

Enfield Council

Economic Impact Assessment of the Cycle Enfield Scheme on Enfield Town

November 2016

Regeneris Consulting Ltd www.regeneris.co.uk

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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 for shorter journeys 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 centre's 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 proposals for Enfield Town.

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).
- 1.10 Reflecting national and London-wide policy, LB Enfield places a high value on supporting the vitality and viability of these centres, particularly through the policies set out in its Core Strategy (LB Enfield, 2010).
- 1.11 To further improve the resilience of Enfield's town centres, the Council has established a 'Framework for the Management of Town Centres' (LB Enfield, 2014) which seeks to build on the strength of existing relationships with businesses, service providers and communities, and review how Enfield's town centres could be managed in the future. The Council's objectives are to:
 - Harness and empower the local community, voluntary, public and private sectors to further develop town centres.
 - Embrace partnership in all its forms for the benefit of centres and for those who live, work, play and visit them.
 - Innovate and be creative with the future direction of centres.
 - Promote inclusive models of governance, enabling all stakeholders to shape town centres.



The Cycle Enfield Scheme

- 1.12 In March 2014, LB Enfield was chosen as one of three outer London boroughs to be awarded £30m of new funding from the Mayor of London's Mini-Holland fund.
- 1.13 The Mini-Holland scheme aims to encourage more people to cycle, more safely and more often while providing better streets and places for everyone, by creating places dominated by people, not motor traffic. The programme specifically focuses on areas where people make short car journeys in outer London that could be cycled easily instead.
- 1.14 The Cycle Enfield proposals comprise a programme of physical changes to nine town and local centres across Enfield, targeted at improving conditions for cycling. The main proposals in the Cycle Enfield programme include:
 - Creating a pedestrian friendly environment on Church Street, Enfield and the provision of two-way lightly segregated cycling facilities on Cecil Road.
 - Converting the Edmonton Green Roundabout into a signalised 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 deterrat 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.
 - Production of initial proposals for Enfield Town: completed September 2015.
 - Public consultation on the initial proposals for Enfield Town: September 2015 to December
 2015
 - Public consultation on the A1010 North Scheme: July 2016 to September 2016.
 - Production of amended proposal for Enfield Town: September 2016.
 - Construction of A105 scheme: Started September 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 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 other stakeholders closely involved with or interested in the proposals (both supportive and opposing the scheme)
- Development of assessment framework, and undertaking assessments, based on the full evidence gathered and analysed.
- Production of the assessment report.



2. Economic Impact Assessment Framework

- 2.1 This section sets out the methodology and framework developed for making the assessment of impact on economic vitality. The approach used is consistent across all of the town and local centres. This section sets out:
 - How we define and measure impact on economic vitality
 - The key factors that could affect this
 - The methodology used to assess these factors
 - How we define the magnitude of impacts
 - Limitations of the analysis.

Defining and 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.

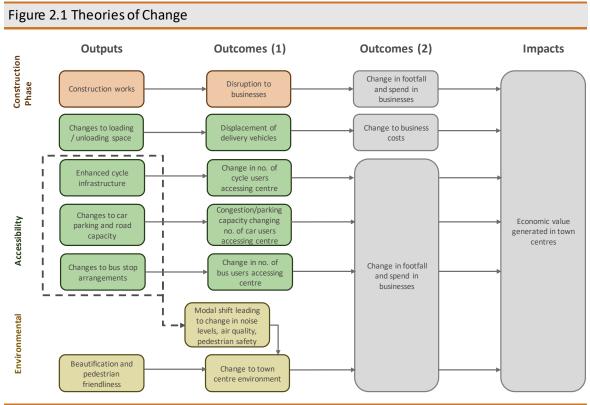
Factors Affecting Economic Vitality and the Theory of Change

- 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 arriving 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.



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:
 - 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 Surveys¹
 - 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 Carpass. Bus Rail Cycle Motor-cycle Walk 1							
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 i.e. 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 (i.e. all shops), and in high frequency consumer services such as restaurants, bars, hairdressers, gyms etc. in which people are likely to spend on a daily / weekly / monthly basis, and hence which are more directly affected by levels of footfall in the town centre.

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



- The analysis therefore does not include employment in town centres activities such as estate agents, funeral services, solicitors, dentists etc. in which the frequency of visits is low.
- 2.17 The results demonstrate almost 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	Turnover per	Estimate of Total		
	Jobs	job	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 (i.e. the design changes)

- 2.28 A detailed analysis of the design plans was undertaken as well as a site visit and consultation with a representative from the design team.
- 2.29 The current design plans and a summary of outputs are set out in the analysis for each town and local centre.

4. Assessment of Magnitude of Change in Outcomes

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



Table 2.4 Evidence Used in Assessment of Outcomes					
Factor	Evidence				
Construction Phase	 Nature of works and anticipated timescales 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 spaces 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				



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 viable². 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 (i.e. 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" (i.e. Cycle Enfield scheme being in operation), versus "policy off" (the present day baseline). It does not set out impacts at different time periods (other than separating construction and operational stages). As a result, the study may underestimate the potential for longer term positive impacts, if there is a significant uplift in the attractiveness of the town centre.

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



Limitations of the Analysis

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

Table 2.6 Limiti	Table 2.6 Limiting Factors in the Assessment						
Factor	Description	Which Assessments Most Affected?					
Data limitations Design plans not yet being	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 produced at the next stage of the work) The scheme plans are not yet at detailed design stage and so some areas of our assessment have had to rely	All Assessments Changes to Car and Cycle Visits Primarily Changes for Car Users Construction works					
fully developed	on best estimates or modelled scenarios.						
Lack of UK Precedents	There are no clear comparators for the scale of the mini Holland schemes in outer London boroughs, meaning no direct comparators against which assessments can be made regarding the likely impact on modal shift (particularly from cars to cycles). While schemes exist in other parts of the world, factors such as climate and cultural differences mean that their outcomes are not directly comparable for Cycle Enfield.	Car and cycle users, and town centre environment					
Phasing of Study	The assessments for each road corridor (A105, A110 and A1010) are being undertaken separately, meaning that the assessment has not been able to analyse cumulative effects across all town centres.	Construction works					

How we Have Responded to the Limitations

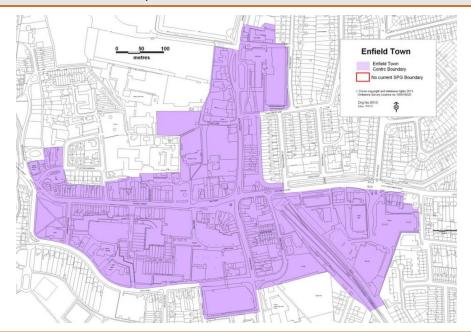
- 2.40 We have responded to the limitations outlined above by incorporating two main approaches in the study:
 - Firstly, we have set out **three scenarios for each assessment**: a base case which sets out the most likely impact, as well as better and worse case scenarios, which provide a realistic range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



3. Enfield Town Assessment

3.1 Enfield Town is the main shopping and commercial centre within Enfield and as such it is designated as a major centre in the London Plan and Enfield's Core Strategy. It is situated in the centre of the borough at the junction of the A105 with the A110. The following maps show the outline of the town centre boundary, and therefore the area this assessment will focus on.

Figure 3.1 Town Centre Boundary



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

Figure 3.2 Context Map



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



3.2 Enfield Town has a wide range of retail and service uses and serves shoppers from across the borough and beyond, with a relatively high proportion of comparison shopping. The table below sets out an overview of the current retail and services provided within the town centre, many of which are within Enfield Town, as well as equivalent data from 2005.

