

Basildon Local Plan

Publication Local Plan Transport & Highway Impact Assessment –
Pound Lane/Cranfield Park Road Junction Addendum

October 2019



Document Control Sheet

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Report Title	Basildon Local Plan – Publication Local Plan Transport & Highway Impact Assessment – Pound Lane/Cranfield Park Road Junction Addendum
Project Number	B3553R8A
Status	Final
Revision	2
Control Date	30 th October 2019

Record of Issue

Issue	Status	Author	Date	Check	Date	Review	Date
1	Draft	A. Nagji	18/08/19	J. Wiffen	23/08/19	T. Kruger	23/08/19
2	Final	J.Wiffen	30/10/19	S. Perry	08/11/19	S. Perry	08/11/19

Approved for Issue By	Date
T Kruger	08/11/19

Distribution

Organisation	Contact	Number of Copies
Essex County Council	Mark Robinson	PDF (electronic)
Basildon Borough Council	Amanda Parrott	PDF (electronic)

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1 Executive Summary

- 1.1.1 This study serves as a further addendum to the Transport Highway Impact Appraisal (THIA) work carried out by EH and documented in the March 2018 report: '*Basildon Local Plan Part 2 – Publication Local Plan Transport & Highway Impact Assessment*' and the subsequent August 2018 Addendum.
- 1.1.2 A scope of work was discussed with Basildon Borough Council (BBC) and Essex County Council (ECC) in May 2019 to undertake further modelling of the proposed grade-separated junction improvements at the A127 junctions with Pound Lane and Cranfield Park Road (referred to as "A127 grade-separated junction" in this report) alongside lower-cost alternative mitigation. This was considered necessary to strengthen the Local Plan evidence base and to assess whether infrastructure could be delivered to best mitigate the impact of planned development if the junction proposals could not be realised.
- 1.1.3 The scope of work included the following assessments:
- A comparison of Local Plan highway impact in 2034 with and without the A127 grade-separated junction
 - An assessment of alternative mitigation in 2034 without the A127 grade-separated junction improvements
 - An assessment of alternative mitigation in a 2025 assessment year without A127 grade-separated junction improvements
 - A capacity evaluation of Pound Lane and connecting junctions
- 1.1.4 An outline economic appraisal of the A127 grade-separated junction has also been undertaken and has been reported separately in a companion technical note titled: "*Local Plan Transport & Highway Impact Assessment – Outline Economic Appraisal of grade separated junction proposals at A127, Pound Lane & Cranfield Park Road*", produced by Essex Highways in October 2019.
- 1.1.5 The modelling approach used for this latest addendum study is consistent with that adopted for the March 2018 Transport & Highway Impact Assessment (THIA) and uses the development numbers from the August 2018 addendum (as reported in the October 2018 Publication Local Plan).
- 1.1.6 A Visum model was used to determine the assignment of Local Plan development traffic which was then added to factored background traffic flows at a local junction level. Further details of this methodology are contained within the March 2018 THIA report.
- 1.1.7 The study area for this addendum modelling is focussed on the local and primary road network around the A127 grade-separated junction, covering Wickford, East Basildon, North Benfleet and Bowers Gifford. Up to eleven junctions have been considered for further capacity appraisal.
- 1.1.8 Results from the junction capacity assessments without A127 grade-separated junction improvements in a 2034 and interim 2025 year are summarised in Table 1-1 and Table 1-2 at the end of this executive summary.

- 1.1.9 Although located within the study area and referenced in this report, the Fairglen Interchange (Ba32) has not been included in the latest junction capacity modelling. Both short-term and long-term proposals for improvements at the A127 junction are being developed and delivered outside the framework of the Local Plan.
- 1.1.10 The earlier THIA did not model Sadlers Farm junction (Ba30) as part of the 2034 Final Growth Scenario with full mitigation (Scenario 4). This was because the junction was, at the time, subject to a design study to investigate early options for improvements, with no preferred scheme determined. This addendum considers one example capacity improvement at the roundabout to demonstrate that the junction might reasonably accommodate Local Plan traffic without the development of the A127 grade-separated junction. It is nevertheless acknowledged that a separate package of improvement measures is being considered and implemented at the roundabout separate to Local Plan mitigation.
- 1.1.11 Improvements offered by the A127 grade-separated junction scheme are shown to help reduce traffic flows through existing junctions within the East Basildon and Wickford study area. Without the scheme in place, five of the eleven junctions assessed will unlikely be able to accommodate predicted levels of growth within the Local Plan period without alternative mitigation considered.
- 1.1.12 Alternative mitigation measures have been considered at five junctions modelled as operating over-capacity without the A127 grade-separated junction. These are shown in the table below.

