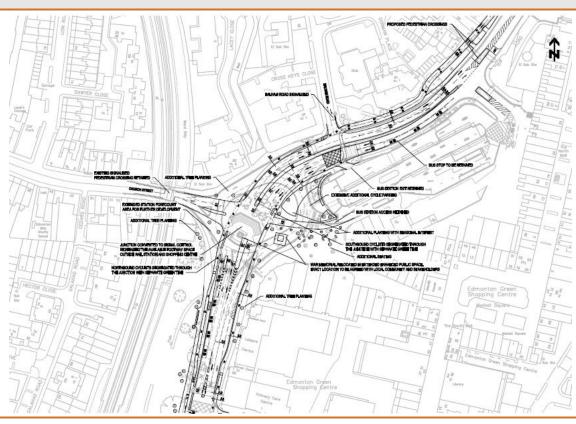regeneris
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Figure 4.6 Proposed Plans for Edmonton Green (Station/Roundabout) – Option 1

Source: Cycle Enfield Consultation Plans

Figure 4.7 Proposed Plans for Edmonton Green (Station/Roundabout) – Option 2
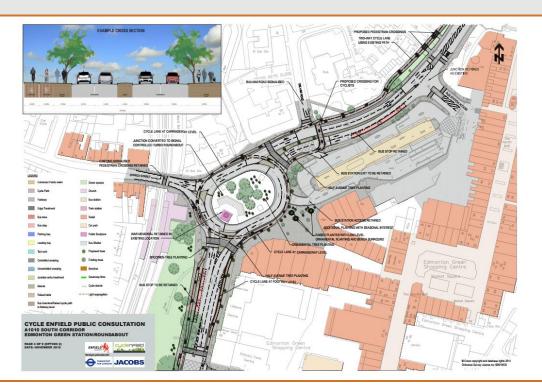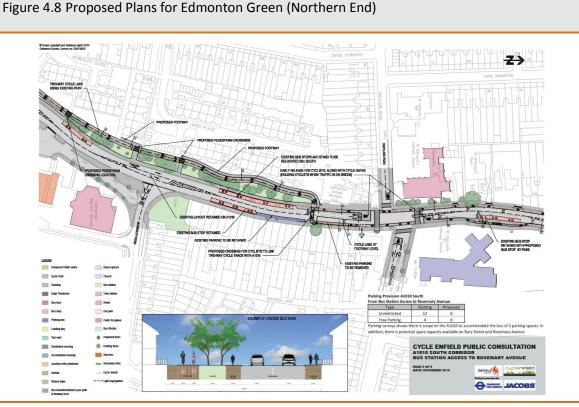

Source: Cycle Enfield Consultation Plans

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Figure 4.8 Proposed Plans for Edmonton Green (Northern End)

Source: Cycle Enfield Consultation Plans

Construction Phase Impacts

Overview

4.19   At this stage detailed plans for construction in Edmonton Green town centre are yet to be developed, and as such, the approach to construction phasing and specific approach both across and within the town centre is not known. The design team estimate the total construction period in Edmonton Green town centre is likely to be around six months.

4.20   Drawing on transport engineers within our team, we have modelled possible construction approaches in Edmonton Green, summarised in the table below. This is likely to be the same for option 1 and 2.

Table 4.7 Summary of Construction Options for Edmonton 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). Temporary traffic lights would need to be introduced, meaning one-way working through the area of construction.	In overall traffic terms, there would be 26 weeks of disruption to north-south movement along the A1010, with delays to visitors to the centre, as well as through movements, caused by the signals. This could cause increased congestion in either direction.	There could be a minor loss of on-street car parking for periods of time as works take place on those stretches.
Approach 2 - maintain	It might be possible to run two-way traffic flows and	Under this approach, roadworks would remain but with 2 lane	Under this approach, the duration of individual stages

two way access along the A1010	maintain retail access, however it is not yet known whether the available space would allow for this.	access retained. Speeds through the roadworks would be reduced, but would not affect journey times significantly.	of works, may be longer, 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 and improvement 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.