Table 3.1 Breakdown of Units in Enfield Town						
Type of Unit	Number of Units 2014	Number of Units 2005				
Comparison Retail	98	97				
Convenience Retail	19	10				
A1 Services (inc hairdressers, travel agents and other class A1 users not selling convenience / comparison goods)	25	14				
A2 Services	38	42				
A3/A5	30	26				
A4 Pubs and Bars	6	5				
Vacant	16	7				
Total Units	232	200				
Total Active Units (i.e. excluding vacancies)	216	193				

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

Town Centre Performance

- 3.3 Town centre data reflects that **Enfield Town is performing well**:
 - Vacancy rate is low in the town centre. Latest data from the Estates Gazette shows that in September 2016 there were sixteen vacant units in Enfield Town, representing a vacancy rate of 6.9%. 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). Ten of these vacant units are located on Church Street.
 - There has been an increase in the number of active units in Enfield Town between 2005 and 2014 (+23 units), alongside an increase in the total number of units (+32 units).
- 3.4 The shops and services offered in Enfield Town changes regularly. Enfield Town has a churn rate of approximately 8.2% of businesses i.e. less one in ten units change user each year.³ The average business has been located in Enfield Town for 12.2 years.

Total Town Centre Business Turnover

- 3.5 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.
- 3.6 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.
- 3.7 Table 3.2 shows the overall proportion of visitors and spend by mode of transport used to reach the centre.

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



Table 3.2 Results from Enfield Town Centre Survey								
	Car- driver	Car pass.	Bus	Rail	Cycle	Motor- cycle	Walk	Taxi
% share of visitors 21% 4% 42% 4% 2.1% 0.2% 2						26%	0.2%	
% share of spending 33% 5% 33% 3% 1.4% 0.3% 25% 0.1%								

Source: Cycle Enfield Survey, Regeneris Calculations

3.8 Using the methodology set out in Chapter 2, Table 3.3 sets out an estimate of total town centre jobs supported and total business turnover in Enfield Town.

Table 3.3 Enfield Town estimates of jobs, turnover per job, and total revenues					
Local Jobs Estimate of Total Business Turnover					
Enfield Town Businesses 1,040 £87,600,00					

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

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

Table 3.4 Annual Business Turnover and Visits by Mode of Transport in Enfield Town					
	Value of Total Annual Business Annua				
	Turnover Spend by Mode				
Car driver	£28,593,000	852,000			
Car passenger	£4,560,000	142,000			
Local bus	£28,543,000	1,684,000			
Rail	£2,556,000	171,000			
Cycle	£1,200,000	87,000			
Motorcycle	£268,000	-			
Walk	£21,815,000	1,113,000			
Taxi	£65,000	-			
Total	£87,600,000	4,050,000			

- 3.10 For Enfield Town, the baseline provides estimates that of the £87.6 million of total annual turnover across all retail and high frequency consumer service businesses in Enfield Town:
 - £33.15 million is derived from 994,000 trips from car users (drivers and some passengers).
 - £28.54 million is derived from 1,684,000 trips by bus passengers.
 - £21.81 million is derived from 1,113,000 pedestrians.
 - At present, an estimated 87,000 cyclist trips account for around £1,200,000.

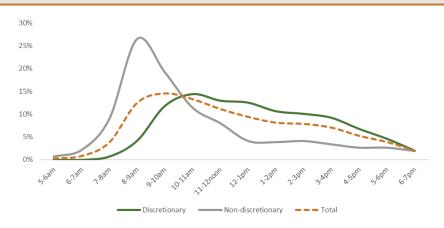
Other Baseline Data to Aid Assessments

- 3.11 The evidence below provides further useful evidence that is drawn on in the analysis in subsequent sections.
- 3.12 An analysis of Enfield Town survey data, shows that 37% of trips to town centres were nondiscretionary trips (i.e. 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 39% of bus users being non-discretionary and 33% of car users being non-discretionary.
- 3.13 The Cycle Enfield Town Centre survey for Enfield Town 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, with the majority arriving between 10am and 4pm whereas non-discretionary visitors largely arrive at the start of the day (between 8am and 10am).

Figure 3.3 Time arrived in Enfield Town

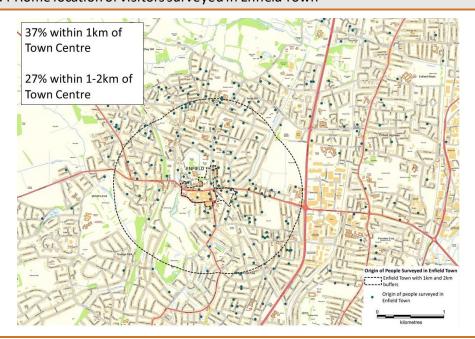


Source: Cycle Enfield Survey

Distance Travelled to Visit Town Centre

3.14 The map below shows the distance travelled to the town centre by all respondents to the Cycle Enfield Survey in Enfield Town.

Figure 3.4 Home location of visitors surveyed in Enfield Town



Source: Cycle Enfield Survey



Current Off-Street Car Park Capacity

3.15 Data provided by Enfield Council shows the current maximum capacity rates of the largest offstreet car parks in Enfield Town for four weeks spread throughout the year. Genotin Road car park
reaches its peak capacity on every day of counting and this is largely due to its popularity in being
within close proximity of Enfield Town station. Palace Gardens Car Park never reaches full capacity
across the weeks examined. The Palace Exchange Car Park only reaches full capacity on Saturdays,
typically between 12noon and 3pm in the afternoon. The Little Park Gardens car park does
sometimes reach full capacity, although this only occurs for periods of less than an hour (with the
exception of the peak shopping period before Christmas).

Table 3.5 Maximum Car Park Occupancy Rates						
		Dec 14-20	March 14-	June 13-19	October	
		2015	20 2016	2016	10-16 2016	
Palace Gardens (550 spaces)						
Mon-Fri		86%	56%	70%	62%	
Saturday		99%	68%	86%	81%	
Sunday		95%	58%	54%	64%	
Little Park Gardens (99 spaces)						
Mon-Fri		100%	94%	93%	100%	
Saturday		100%	94%	100%	100%	
Sunday		100%	77%	88%	86%	
Genotin Road (123 spaces)						
Mon-Fri		100%	100%	100%	100%	
Saturday		100%	100%	100%	100%	
Sunday		100%	100%	100%	100%	
Palace Exchange (500 spaces)						
Mon-Fri		85%	61%	74%	62%	
Saturday		100%	82%	100%	99%	
Sunday		94%	47%	46%	55%	

Source: Enfield Council

Alternative Retail and Service Destinations

3.16 The table below sets out an overview of key retail and service destinations which visitors to Enfield Town might consider as alternatives.

Туре	Name	Distance (miles)
Town centres	Ponders End	1.4
_	Palmers Green	2.4
	Edmonton Green	2.5
Out-of-Town Shopping Centres	Enfield Retail Park	1.4
	Ravenside Retail Park, Edmonton	4.0
	Brookfield Retail Park, Cheshunt	5.7

Source: Regeneris Consulting.

N.B. Distances are the shortest walking routes from Enfield Town rails tation



Outputs - Physical Changes of Cycle Enfield Scheme

3.17 The key outputs of the Cycle Enfield scheme in Enfield Town are shown in the table below.

Table	e 3.7 Cycle Scheme Delive	erables at Enfield Town
	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 an 8-month period, which will be divided into phases to minimise disruption to local residents, retailers and road users.
	Enhanced Cycle Infrastructure	 Lightly segregated cyclelanes on Cecil Road and London Road Junctions modified to improve safety for cyclists and pedestrians
	Changes to car parking and road capacity	 Loss of fourteen parking spaces in Enfield Town Changes to all major road junctions in Enfield Town Two additional disabled parking spaces on Church Street (total of three) Signalised junction replaces pedestrian crossings adjacent to Trinity Church (western end of town centre)
Accessibility	Changes to bus stop locations	 Majority of bus stops remaining in the same locations. Floating bus stop design for two bus stops outside Dugdale Centre. Removal of northbound bus lane on London Road Cycle lane runs between footway and stationary bus at London Road bus stop. Stop S on Cecil Road will be merged into the existing W and X bus stops adjacent to the Dugdale Centre. Stop V on London Road will be moved further south, making it more convenient for people wishing to access the Palace Exchange.
	Changes to loading/ unloadingspace	 Three loading bays to be removed along Church Street (with eight remaining). Two loading bays removed adjacent to the Fountain Island (with six remaining) One loading bay to be removed from London Road (with five remaining)
Environ-mental	Beautification and Pedestrian Friendliness	 Signalisation of the pedestrian crossing adjacent to Trinity Church Signalisation of pedestrian crossing at entrance to Enfield Town Park on Cecil Road. Public realmimprovements at Enfield Town station Public realmimprovements at Fountain Island Landscaping along cyclelane buffer on Cecil Road Two pedestrian crossing on Church Street widened to accommodate higher volumes of pedestrians

Source: Regeneris Consulting based on Cycle Enfield Consultation Plans

3.18 The diagrams show the Cycle Enfield proposals for Enfield Town proposed in October 2016.



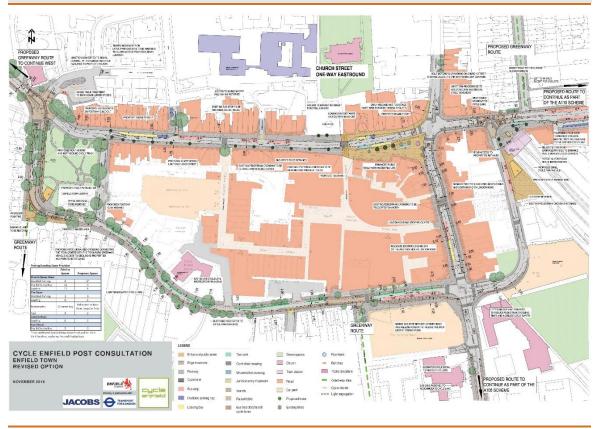


Figure 3.5 Proposed Plans for Enfield Town

Source: Cycle Enfield

Construction Phase Impacts

Overview

- 3.19 At this stage detailed plans for construction in Enfield Town are yet to be developed, and as such, the approach to construction phasing and specific approach both around and within the town centre is not known. The design team estimate the total construction period across Enfield Town Centre is likely to be around eight months.
- 3.20 Drawing on transport engineers within our team, we have considered the possible construction approach in Enfield Town. Given the current spare capacity on the roads in Enfield Town (especially along Cecil Road), there is not expected to be any full road closures during the Cycle Enfield construction period. A large proportion of the works will be focused along Cecil Road and London Road where cycle lanes are being constructed on both sides of the road. On Cecil Road there are fewer businesses compared to the main shopping streets of Church Street and London Road. Only Argos, Lidl and Greenfox Garage have frontages on Cecil Road, and M&S and Waitrose have customer collections points which are accessed from Cecil Road. As such there is not anticipated to be any major impact as long as deliveries can still access the rear of the Palace Exchange / Palace Gardens shopping centre.
- 3.21 Works on Church Street are expected to be less disruptive than on Cecil Road given that less construction will be carried out. However, there may be issues for businesses loading/unloading during the construction period, and mitigation measures should be considered.



3.22 Works on London Road have the highest potential to cause an impact on businesses, with cyde lanes constructed on both sides of the road. This may create issues for businesses loading/unloading during the construction period, although if roadworks are appropriately phased, this should reduce the potential impact on businesses.

Nature of Effect

- 3.23 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.
- 3.24 These effects can impact on visitor numbers and spend in the town centre, however there is currently no research which provides robust quantification of the link between these factors and adverse town centre vitality.
- 3.25 Case study evidence from the London wide OLF programme⁴ highlights that extended periods of construction activity can have disruptive effects in town centres where major public realm and highway works resulted in businesses reporting losses of footfall and turnover, however this was mainly the case where construction works were concentrated in one area for a period of over eight months, or where pedestrian flows were interrupted. Neither of these would be the case in the approaches set out above (with disruption in the town centre itself expected to only last for part of the overall eight-month construction period.

Impacts on Users

3.26 The analysis below focuses on the impact on three main user groups – people visiting on foot, by car and by bus, which make up 95% of total spend in Enfield Town⁵ and are likely to be most affected.

Pedestrians

3.27 The works are primarily focused on the carriageway, and therefore pedestrian access should be maintained 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

- 3.28 Both congestion and reduced car parking could affect car users:
 - The Cycle Enfield Visitor Survey for Enfield Town shows that around 33% 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 eggoing to work, visiting the doctor etc).



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 set out in Table 3.4

- 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, with similar types of shops to Enfield Town, within a small radius – eg Ponders End, Palmers Green, Edmonton Green, all of which are within 3 miles).
- However, the majority of discretionary trips take place between 10am and 4pm, 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 12.5% of the discretionary cartrips (effectively 8.4% of all car trips) for the duration of the works
 - This alters to 25% of discretionary car trips (effectively 16.8% of all car trips) under a worse case scenario, and 6% of discretionary car trips (effectively 4.0% of all car trips) under a better case scenario, for the duration of the works.

Bus Users

- 3.29 Congestion impacts and temporary changes to bus stop locations could affect bus users:
 - The Cycle Enfield Visitor Survey for Enfield Town shows that around 39% 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 4pm, 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 3.1% of all bus trips) for the duration of the works
 - This alters to 15% of discretionary bus trips (effectively 9.2% 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

- 3.30 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.
- 3.31 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 assumed to last for a maximum of 36 weeks, so the impact on *annual* town centre turnover is more limited).



3.32 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 4 of the report.

Table 3.8 Summary of Construction Phase Impacts in Enfield Town									
Transport	Town	Bas	se Case	Bett	er Case	Wor	Worse Case		
Mode	Centre	%	Impact on	%	Impact on	%	Impact		
	Annual	change	annual TC	change	annual TC	change	on		
	Spend	in no.	turnover	in no.	turnover	in no.	annual TC		
		of trips		of trips		of trips	turnover		
Walking	£21.81m								
Cycling	£1.20m								
Car	£33.15m	-8.4%	-2.2%	-4.0%	-1.1%	-16.8%	-4.4%		
Bus	£28.54m	-3.1%	-0.7%	0.0%	0.0%	-9.2%	-2.1%		
Other	£2.89m								
Total	£87.60m		-2.9%		-1.1%		-6.5%		

- 3.33 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 2.9%.
- 3.34 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 1.1% and 6.5% (respectively a minor negative impact and a medium negative impact).

Cycle User Impacts

Overview and Nature of Effect

- 3.35 Increasing the number of cyclists using the A105 and A110 Corridor is at the heart of the Cyde Enfield scheme plans for Enfield Town.
- 3.36 The changes to cycling infrastructure on the roads include uninterrupted segregated cycle lanes on both sides of the road along Cecil Road and London Road through Enfield Town. 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. Cycle hubsare expected to be provided at Enfield Town and Enfield Chase stations in addition to more cycle parking at the Dugdale Centre.
- 3.37 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

- 3.38 The available evidence points to a significant opportunity to increase cycling across Enfield borough, and within Enfield Town:
 - 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 2.1% of shoppers used a bike to access Enfield Town.
- 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 Enfield Town 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 (29%), being unable to cycle (21%), lack of safe routes (14%) and too much car traffic (13%).
- 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).
- 3.39 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.
- 3.40 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.
- 3.41 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 19% increase in visitors from the current rate of 2.1% in Enfield Town⁶)
 - This assumption alters to an increase of 4% (90% increase from baseline of 2.1%) in the better case scenario (in line with the strongest performing outer London boroughs Kingston on Thames at 4% and Waltham Forest at 3.8%), and no change under the worse case scenario.