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 97% of total spend in Edmonton Green[5] 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 for Edmonton Green shows that around 62% 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 –

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

[5] Based on Regeneris calculations from Estates Gazette data.

eg Angel Edmonton, White Hart Lane (Tottenham) and Ponders End, all of which are within 2 miles).

- However 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 10% of all car trips) for the duration of the works

  - This alters to 50% of discretionary car trips (effectively 19% of all car trips) under a worse case scenario, and 12.5% of discretionary car trips (effectively 5% 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 for Edmonton Green shows that around 40% 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 5% of the discretionary bus trips (effectively 3% of all bus trips) for the duration of the works

  - This alters to 15% 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 nine months, 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 5 of the report.

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	£14.1m						
Cycling	£0.07m						
Car	£7.6m	-9.5%	-0.9%	-4.8%	-0.4%	-19.0%	-1.7%
Bus	£18.6m	-3.0%	-0.7%	0.0%	0.0%	-9.0%	-2.0%
Other	£1.0m						
Total	**£41.4m**		**-1.5%**		**-0.4%**		**-3.8%**

Table 4.8 Summary of Construction Phase Impacts in Edmonton Green

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 1.5%.

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 0.4% and 3.8% (respectively a neutral / negligible impact and a medium negative impact).

Cycle User Impacts

Overview and Nature of Effect

4.33 Increasing the number of cyclists using the A1010 (South) Corridor is at the heart of the Cycle Enfield scheme plans for Edmonton 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 A1010 stretch through Edmonton Green and major changes to the Edmonton Green roundabout. 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 Edmonton 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.

- Data from the Cycle Enfield Survey found that 1% of shoppers used a bike to access Edmonton Green.

- 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 visitor survey for Edmonton Green highlights the main constraints to people cycling more to the 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: not having a bike (30%), lack of safe routes (25%), too much car traffic (20%) and being unable to cycle (10%).

- 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, and perception of cycling as incompatible with busy lifestyles).

4.37   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.

4.38   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.

4.39   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 127% increase in visitors from the current rate of 1.1% in Edmonton Green[6])

- 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.

4.40   This impact is likely to be the same for both option 1 and 2, as both are segregated cycle lanes which will improve the safety of cycling and reduce the current barriers to the public's involvement.

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

[6] Cycle Enfield Survey

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 These impacts will be the same for both option 1 and 2.

4.45 Various measures could be made to enhance the positive impacts set out in the base case. These are summarised in final chapter of the report.

Table 4.9 Summary of Impact of Change in Cycle Users in Edmonton 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	£14.1m	0%		0%		0%	
Cycling	£0.07m	127%	0.02%	264%	0.05%	0%	0.0%
Car	£7.6m	0%		0%		0%	
Bus	£18.6m	0%		0%		0%	
Other	£1.0m	0%		0%		0%	
Total	**£41.4m**	-	0.02%	-	0.05%	-	0.0%

4.46 Under the base case the impact of increased cycle users would have a <u>neutral / negligible impact</u> on town centre economic vitality, with a potential increase in town centre spending of around <u>0.02 %</u>.

4.47 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 0.05% (a neutral / negligible impact in both cases).

Car User Impacts

Overview

4.48 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.

4.49 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.

4.50 Figure 4.9 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 Edmonton Green, there are currently four major junctions along the A1010 Fore Street. These are A1010 Fore Street/Smythe Close, A1010 Hertford Road/Balham Road, A1010 Hertford Road/Bus Station Exit (north) and the A1010 Broadway/The Green/Church Street. The former three junctions are signalised while the Broadway junction is a three-arm roundabout.

4.52   There are a number of other minor side roads that join the A1010 in the study area but these are not signalised. As part of their preliminary design work, Jacobs have constructed separate local highway junction models to simulate the current operation of the four 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 junction. As an overall summary of these models, they predict that traffic travelling along the A1010 (in a north/south direction) through Edmonton Green are currently delayed by an average of around 38 seconds in the AM peak period and 62 seconds in the PM Peak period across the four junctions.

4.53   Some data is available from Jacobs Town Centre Survey relating to the distances travelled by car drivers when accessing the nearby Palmers Green town centre. This indicates that around 50% of car trips are under 2kms 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 4 minutes, i.e. 8 minutes for a 1.6km return journey.