Net impact on town centre performance

- 3.42 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.
- 3.43 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

regeneris

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⁶ Cycle Enfield Survey

related spend would have occurred regardless by people travelling in by different means. As such the table below only captures the net additional impact on town centre annual business turnover of these additional cycle users.

- 3.44 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
- 3.45 Various measures could be made to enhance the positive impacts set out in the base case. These are summarised in chapter 4 of the report.

Table 3.9 Summary of Impact of Change in Cycle Users in Enfield Town									
Transport	Town	Bas	se Case	Bett	er Case	Worse Case			
Mode	Centre	%	Impact on	%	Impact on	%	Impact		
	Annual	change	annual TC	change	annual TC	change	on		
	Spend	in no.	turnover	in no.	turnover	in no.	annual TC		
		of trips		of trips		of trips	turnover		
Walking	£21.81m	0%		0%		0%			
Cycling	£1.20m	19%	0.03%	90%	0.12%	0%	0.0%		
Car	£33.15m	0%		0%		0%			
Bus	£28.54m	0%		0%		0%			
Other	£2.89m	0%		0%		0%			
Total	£87.60m	-	0.03%	-	0.12%	-	0.0%		

- 3.46 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 0.03 %.
- 3.47 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 0.12% (a neutral / negligible impact in both cases).

Car User Impacts

Overview

- 3.48 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.
- 3.49 On-street parking would be affected by reduction of on-street parking spaces to make way for cyde 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.
- 3.50 Figure 3.6 towards the end of this section, 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

- 3.51 The current highway network around Enfield Town consists of a main overarching gyratory system around the town, designated as the A110, but consisting of the main retail thoroughfare (Church Street and The Town) to the north and Cecil Road to the south, with Genotin Road completing the formal gyratory. London Road provides a northbound route cutting across the eastern end of the gyratory, creating a min-gyratory with Genotin Road.
- 3.52 The main arterial routes into and out of the centre consist of the A110 Church Street from the west, Silver Street from the north, A110 Southbury Road from the east and A105 London Road from the south. The key network junctions occur at the intersection of these routes, creating four main junctions:
 - A110 Church Street, A110 Cecil Road and Little Park Gardens
 - A110 The Town, Silver Street, and London Road
 - A110 Southbury Road and A110 Genotin Road (outside Enfield Town Rail Station)
 - A110 Genotin Road and A105 London Road
- 3.53 Three of these junctions are currently signalised, with the exception being the first junction (Church Street and Cecil Road), which currently has limited conflicting highway movements and so is unsignalised. There are, though, zebra crossing facilities on eastbound and we stbound arms from Cecil Road.
- 3.54 Jacobs have constructed local junction models to simulate the current operation of the key junctions and pedestrian crossings within Enfield Town Centre during the AM, PM and Saturday peak periods. The overall summary of these models details the demand flow, degree of saturation, mean max queue and delay and each approach arms of the junctions / crossings. The baseline models highlight that, on average, a vehicle is currently delayed by around 23.5 seconds when travelling through one of these four junctions.
- 3.55 There are two main car parks located within Enfield Town Centre. The first is Palace Exchange Multi-storey car park which has more than 500 parking spaces and it accessed via Sydney Road. The second is Palace Gardens Multi-storey car park which has 550 parking spaces and it accessed via Sarnesfield Road.
- 3.56 The entrance to the Palace Exchange Multi-storey car park is via Sydney Road but the exit is via a privately serviced road leading to London Road. The entrance to and exit from Palace Gardens Multi-storey car park is via Sarnesfield Road. However this road is one way southbound, therefore the entrance is accessed via Church Street to the north, which is one way eastbound.
- 3.57 In order to assess the impact of the proposed changes to the highway network resulting from the Mini-Holland scheme upon general car users entering the town an estimate of the impact of trips to and from these two main car parks has been undertaken.
- 3.58 A mechanism to inform this process, data is available from the Cycle Enfield surveys relating to the distances travelled by car drivers when accessing the town centre. Whilst this data does not permit an accurate assessment of trip lengths, it suggests that the town has a larger catchment area than other town centres within Enfield. The traffic modelling results also indicate higher levels of delay for trips into the town centre. For the purposes of the analysis below we have assumed an average journey time by car of around 8.5 minutes, i.e. 17 minutes for a 2.6km return journey.



Congestion Impacts on routes to and from Palace Exchange Multi-storey car park

- 3.59 The model outputs were examined to determine the impact on expected journey times along four potential routes to/from Palace Exchange Multi-storey car park.
- 3.60 The four routes to access the car park are:
 - From the East (Route 1): Southbury Road / Genotin Road signalised junction, Genotin Road crossing, London Road / Genotin Road signalised junction and Cecil Road / Sydney Road signalised junction.
 - From the North (Route 2): The Town/Southbury Road / London Road signalised junction,
 Southbury Road / Genotin Road signalised junction, Genotin Road crossing, London Road / Genotin Road signalised junction and Cecil Road / Sydney Road signalised junction.
 - From the South (Route 3): London Road / Car Park exit signalised junction, London Road / Genotin Road signalised junction and Cecil Road / Sydney Road signalised junction.
 - From the west (Route 4): Church Street / Little Park Gardens signalised junction, The Town / Southbury Road / London Road signalised junction, Southbury Road / Genotin Road signalised junction, Genotin Road crossing, London Road / Genotin Road signalised junction and Cecil Road / Sydney Road signalised junction
- 3.61 The four routes to exit the car park are:
 - To the East (Route 1): London Road / Car Park exit signalised junction, London Road / Genotin Road signalised junction, London Road crossing, The Town / Southbury Road / London Road signalised junction and Southbury Road / Genotin Road signalised junction.
 - To the North (Route 2): London Road / Car Park exit signalised junction, London Road / Genotin Road signalised junction, London Road crossing and The Town / Southbury Road / London Road signalised junction.
 - To the South (Route 3): London Road / Car Park exit signalised junction.
 - To the west (Route 4): London Road / Car Park exit signalised junction, London Road / Genotin Road signalised junction, Cecil Road / Sydney Road signalised junction and Church Street / Little Park Gardens signalised junction.
- 3.62 Around a third of traffic flows into Enfield Town come from London Road (Route 3), and around a quarter come from Southbury Road (Route 1).

Table 3.	Table 3.10 Current Traffic Flows into Enfield Town - passenger car unit (pcu)								
From	Road	Д	AM		PM		Sat		
FIOIII		No.	%	No.	%	No.	%		
North	Silver Street	525	18%	469	18%	406	15%		
East	Southbury Road	733	25%	626	24%	736	27%		
South	London Road	929	32%	892	34%	912	33%		
West	Windmill Hill / Church St.	734	25%	644	24%	723	26%		
Total		2,921	100%	2,631	100%	2,777	100%		

Source: JMP Analysis based on data provided by Jacobs

3.63 Tables 3.10, 3.11, 3.12 and 3.13 show the predicted levels of delays in seconds / pcu for each route to and from the car park for both the current baseline situation and post-implementation of the proposed scheme. The data is presented for the AM weekday peak period, PM weekday peak period, and the Saturday peak period.