Congestion Impacts of New Edmonton Green Network Option 1 (New Four Armed Signalised Junction)

4.54   The new signalisation scheme (Option 1) at A1010 Broadway/The Green/Church Street (Edmonton Green) scheme will result in a number of changes to the operation of the highway network through the town centre. This three arm priority controlled roundabout will be signalised. The signals at the A1010 Hertford Road/Balham Road will be modified to introduce traffic signal control on Balham Road. Also, segregated cycle lanes will be introduced at three signalised junctions in the Edmonton Green network:

- A1010 Hertford Road/Balham Road

- A1010 Broadway/The Green/Church Street

- A1010 Fore Street/Smythe Close

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

4.56   The results from the Jacobs modelling work indicates that total traffic delay over all junction approaches barely changes at the A1010 Hertford Road/ Bus station exit (north) signals.

4.57   However, at the A1010 Broadway/The Green/Church Street (the New Four Armed Signalised Junction which envelops the Balham Road signals) the average junction delay over all approaches in both the AM and PM peak periods would experience increases by 25 sec and 20 sec respectively. Similarly, at the A1010 Fore Street/Smythe Close signalised junction, the average traffic delay over all approaches in both the AM and PM peak periods increases by approximately 23 sec and 17 sec respectively.

4.58   The model output was examined to determine the impact on expected journey times along routes through traffic signals in the network. Four bi-directional routes were examined:

- North-South (Route 1) - A1010 Hertford Road from Smythe Close signals to A1010 Hertford Road/Bus station exit (north)

- North-Southeast (Route 2) - A1010 Hertford Road/Bus station exit (north) into Smythe Close (Route 2)

- Northwest - Southeast (Route 3) - Church Street into Smythe Close

- West - East (Route 4) - Church Street to A1010 Hertford Road/Bus station exit (north)

4.59   In the AM peak, delay increases on all routes in a northbound direction by at least 59s and delay increases on all routes in a southbound direction by at least 29s.

4.60   In the PM peak, delay increases on all routes in a northbound direction by at least 30s. Also, delay increases on all routes in a southbound direction by at least 45s apart from Route 1. This route showed a 2s reduction in total journey time – due to large delay reductions at the Bus station exit (north) signals and the Smythe Close signals.

4.61   In the AM peak, delay increases predominantly occur

- For Routes 1 and 4 at A1010 Broadway/The Green/Church Street. These signals account for over 90 percent of delay increases in both northbound and southbound directions.

- For Routes 2 and 3 at A1010 Broadway/The Green/Church Street accounts for at least 80 percent of delay increases in the northbound direction and at A1010 Fore Street/Smythe Close accounts for at least 60 percent of delay increases in the southbound direction.

4.62   In the PM peak delay increases predominantly occur on:

- Routes 1 and 4 at A1010 Broadway/The Green/Church Street - again. These signals account for over 90 percent of delay increases in both northbound and southbound directions. However, on southbound Route 1 these delay increases are cancelled out by delay reductions at the Smythe Close and Bus Station Exit (north) signals.

- Routes 2 and 3 both A1010 Broadway/The Green/Church Street and A1010 Fore Street/Smythe Close account for similar levels of delay increases. This happens in both northbound and southbound directions.

4.63   When different assumptions are made regarding the percentage mode shift from car to bicycle a similar trend is seen. Again, in the AM peak this scheme (Option1) causes delay increases on all routes. In the PM peak delay increases on all routes in a northbound direction; in a southbound direction delay still increases on all routes apart from Route 1 where there is, again, a slight reduction. Even with a mode shift from car to bicycle of 5 percent, net delay increase never shrinks by more than 13s per route.

4.64   In assessing the combined impact of the changes to all four junctions the analysis concludes that, on average, **vehicles travelling through Edmonton Green may experience around 76 seconds additional delay in the AM peak** (ranging between a minimum of 29s and a maximum of 111s) and **54 seconds additional delay in the PM peak** (ranging between a minimum of -2s and a maximum of 85s).

4.65   In order to put these delay figures into some form of context we have applied them to our assumed average two-way car journey (1.6 km round trip) into the town centre of eight minutes. The combined additional delays would, therefore, represent around a 32% increase in journey times in the AM peak and a 23% increase in the PM peak. These delays could potentially be reduced with the introduction of the SCOOT UTC traffic signal control system. SCOOT ensures smooth traffic

linking between neighbouring signals and flexibility to rapidly adjust signal timings in incidents and special event conditions. However, this would be at the discretion of Transport for London.

4.66   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.

4.67   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.

4.68   For the inter-peak and evening periods, the lower volumes of traffic mean there are likely to be lower increases in delay at the existing junctions.

Congestion Impacts of New Edmonton Green Network Option 2 (Signalised Roundabout)

4.69   The new signalised 'turbo' roundabout scheme (Option 2) at A1010 Broadway/The Green/Church Street (Edmonton Green) scheme will maintain the broad overall functionally of the existing roundabout layout; however, the introduction of signals, along with a revised roundabout layout will result in some changes to the operation of the highway network, and the associated flow of traffic, through the town centre.

4.70   The Option 2 scenario has been evaluated within the context of the surrounding junctions. These will operate in a manner as previously described under the Option 1 layout.

4.71   The results from the Jacobs modelling work indicate that, whilst the Option 2 design for the A1010 Broadway/The Green/Church Street Junction (signalised roundabout) is forecast to marginally increase delay at the junction, these delays are less than for the signalisation scheme within Option 1.

4.72   The model outputs were examined to determine the impact on expected journey times along routes through traffic signals in the network. As with Option 1, four bi-directional routes were examined:

- North-South (Route 1) - A1010 Hertford Road from Smythe Close signals to A1010 Hertford Road/Bus station exit (north)

- North-Southeast (Route 2) - A1010 Hertford Road/Bus station exit (north) into Smythe Close (Route 2)

- Northwest - Southeast (Route 3) - Church Street into Smythe Close

- West - East (Route 4) - Church Street to A1010 Hertford Road/Bus station exit (north)

4.73   In the AM peak, delay increases on all routes in a northbound direction by between 4 and 31s. The delay increases predominantly occur for northbound routes 2 and 3 at A1010 Broadway/The Green/Church Street and at The Broadway/Smythe Close. Journey times for route in a southbound direction are forecast to broadly remain the same as for the current layout.

4.74   In the PM peak, delay on some routes in a northbound direction increases by up to a minute (route 3) but southbound routes are forecast to see some reductions in delays.

4.75   In assessing the combined impact of the changes to all four junctions, including the Option 2 'turbo' roundabout, the analysis concludes that, on average, vehicles travelling through Edmonton Green may experience around 10 seconds additional delay in the AM peak (ranging between -1s and a

maximum of 31s) and 10 seconds additional delay in the PM peak (ranging between -18s and a maximum of 55s).

4.76 In order to put these delay figures into some form of context we have applied them to our assumed average two-way car journey (1.6 km round trip) into the town centre of eight minutes. The combined additional delays would, therefore, represent only around a 2% increase in journey times in the AM and PM peak periods. These delays could potentially be reduced further with the introduction of the SCOOT UTC traffic signal control system.

4.77 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.

4.78 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.

4.79 For the inter-peak and evening periods, the lower volumes of traffic mean there are likely to be lower increases in delay at the existing junctions.
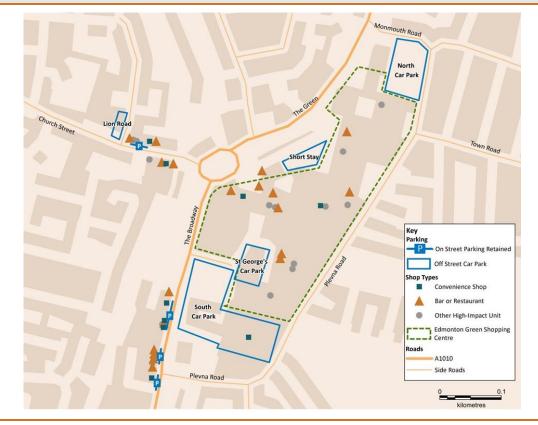
Car Parking

4.80 There are no planned changes to the amount of car parking available in Edmonton Green town centre across both option 1 and 2. The table below summarises the current (and proposed) number of spaces and parking restrictions under current and proposed plans.