Table 3.11 Average Delays – Route 1 (s/pcu) – 'Current' and 'with scheme'

To Car Park From Car Park Combined

Base Scheme Difference Base Scheme Difference Difference

AM Peak 96 109 85 109 24 37 PM Peak 100 112 12 112 122 10 22 96 138 42 96 72 114 Sat Peak 168

Source: JMP Analysis based on data provided by Jacobs

Table 3.12 Average Delays – Route 2 (s/pcu) – 'Current' and 'with scheme'

		To Car Park		Fi	From Car Park			
	Base	Scheme	Difference	Base	Scheme	Difference	Difference	
AM Peak	163	191	28	98	133	35	63	
PM Peak	154	185	31	112	135	23	54	
Sat Peak	176	193	17	91	159	68	85	

Source: JMP Analysis based on data provided by Jacobs

Table 3.13 Average Delays – Route 3 (s/pcu) – 'Current' and 'with scheme'

	To Car Park			F	From Car Park			
	Base	Scheme	Difference	Base	Scheme	Difference	Difference	
AM Peak	48	77	29	46	46	0	29	
PM Peak	50	60	10	50	52	2	12	
Sat Peak	55	117	62	52	47	-5	57	

Source: JMP Analysis based on data provided by Jacobs

Table 3.14 Average Delays – Route 4 (s/pcu) – 'Current' and 'with scheme'

		To Car Park		F	From Car Park			
	Base	Scheme	Difference	Base	Scheme	Difference	Difference	
AM Peak	168	305	137	68	182	114	251	
PM Peak	164	253	89	76	159	83	172	
Sat Peak	180	219	39	85	152	67	106	

Source: JMP Analysis based on data provided by Jacobs

- 3.64 From Table 3.10 it can be seen that average vehicle delay is forecast to increase during all three peak periods for Route 1. The largest increase is during the AM peak where delays to and from the car park are predicted to increase by 1 minute 54 seconds.
- 3.65 From Table 3.11 it can be seen that, on average, a trip to and from the car park via Route 2 in the AM peak would take an additional 1 minute 3 seconds, and 54 seconds in the PM peak.
- 3.66 Table 3.12 indicates the majority of delays occur on Route 3 on the way into the car park, with little change in delays on the exiting route, indeed a reduction on the Saturday.
- 3.67 Table 3.13 indicates that Route 4 has the highest levels of delay across all four route, reflecting the requirement for trips to circumnavigate the whole of the one-way system to access and then egress the car park.
- 3.68 A weighted average of trips has been calculated based upon the estimated number of trips that would originate along each of the four routes. This indicates that, on average, a vehicle entering and exiting the car park by one of the four routes would incur an <u>additional 40 seconds delay</u> in the AM peak as a result of the proposed changes.



- 3.69 On average, a vehicle entering and exiting the car park by one of the four routes would incur an additional 25 seconds delay in the PM peak as a result of the proposed changes.
- 3.70 On average, a vehicle entering and exiting the car park by one of the four routes would incur an additional 1 minute 34 seconds delay in the Saturday peak as a result of the proposed changes.
- 3.71 In order to put these delay figures into context we have applied them to our assumed average two-way car journey (2.6 km round trip) into the town centre of seventeen minutes. The combined additional delays would, therefore, represent around a 4% increase in journey times in the AM peak, a 2% increase in the PM peak and a 9% increase in the Saturday peak.

Congestion Impacts on routes to and from Palace Gardens Multi-storey car park

- 3.72 The model outputs were examined to determine the impact on expected journey times along two routes to/from Palace Gardens Multi-storey car park.
- 3.73 The two routes to access the car park are:
 - From the West (Route 5): Church Street / Little Park Gardens signalised junction.
 - From the East (Route 6): Southbury Road / Genotin Road signalised junction, Genotin Road crossing, London Road / Genotin Road signalised junction and Cecil Road / Sydney Road signalised junction, Church Street / Little Park Gardens signalised junction.
- 3.74 The two routes to exit the car park are:
 - To the West (Route 5): Sarnesfield Road / Cecil Road priority junction, Cecil Road crossing and Church Street / Little Park Gardens signalised junction.
 - To the East (Route 6): Sarnesfield Road / Cecil Road priority junction, Cecil Road crossing and Church Street / Little Park Gardens signalised junction, The Town / Southbury Road / London Road signalised junction and Southbury Road / Genotin Road signalised junction.
- 3.75 Table 3.14 and 3.15 shows the results for the base and proposed delays in seconds / pcu for the routes to and from the car park.

Table 3.15 Average Delays – Route 5 (s/pcu) – 'Current' and 'with scheme'									
_	To Car Park From Car Park						Combined		
	Base	Scheme	Difference	Base	Scheme	Difference	Difference		
AM Peak	1	87	86	5	45	40	126		
PM Peak	1	57	56	7	50	43	99		
Sat Peak 1 43 42 8 60 52									

Source: JMP Analysis based on data provided by Jacobs

Table 3.16 Average Delays – Route 6 (s/pcu) – 'Current' and 'with scheme'									
		To Car Park		Fı	Combined				
	Base	Scheme	Difference	Base	Scheme	Difference	Difference		
AM Peak	101	171	70	63	165	102	172		
PM Peak	105	172	67	69	147	78	144		
Sat Peak 102 200 98 65 116 51 14									

Source: JMP Analysis based on data provided by Jacobs

3.76 From Table 3.14 it can be seen that delay is increased during all three peak periods for Route 5. During the AM and PM peak period, the largest increase in delay is on the route into the car park with an additional 1 minute 26 seconds and 56 seconds delay, respectively. During the Saturday



- peak period, the largest increase is a 52 seconds delay on the route out from the car park he ading west. The additional delay is caused by the signalisation of Church Street / Little Park Gardens.
- 3.77 From Table 3.15 it can be seen that even higher delays occur on Route 6 during all three peak periods. This reflects the requirement for trips to circumnavigate the whole of the one-way system to access and then egress the car park.
- 3.78 A weighted average of trips has been calculated based upon the estimated number of trips that would originate along each of the two routes. This indicates that, on average, a vehicle entering and exiting the car park by one of the two routes would incur an <u>additional 1 minute 11 seconds</u> delay in the AM peak as a result of the proposed changes.
- 3.79 On average, a vehicle entering and exiting the car park by one of the two routes would incur an <u>additional 1 minute 44 seconds delay in the PM peak</u> as a result of the proposed changes.
- 3.80 On average, a vehicle entering and exiting the car park by one of the two routes would incur an additional 1 minute 37 seconds delay in the Saturday peak as a result of the proposed changes.
- 3.81 In order to put these delay figures into context we have applied them to our assumed average two-way car journey (2.6 km round trip) into the town centre of seventeen minutes. The combined additional delays would, therefore, represent around a 13% increase in journey times in the AM peak, a 10% increase in the PM peak and a 9% increase in the Saturday peak.

Summary

- 3.82 During all three peak periods the delays at all junctions within Enfield Town Centre have increased, in particular at The Town / Southbury Road / London Road and London Road / Genotin Road junctions. Additionally, the Church Street / Little Park Gardens junction has a significantly increased delay due to the junction currently not operating under signal control.
- 3.83 Around a third of traffic comes on Route 3 which is the least affected by the Cycle Enfield proposals.
- 3.84 Enfield Town is already operating under a 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. It should be ensured that the new junctions are added to the SCOOT cell. However, this would be at the discretion of Transport for London.