Table 4.10 Car Parking Summary		
	Current and Proposed Parking Provision	
	Number	Regulations
On-street	11 spaces on A1010 3 spaces on Church Street	• Pay and display on A1010, £1.20/hr • Spaces on Church Street free, but limited to 2 hours
On-street Single Yellow Line Areas	4 on Church Street (estimated)	• Available after 6.30pm
Off-street	Lion Car Park –19 spaces Edmonton Green Shopping Centre (North Car Park) –- 185 spaces Edmonton Green Shopping Centre (Short Stay) –30 spaces St George's Car Park – 419 spaces Edmonton Green Shopping Centre (South Car Park) –400 spaces	• Open 7 days, 24hrs • Lion Car Park = £1/hr • Shopping Centre Car Parks = 60p/hr
Total Daytime	1,067 spaces	
Total Evening	1,071 spaces	

Source: Parkopedia

4.81 The following map shows the current parking provision in Edmonton Green and its positioning relative to high-impact units such as convenience shops, bars and restaurants and other high-impact units such as hairdressers.

Figure 4.9 Available Parking and Shop Types in Edmonton Green

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

Note: any post consultation design changes are not incorporated.

4.82   There is limited change on the numbers of on-street parking spaces supporting businesses along the corridor, although some on-street parking is lost, most significantly between St. Alphege Road and Elizabeth Ride. There is not anticipated to be an adverse impact relating to car parking for smaller stores which largely serve local communities and so the proportion of shopping trips by car is likely to be low.

Impact on Users

4.83   Given there are not expected to be any significant changes to car parking in Edmonton Green as part of the proposals, this is not expected to have an impact on town centre performance.

4.84   The analysis above shows that the congestion impacts of option 1 will lead to an additional delay of around 76 seconds in the AM peak (ranging between a minimum of 29s and a maximum of 111s) and 54 seconds additional delay in the PM peak (ranging between a minimum of -2s and a maximum of 85s).

4.85   The analysis for option 2 concludes that, on average, vehicles travelling through Edmonton Green may experience around 10 seconds additional delay in the AM peak (ranging between -1s and a maximum of 31s) and 10 seconds additional delay in the PM peak (ranging between -18s and a maximum of 55s).

4.86   This increase in congestion in both options may have an impact on the number of people choosing to shop in Edmonton Green. Our modelling assumes:

- There will be no impact on the 62% of car visitors making non-discretionary trips, as they will still need to visit the centre

- This will therefore only affect a maximum of 38% of visitors to the centre by car.

- The majority of shoppers on discretionary trips arrive after the AM peak and leave before the PM peak, hence will be less affected by this additional delay.

4.87   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 across both options 1 and 2:

- Our base case assumes an overall 5% reduction in the 38% of discretionary car users – which equates to a 1.9% overall reduction in car user visitors.

- This alters to a 15% reduction in the number of discretionary car users in the worse case (equating to a 5.7% reduction in all car users), and no change in the better case.

Net impact on town centre performance

4.88   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 (taking into account the two possible junction configuration options).

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

4.90   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

4.91   Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 5 of the report.

Table 4.11 Summary of Impact of Changes in Car Users in Edmonton 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	£14.1m						
Cycling	£0.07m						
Car	£7.6m	-1.9%	-0.3%	0.0%	0.0%	-5.7%	-1.0%
Bus	£18.6m						
Other	£1.0m						
Total	**£41.4m**		-0.3%		0.0%		-1.0%

4.92   Under the base case, the impact of reduced car users would have a neutral / <u>negligible impact</u> on town centre economic vitality, with a potential loss of town centre spending of approximately 0.3%.

4.93   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% (which is equivalent to a neutral / negligible impact and minor negative impact respectively).

Bus User Impacts

Overview

4.94   There are no proposed changes to the position of the four bus stops within the borders of Edmonton Green town centre and the bus station. There is currently one bus stop adjacent to the bus station (southbound), one bus stop opposite the leisure centre (northbound), and two bus stops at Edmonton Green police station (north and south-bound). There is no difference in the bus stop locations between option 1 and 2.

4.95   The proposed cycle lane will run between the footway and stationary bus at the police station bus stops which may cause some inconvenience for bus passengers embarking or disembarking from the bus and cyclists. The northbound bus stop at the leisure centre will have a bus stop bypass, and the southbound bus stop at the leisure centre will not be impacted by any cycle lane.

Nature of Effect

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

- **Perceptions of safety of the new bus stops, which could discourage some users from using the bus**

    - The majority of bus stops within the town centre will be designed to have a bus stop boarder with the cycle lane running between the footway and stationary bus. The northbound bus stop at the leisure centre is planned to 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 an additional delay of around 76 seconds in the AM peak (ranging between a minimum of 29s and a maximum of 111s) and 54 seconds additional delay in the PM peak (ranging between a minimum of -2s and a maximum of 85s). 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

4.97   The visitor survey shows that around 40% 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.

4.98   The remaining 60% 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.

4.99   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 10-76 second additional journey time even at peak travel periods (across both junction configuration options)

- There are no expected changes to the location of bus stops

- 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.

4.100   The scenarios across both options 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 5% of discretionary trips (which equates to a 3% in visits by all bus users).

Net impact on town centre performance

4.101   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.

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

4.103   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

4.104   Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 5 of the report.

Table 4.12 Summary of Impact of Change in Bus Users in Edmonton 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	£14.1m						
Cycling	£0.07m						
Car	£7.6m						
Bus	£18.6m	0.0%	0.0%	0.0%	0.0%	-3%	-1.4%
Other	£1.0m						
Total	**£41.4m**		0.0%		0.0%		-1.4%

4.105 Under the base case, there is assumed to be no change in bus users, hence a <u>neutral / negligible impact</u> on town centre economic vitality.

4.106 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 1.4% (a neutral / negligible impact and a minor negative impact respectively.

Impacts on Loading & Unloading

4.107 There are presently no designated loading or unloading bays in Edmonton Green town centre, with businesses using parking bays for loading purposes.

4.108 A number of businesses along the high street are already able to load or unload from the rear of their premises, and will therefore not be affected by changes to the parking at the front. However there are a number of premises unable to use the rear of the premises for loading purposes and these are reliant on parking spaces along the high street.

4.109 All businesses within Edmonton Shopping Centre are able to use the loading area provided, and access to this will be unaffected by the proposals.

4.110 The inconvenience to the majority of businesses in Edmonton Green is likely to be minimal (or non-existent) as most have rear access. Therefore, the impact of changes to delivery vehicle access on town centre business turnover has been assessed as **<u>neutral / negligible</u>.** This will be the same across both option 1 and 2.

Town Centre Environment

Overview

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

- The relocation of the war memorial from the centre of the roundabout to a more prominent location next to Edmonton Green Shopping Centre

- Signalisation of the pedestrian crossing linking Edmonton Green train station and the shopping centre.

- Additional trees planted around the entrance to Edmonton Green train station and the shopping centre

4.112 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

4.113 There are a number of planned changes to crossings in Edmonton Green as part of the Cycle Enfield scheme which will make the town centre a more pedestrian friendly area. The crossing between Edmonton Green train station and the shopping centre will be signalised, increasing the safety of pedestrians. In addition the pedestrian crossing between Bridge Road and the South Car Park of

Edmonton Green shopping centre will be upgraded to a toucan crossing, with shared space provided for both pedestrians and cyclists.

4.114   These improvements will encourage more pedestrian footfall in Edmonton Green as journeys will be quicker and safer than at present.

4.115   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

4.116   Under option 1, there will be a considerable overhaul of the public realm around Edmonton Green roundabout, with the roundabout replaced with a new four armed signalised junction, increasing the amount of public space. The war memorial is set to be relocated to improve accessibility. Option 2 will also have a considerable impact on public realm in Edmonton Green, with the present greenery on the roundabout set to be retained along with the present location of the war memorial. The following visualisation offers a sense for how the Cycle Enfield scheme will improve the public realm within Edmonton Green.

Figure 4.10 Visualisation of Edmonton Green after Cycle Enfield

Source: Enfield Council

4.117   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[7] 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%.