Car Parking

- 3.85 There are currently 1,370 parking spaces available in Enfield Town available during the day time and 1,402 spaces available after 6.30pm. The proposals for Cycle Enfield will reduce the number of daytime spaces by 14 (a 1% reduction) and remove the single yellow line parking, reducing the number of evening spaces by an estimated 46 spaces (a 3% reduction). The table below summarises the current (and proposed) number of spaces and parking restrictions under current and proposed plans.
- 3.86 Parking is also available at the Market Square on non-market days (typically Sunday to Wednesday). This has not been included as part of these calculations since it is not available every day.



Table 3.17 Car Parking Summary for Enfield Town							
	Current Park	ing Provision	Proposed Parking				
	Number Regulations		Provision				
On-street	14 parking spaces, 1 disabled parking space	Pay and display, limited to 2 hours	No on-street parking available with the exception of three disabled parking spaces				
On-street Single Yellow Line Areas	Estimated 32 spaces		No parking available				
Off-street	Little Park Gardens – 99 spaces Church Lane – 16 spaces Genotin Road – 123 spaces Sydney Road – 68 spaces Palace Gardens – 550 spaces Palace Exchange – 500 spaces	Mon-Sat 7:30am - 6:30pm 1 Hour £1.20, 3 Hours £2.40 5 Hours £4.00, Max £6.00 Evening Free Free parking for 3 hours on Sunday Mon-Sun 6:00am - 10:00pm £1 per hour, up to a max of £7	Same as present				
Total Daytime (excl. disabled)	1,370 on	1,356 spaces					
Total Evening (excl. disabled)	1,402 sp	oaces	1,356 spaces				

Source: Cycle Enfield Consultation Plans

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



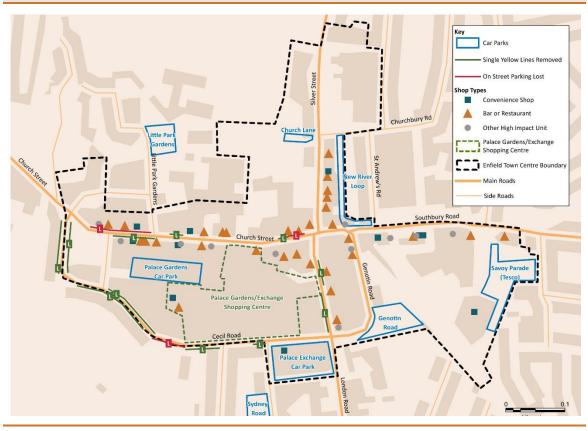


Figure 3.6 Available Parking and Shop Types in Enfield Town

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

3.88 All on-street parking spaces on Church Street, London Road and Cecil Road would be removed as part of the Cycle Enfield proposals, with the exception of two disabled parking spaces. It is expected that the high proportion of off-street car parks in Enfield Town will accommodate for the reduction in the number of on-street parking spaces. In addition, parking is available at the Market Square from Sunday to Wednesday, which will support the loss of parking along Church Street.

Impact on Users

- 3.89 The analysis above shows that the congestion impacts will lead to an additional delays in Enfield Town, although the impact is dependent of the direction of travel.
 - For journeys to and from the Palace Exchange Multi-storey car park there would be a combined additional delay representing a 4% increase in journey times in the AM peak, a 2% increase in the PM peak and a 9% increase in the Saturday peak based on an average two-way car journey (2.6 km round trip) into the town centre of seventeen minutes.
 - For journeys to and from the Palace Gardens Multi-storey car park there would be a combined additional delay representing a 13% increase in journey times in the AM peak, a 10% increase in the PM peak and a 9% increase in the Saturday peak based on an average two-way car journey (2.6 km round trip) into the town centre of seventeen minutes
- 3.90 In isolation, this is not anticipated to have a significant impact on car users accessing the centre, particularly given that:
 - There is not expected to be any impact on the 33% of car visitors making non-discretionary trips, as they will still need to visit the centre



- 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 peak time delay.
- 3.91 The changes to car parking will result in a minor loss of day-time and evening parking, however this is a marginal change given the extensive availability of town centre parking space. Evidence on the current capacity of off-street car parks in Enfield Town shows that there is spare capacity at Palace Gardens car park at all times, and Palace Exchange and Little Park Gardens for the majority of the week (with the exception of a short time period across the middle of the day on Saturday and at peak shopping times of the year (e.g. Christmas).
- 3.92 The combination of these factors points to there being a limited impact on car users, however the three scenarios are used to set out a range of possible impact scenarios:
 - Our base case assumes an overall 10% reduction in the 67% of discretionary car users which equates to a 6.7% overall reduction in car user visitors.
 - This alters to a 20% reduction in the number of discretionary car users in the worse case (equating to a 13.4% reduction in all car users), and no change in the better case.

Net impact on town centre performance

- 3.93 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.
- 3.94 It is assumed that the reduction in car users to the centre will all be entirely lost spend to Enfield Town (i.e. no displacement to other modes of transport).
- 3.95 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
- 3.96 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 4 of the report.

Table 3.18	Table 3.18 Summary of Impact of Changes in Car Users in Enfield Town									
Transport	Town	Bas	se Case	Bett	er Case	Worse Case				
Mode	Centre	%	Impact on	%	Impact on	%	Impact			
	Annual	change	annual TC	change	annual TC	change	on			
	Spend	in no.	turnover	in no.	turnover	in no.	annual TC			
		of trips		of trips		of trips	turnover			
Walking	£21.81m									
Cycling	£1.20m									
Car	£33.15m	-6.7%	-2.5%	0.0%	0.0%	-13.4%	-4.9%			
Bus	£28.54m									
Other	£2.89m									
Total	£87.60m		-2.5%		0.0%		-4.9%			

- 3.97 Under the base case, the impact of reduced car users would have a <u>minor negative impact</u> on town centre economic vitality, with a potential loss of town centre spending of approximately 2.5%.
- 3.98 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 4.9% (respectively a neutral / negligible and a medium negative impact).



Bus User Impacts

Overview

3.99 There are currently twelve bus routes which service Enfield Town. The routing of these buses is not expected to change with the Cycle Enfield proposals. The routes, number of junctions on the route through Enfield Town, and the frequency of buses for each three peak periods are shown in Table 3.16.

Table 3.19 Bus Routes, Junctions, and Frequency					
Route			Junctions on route through Enfield Town	AM/PM peak	Saturday peak
	Direction			Flow (buses/hr)	Flow (buses/hr)
121	Enfield Lock	EB	5	7	6
121	Turnpike Lane	WB	5	6	7
191	Brimsdown	WB	5	8	6
191	Edmonton Green	EB	5	6	6
192	Tottenham Hale	EB	5	7	6
192	Enfield Town	WB	5	6	6
231	Turnpike Lane	EB	5	5	4
231	Enfield Chase Station	WB	5	5	4
307	Barnet Hospital	WB	5	6	6
307	Brimsdown	EB	5	6	7
313	Chingford	EB	5	4	3
313	Potters Bar	WB	5	4	3
317	Waltham Cross	EB	5	3	3
317	Enfield Town	WB	5	3	3
329	Turnpike Lane	EB/SB	5	10	8
329	Enfield Town	NB/WB	5	8	9
377	Oakwood	EB	5	2	2
377	Ponders End	WB	8	2	2
W8	Chase Farm Hospital	NB	4	8	7
W8	Picketts Lock	SB	5	8	7
W9	Chase Farm Hospital	NB	4	4	4
W9	Southgate	SB	6	4	4
W10	Crews Hill	NB	5	0	1
W10	Enfield Town	SB	5	0	1

3.100 There are some minor proposed changes to the position of the bus stops in Enfield Town, however these are not expected to have a large impact on bus journeys. Stop S on Cecil Road will be merged into the existing W and X bus stops adjacent to the Dugdale Centre. Stop V on London Road will be moved further south, making it more convenient for people wishing to access the Palace Exchange shopping centre. This is unlikely to have a major impact on shops along this stretch of road.