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

- Evidence cited by Living Streets[8] 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[9], has suggested that turnover for businesses in a high street location increased by between 5 and 15% following investment in public realm developments.

4.118 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[10] 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.

Town Centre Environment

4.119 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.

4.120 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.

Impact on Users

4.121 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. We believe it is likely that the proposed scheme will have a considerable impact on the town centre environment in Edmonton Green, and that there could be an uplift in footfall as a result of this. However, given there are still uncertainties about the specifics of the scheme and lack of clear precedents we have made conservative assumptions about these impacts. These are consistent across both option 1 and 2.

- Our base case assumes that overall footfall and spend in the town centre will increase by 1% across all users as a result of improvements to the town centre environment

- This assumption for the worse case scenario is that there will be no change in town centre footfall, but this rises to a 3% increase in overall footfall and spend across all users in the better case scenario.

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

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

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

Net impact on town centre performance

4.122   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.

4.123   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.

4.124   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

4.125   Various measures could be made to enhance the positive impacts set out in the base case. These are summarised in Chapter 5 of the report. The impact is projected to be similar across both option 1 and 2.

Table 4.13 Summary of Town Centre Environment Impacts in Edmonton Green							
Transport Mode	Town Centre Spend	Base Case		Better Case		Worse Case	
		% change	Value change	% change	Value change	% change	Value change
Walking	£14.1m	1%	1%	3%	3%	0%	0%
Cycling	£0.07m	1%	1%	3%	3%	0%	0%
Car	£7.6m	1%	1%	3%	3%	0%	0%
Bus	£18.6m	1%	1%	3%	3%	0%	0%
Other	£1.0m	1%	1%	3%	3%	0%	0%
Total	**£41.4m**		1%		3%		0%

4.126   Under the base case there is assumed to be a 1% increase in town centre users, hence a <u>minor positive impact</u> on town centre economic vitality.

4.127   There is no change under the worse case scenarios (a neutral / negligible impact), but an increase in town centre spending of 3% under the better case scenario (a medium positive impact),

Summary and Assessment of Net Impacts

4.128   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 Edmonton 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.

4.129   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. We estimate that although there are differences between the two options for Edmonton Green, they are both likely to fall within the better and worse case estimates presented below.

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Table 4.14 Summary of Net Impacts in Edmonton Green				
Impacts		Base Case	Better Case	Worse Case
Construction Phase	£	**-£640,146**	**-£180,200**	**-£1,560,037**
	%	**-1.5%**	**-0.4%**	**-3.8%**
Transport Shifts (Bus, Car & Cycle Users)	£	-£135,103	£0	-£991,971
	%	-0.3%	0.0%	-2.4%
Town Centre Environment	£	£414,345	£1,243,034	£0
	%	1.0%	3.0%	0.0%
Total Operational Phase (Transport Shift & Town Centre Environment)	£	**£279,241**	**£1,261,794**	**-£991,971**
	%	**0.7%**	**3.0%**	**-2.4%**

4.130   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 1.5%.

- The operational phase would have a **neutral / negligible impact on town centre economic vitality on an ongoing basis**, with a potential gain of town centre spending of approximately 0.7% per annum.

4.131   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 5 of the report.

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

4.133   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 earlier in this report), if this is achieved, then there could be a longer term uplift in town centre spend of up to 10-15%.

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

5.1 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.

5.2 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

5.3 As highlighted in the previous chapter, 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.

5.4 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 A1010 Scheme in Edmonton Green

5.5 The ongoing design and planning process provides an opportunity to develop and refine a number of important pre-construction mitigation approaches.

- **Design of construction works** – as demonstrated by impact assessment in the preceding chapter, 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.

5.6 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

5.7 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.

Traffic flow

5.8 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.

5.9 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.

Maximising Prosperity

5.10 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 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

5.11 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.

5.12 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 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 addressed.

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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:

- 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 the following businesses in Edmonton Green:

- Gary Morris, Senior Development Manager, St Modwen Properties (Owners of Edmonton Green Shopping Centre)

- Mr K Ucur, Turkish Food Centre

- Mr B Akyildiz, Levent Hair & Beauty

- Mr E Tutuman, Estanbul Express

- Mr I Nazim, River Dry Cleaners

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