3.101 The greatest impact for bus users is expected to be the increased levels of congestion in Enfield Town which will may lengthen journey times. However, these delays are not expected to be significantly different than for car users.

Nature of Effect

- 3.102 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
- 3.103 The bus stop on London Road will be designed to have a bus stop boarder with the cycle lane running between the footway and stationary bus. The bus stops adjacent to the Dugdale Centre are planned to have a bus stop bypass. The bus stops on Church Street will remain the same as present with no conflict with cyclists.
- 3.104 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 Enfield Councilin partnership with TfL taking action to mitigate if there is any evidence emerging of a risk to bus passengers.
 - Congestion Impacts which could extend bus journey times
- 3.105 Table 3.17 demonstrates that the majority of buses pass through a wide range of junctions within Enfield Town Centre. This, in part, reflects the nature of one-way gyratory. Within the main town centre there is limited bus priority provision, due to restrictions in available road space. This means that buses are subjected to the same delays as general traffic.
- 3.106 Jacobs have constructed local junction models to simulate the current operation of the key junctions and pedestrians crossings within Enfield Town Centre during the AM, PM and Saturday peak periods. The overall summary of these models details the demand flow, degree of saturation, mean max queue and delay and each approach arms of the junctions / crossings.
- 3.107 The model outputs have been examined to determine the impact of the proposed scheme upon the expected journey times of all of the bus routes. This has been done by examining the bus routes in detail and determining the precise turning movement of individual bus routes through each junction and allocating the level of delay forecast for the turning movement from the model outputs. By combining all of the turning movements for each individual bus route and estimation of the current delay experienced by that bus route has been determined, alongside the predicted delay resulting from the proposed scheme. This information has been collated for the AM, PM and Saturday peak periods presented within the Jacobs modelling outputs.
- 3.108 The Enfield Town Preliminary Junction Modelling report will provide a more detailed summary of this delay to each bus route for the current base and with the proposed scheme. It will also show the difference in delay per route and based on the bus frequencies the delay for the hour.
- 3.109 Table 3.17 provides a summary of the data as an average delay per bus for each of the routes



Table 3.20 Summary of Additional Average Delay per Bus						
Route	Junctions on route	Additional Average Delay (seconds per bus)				
	through Enfield Town	AM peak	PM peak	Saturday peak		
121	5	139	119	106		
191	5	134	117	104		
192	5	91	99	147		
231	5	138	118	104		
307	5	138	118	98		
313	5	138	118	104		
317	5	92	100	146		
329	5	231	138	119		
377	5	250	138	139		
W8	4	120	46	131		
W9	4	208	182	109		
W10	5	-	-	146		

3.110 From Table 3.17 it can be seen that additional delay is incurred across all bus routes within Enfield Town Centre during all three peak periods.

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- 3.111 On an individual route basis, the routes which have increased the highest are bus routes 377, 329, and W9 during the AM and PM peak periods and the 192, 317, W10, 377 and W8 during the Saturday peak period.
- 3.112 On average, buses operating within the AM peak are predicted to incur an additional 2 minutes 30 seconds delay, in the PM peak, 1 minutes 53 seconds, and in the Saturday peak, 1 minute 58 seconds.
- 3.113 The main cause for the increase in delay is at the junction of Church Street / Little Park Gardens which currently is not operating under signal control but is now proposed to be signalised within the scheme.
- 3.114 The precise levels of delays incurred by passengers accessing and egressing Enfield Town centre by will be dependent upon the profile of use of individual bus stops. This will influence what sections of the route passenger travel and so how much additional delay they incur on their trip. The figures presented in Table 3.17 can be considered to represent a worst case level of delay on a round trip into and out from Enfield Town Centre.

Impact on Users

All Route

- 3.115 The visitor survey shows that around 39% of bus users are spending money in the town centre as part of non-discretionary trips (i.e. for non-flexible purposes such as work or education). It is assumed that there would be no impact on these visits.
- 3.116 The remaining 61% 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.
- 3.117 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 limited given that the majority of people shopping
 in the town centre will not incur the full delays shown across full bus routes given that



bus stops are located on the entry to the town centre from each direction. Bus routes are expected to incur delays of between 46 and 250 seconds dependent on the route they take through the town centre.

- There are no significant changes to the location of bus stops (only merging existing 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.
- 3.118 The scenarios include the following:
 - Our base case scenario is for a 2.5% reduction in the number of bus users as a result of the changes (which equates to a 1.5% reduction in visits by all bus users).
 - The better case scenario assumes there will be no reduction in the number of bus users, while the worse case scenario assumes a reduction of 7.5% of discretionary trips (which equates to a 4.5% in visits by all bus users).

Net impact on town centre performance

- 3.119 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.
- 3.120 It is assumed that any reduction in bus users to the centre will all be entirely lost spend to Enfield Town (i.e. no displacement to other modes of transport).
- 3.121 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
- 3.122 Various mitigation measures could be made to reduce the negative impacts set out in the base case. These are summarised in Chapter 4 of the report.

Table 3.21 Summary of Impact of Change in Bus Users in Enfield Town							
Transport Town Mode 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	£21.81m						
Cycling	£1.20m						
Car	£33.15m						
Bus	£28.54m	-1.5%	-0.5%	0.0%	0.0%	-4.5%	-1.5%
Other	£2.89m						
Total	£87.60m		-0.5%		0.0%		-1.5%



- 3.123 Under the base case, the impact of reduced bus users would have a <u>neutral / negligible impact</u> on town centre economic vitality, with a potential loss of town centre spending of approximately 0.5%.
- 3.124 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 1.5% (a neutral / negligible impact and a minor negative impact respectively.

Impacts on Loading & Unloading

- 3.125 There are presently 25 designated loading or unloading bays in Enfield Town of which 11 are on Church Street (West), eight in the Town area, and six on London Road. As part of the Cycle Enfield proposals, 19 of these loading spaces will be retained with eight on Church Street (three loading bays lost), six loading bays adjacent to Fountain Island (two lost) and five loading bays on London Road (one lost). These are largely in the same location as the existing loading bays, with the exception of those on Church Street (West) which will be relocated to the opposite side of the road.
- 3.126 The majority of businesses along the Church Street have a limited ability to load/unload goods from the rear of their premises, and are therefore are dependent on space outside the shop. Given that there is no significant reduction in loading space, and the spare capacity of spaces, there is not likely to be a major impact on businesses.
- 3.127 The inconvenience to the majority of businesses in Enfield Town is likely to be minimal therefore, the impact of changes to delivery vehicle access on town centre business turnover has been assessed as **neutral / negligible**.

Town Centre Environment

Overview

- 3.128 The proposed scheme includes a number of elements which have the potential to directly enhance the overall town centre environment. These include:
 - Signalisation of the pedestrian crossing adjacent to Trinity Church
 - Signalisation of pedestrian crossing at entrance to Enfield Town Park on Cecil Road.
 - Public realm improvements at Enfield Town station (subject to approval with TfL)
 - Public realm improvements at Fountain Island
 - Landscaping along cycle lane buffer on Cecil Road
 - Widening of two pedestrian crossings on Church Street to accommodate higher volumes of pedestrians
- 3.129 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

- 3.130 There are a number of planned changes to crossings in Enfield Town as part of the Cycle Enfield scheme which will make the town centre a more pedestrian friendly area. The two existing pedestrian crossings on Church Street will be widened to accommodate higher volumes of pedestrians. The current crossings do not provide much space for pedestrians especially on market days. A new pedestrian crossing will be built linking the library and the Town Park, improving connections between the town centre with the Park.
- 3.131 These improvements will encourage more pedestrian footfall in Enfield Town as journeys will be quicker and safer than at present.

Public Realm

- 3.132 The Cycle Enfield proposals have plans to improve the public realm outside Enfield Town station, by relocating the taxi rank onto the carriageway, and providing a more visually attractive entrance to the town centre for visitors arriving by train (subject to approval by TfL). Public realm improvements are also planned for the area around Fountain Island, which will also create a more attractive town centre.
- 3.133 There will be new landscaping along Cecil Road which will create a more visual divide for the contraflow cycle lane. Although this will have a limited impact on the main shopping areas in the town centre, it will help to improve the overall image of Enfield Town.
- 3.134 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 suggests that public realm improvements such as pedestrianisation or adding seating and greenery, can increase retail footfall by about 30% and retail turnover by an average of 17%.
 - Evidence cited by Living Streets⁸ 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 DfT⁹, has suggested that turnover for businesses in a high street location increased by between 5 and 15% following investment in public realm developments.
- 3.135 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,

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



⁷ https://www.atcm.org/townteamuploads/why great spaces matter

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

^{9 &}lt;u>https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/3890/making-sustainable-local-transport-happen-whitepaper.pdf</u>

emerging evidence from the programme suggests that impact is greatest where enhancements are relatively concentrated and where they are 'transformational' in the way that people perceive and use a specific town centre.

Town Centre Environment

- 3.136 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. Increased congestion, especially on Church Street, may limit some of the positive benefits created by public realm improvements due to increased air and noise pollution, however it is anticipated that the Cycle Enfield proposals will generate some modal shift away from cars helping to reduce this impact.
- 3.137 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

- 3.138 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 Enfield Town, 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.
 - Our base case assumes that overall footfall and spend in the town centre will increase by 2% as a result of improvements to the town centre environment
 - This assumption for the worse case scenario is that there will also be no change in town centre footfall, but this rises to a 5% increase in overall footfall and spend across all users in the better case scenario. This is a conservative estimate given that other high street have experienced a 5% to 15% increase in town centre turnover¹¹.

Net impact on town centre performance

- 3.139 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.
- 3.140 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.
- 3.141 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
- 3.142 Various measures could be made to enhance the positive impacts set out in the base case. These are summarised in Chapter 4 of the report.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/3890/making-sustainable-local-transporthappen-whitepaper.pdf



Table 3.22 Summary of Town Centre Environment Impacts in Enfield Town							
Transport	Town Centre	Base Case		Better Case		Worse Case	
Mode	Spend	%	Value	%	Value	%	Value
		change	change	change	change	change	change
Walking	£21.81m	2%	2%	5%	5%	0%	0%
Cycling	£1.20m	2%	2%	5%	5%	0%	0%
Car	£33.15m	2%	2%	5%	5%	0%	0%
Bus	£28.54m	2%	2%	5%	5%	0%	0%
Other	£2.89m	2%	2%	5%	5%	0%	0%
Total	£87.60m		2%		5%		0%

- 3.143 Under the base case there is assumed to be a 2% increase in town centre users, hence a minor positive impact on town centre economic vitality.
- 3.144 There is no change under the worse case scenarios (a neutral / negligible impact), but an increase in town centre spending of 5% under the better case scenario (a medium positive impact).

Summary and Assessment of Net Impacts

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

Table 3.23 Summary of Net Impacts in Enfield Town					
Impacts		Base Case	Better Case	Worse Case	
Construction Phase	£	-£2,525,000	-£923,000	-£5,653,000	
	%	-2.9%	-1.1%	-6.5%	
Transport Shifts (Bus, Car & Cycle Users)	£	-£2,567,000	+£109,000	-£5,615,000	
	%	-2.9%	+0.1%	-6.4%	
Town Centre Environment	£	+£1,752,000	+£4,380,000	-	
	%	+2.0%	+5.0%	0.0%	
Total Operational Phase	£	-£815,000	+£4,489,000	-£5,615,000	
(Transport Shift & Town Centre Environment)	%	-0.9%	+5.1%	-6.4%	

- 3.147 Under the base case:
 - The construction phase would have 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 2.9%.



- The operational phase would have a <u>neutral / negligible impact</u> on town centre economic vitality on an ongoing basis, with a potential loss of town centre spending of approximately 0.9% per annum.
- 3.148 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 4 of the report.
- 3.149 By implementing these, we believe the impact of the operational phase can ensure a neutral or positive level.
- 3.150 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%.



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

- 4.1 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.
- 4.2 The mitigation measures respond directly to the impacts identified above, and draw on best practice from elsewherein London and the UK.

Construction Phase Mitigation

- 4.3 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.
- 4.4 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 Enfield Town Scheme

- 4.5 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 the design of the construction works and programme can
 have a significant impact on the scale of 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, 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.
- 4.6 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 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:
 - Develop a coherent town centre parking strategy for both the construction and operational phases of Cycle Enfield, taking into consideration modal shift and changes in traffic flows affecting the town centre
 - 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

4.7 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

- 4.8 Congestion delays are expected to increase as a result of the Cycle Enfield proposals. These impacts could be further reduced by the introduction of additional traffic management measures.
- 4.9 Enfield Town is already operating under SCOOT control and the new junctions should be added to this cell to ensure that congestion delays are minimized.

Loading / unloading

4.10 Although loading and unloading effects are not expected to impact on overall economic vitality of the centres, where the change will create additional problems for businesses, LB Enfield could offer to work with these individual businesses to explore alternative loading and unloading solutions that would minimise cost impacts for their businesses.

Maximising Prosperity

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



- Town centre management evidence form the Outer London Fund Programme has highlighted the important role that town centre management can play in supporting town centre vitality, particularly given increasing resource constraints within councils. It is understood that LB Enfield has aspirations to establish town teams for the larger town centres within the Borough: if established these could play a valuable role in helping to build relationships between stakeholders in each of the town centres, providing a stronger mechanism to both identify and respond to issues, while also offering potential to be proactive in developing future schemes and initiatives to enhance town centre vitality.
- **Employment and training** the Council could explore the potential to engage local residents—particularly young people—in the delivery process. This could include 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

- 4.12 Given the scale and complexity of the proposals, it is important that LB Enfield closely monitors the impacts of delivery activity—both during the construction period and over the short-medium term period once the schemes are operational. This will help to ensure that potential adverse effects are identified if and where they emerge and, where necessary enable appropriate mitigation responses to be developed and deployed.
- 4.13 Monitoring should include:
 - Ongoing renewal of town centre health check intelligence which provides a quantitative overview of town centre performance and vitality. The 2014 health check data collected as part of the Retail Study and updated for this impact assessment provides the baseline against which future changes in performance can be measured.
 - Ongoing liaison with the town centre stakeholders to maintain an up to date picture of
 more qualitative aspects of town centre vitality. Again, this will help to identify specific
 issues or concerns as they emerge and help to inform mitigation responses. Liaison should
 be approached both informally (eg ad hoc walk arounds and conversations with local
 businesses and residents) and formally (eg piggybacking onto wider town team or business
 association activities).
 - Ongoing monitoring system to assess the use and effectiveness of bus stop boarders and bypasses to ensure they are being used correctly and safely by bus drivers, cyclists and pedestrians. If there are any weaknesses in the current design these could be quickly addressed
 - Ongoing monitoring of parking provision and congestion to establish any significant and detrimental effect of delivery. Again, monitoring will ensure that if there are any weaknesses in the current design these could be addressed.