Area	Junction	Description	Mitigation Option
Basildon	Ba7	Broadmayne / South Mayne / Ashlyns	<u>Preferred Option</u> <ul style="list-style-type: none"> South Mayne approach as 3-lane entry and provide 3-lane circulatory between South Mayne and Broadmayne arms
Basildon	Ba15	Cranes Farm Road / A132 East Mayne	<u>Preferred Option</u> <ul style="list-style-type: none"> Widen 3-lane East Mayne southern approach to 3.5m per lane
Wickford	W1	A132 Runwell Road / A132 / Runwell Road	<u>Preferred Option</u> <ul style="list-style-type: none"> Part-time signalisation of A132 Golden Jubilee Way
Wickford	W3	A132 Runwell Road / Church End Lane	<u>Preferred Option</u> <ul style="list-style-type: none"> Convert junction to mini-roundabout
Wider Highway Schemes	Ba30	Sadlers Farm A130 / A13 / London Road	<u>Preferred Option</u> <ul style="list-style-type: none"> Extend A13 Westbound approach arm from 3 lanes to 4 lanes instead of flare

- 1.1.13 Despite mitigation, the A132 Runwell Road / Church End Lane junction in Wickford (W3) remains markedly over capacity in both 2025 and 2034 assessed scenarios without the A127 grade-separated junction improvements.
- 1.1.14 The capacity performance of the proposed mitigation (mini-roundabout) at A132 Runwell Road / Church End Lane junction is nevertheless an improvement over the existing junction with 2034 background growth alone. This at least suggests that the proposed scheme would mitigate the impact of Local Plan development trips, and a proportion of background traffic growth.
- 1.1.15 A number of junctions within the study area are modelled to operate slightly over-capacity in a 2025 interim assessment year with local junction mitigation and phased Local Plan development. This suggests that sustainable transport measures may need to be implemented early within the Local Plan period.
- 1.1.16 Without a grade-separated junction on the A127, analysis suggests that Pound Lane itself operates at around 63% capacity in either peak hour in 2034. This suggests that upgrades to the existing Pound Lane link would not be required within the Local Plan period from a capacity perspective.
- 1.1.17 Modelled delay at the existing junction for movements from Pound Lane to the westbound carriageway of the A127 is averaged at 37 seconds per vehicle in the 2034 AM peak. This can be considered comparable to a typical red-phase at a signalised junction, suggesting that the existing junction will accommodate local traffic flow growth within the Local Plan period.
- 1.1.18 Optimisation of the signal timings at the junction of Pound Lane with the B1464 London Road is shown to enable the junction to operate within capacity by 2034.

Table 1-1 – AM Peak Junction capacity results summary table

Junction ID	Junction Location	Existing Junction Type	Performance Summary (Ratio of Flow to Capacity)						
			AM Peak						
			Scenario 0	Scenario 1	Scenario 2	Scenario 3a	Scenario 3b	Scenario 4	Scenario 5
			2014 Base	2034 Background Growth	2034 Final Growth Scenario - No Mitigation	2034 Final Growth Scenario: Initial mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial + further mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial mitigation with A127 grade-separated junction	2025 Phased Growth Scenario: Initial + further mitigation without A127 grade-separated junction
Basildon									
Ba4	A127/A132 Nevendon Interchange Junction	Signal rbt	0.99	1.00	1.03	1.03	1.03	0.50	0.96
Ba7	Broadmayne / South Mayne / Ashlyns	Standard rbt	0.97	1.18	1.52	1.52	1.09	1.05	0.87
Ba15	Cranes Farm Road / A132 East Mayne	Standard rbt	1.04	1.11	1.24	1.24	1.15	0.99	1.14
Ra1	A1245 Chelmsford Road / A129 London Road	Standard rbt	0.76	0.86	0.86	0.86	0.86	0.66	0.85
Wickford									
W1	A132 Runwell Road / A132 / Runwell Road	Standard rbt	1.07	1.19	1.42	1.42	1.02	1.12	0.95
W2	A132 Golden Jubilee Way/Radwinter Ave/ A129 London Rd	Standard rbt	0.81	0.96	1.02	1.02	1.02	1.04	1.07
W3	A132 Runwell Road / Church End Lane	Priority	0.57	1.86	X	X	1.38	1.06	1.30
W4	A129 London Road / Nevendon Road / High Street	Signal	0.88	1.00	1.15	0.89	0.89	0.92	0.88
W5	A132 / Cranfield Park Road / Nevendon Road	Standard rbt	0.80	0.77	0.87	0.87	0.87	0.41	0.78
Wider Highway Schemes									
Ba30	Sadlers Farm A130/A13/London Road	Signal rbt	0.91	1.00	1.11	1.11	0.91	Not tested	1.02
Ba32	Fairglen Interchange A127/A1246	Standard rbt	0.91	1.02	1.13	Fairglen mitigation considered separately		1.85	Not tested
W6	Rettendon Turnpike Lane A1245/A132	Standard rbt	0.75	0.82	0.86	0.82	0.82	0.73	0.80

Table 1-2 - PM Peak Junction capacity results summary table

Junction ID	Junction Location	Existing Junction Type	Performance Summary (Ratio of Flow to Capacity)						
			PM Peak						
			Scenario 0	Scenario 1	Scenario 2	Scenario 3a	Scenario 3b	Scenario 4	Scenario 5
			2014 Base	2034 Background Growth	2034 Final Growth Scenario No Mitigation	2034 Final Growth Scenario: Initial mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial + further mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial mitigation with A127 grade-separated junction	2025 Phased Growth Scenario: Initial + further mitigation without A127 grade-separated junction
Basildon									
Ba4	A127/A132 Nevendon Interchange Junction	Signal rbt	0.90	0.89	0.97	0.97	0.97	0.37	0.86
Ba7	Broadmayne / South Mayne / Ashlyns	Standard rbt	0.84	0.99	1.13	1.13	1.09	0.81	0.97
Ba15	Cranes Farm Road / A132 East Mayne	Standard rbt	0.85	0.90	1.04	1.04	1.04	0.62	1.01
Ra1	A1245 Chelmsford Road / A129 London Road	Standard rbt	0.95	1.14	1.09	0.89	0.89	0.91	0.85
Wickford									
W1	A132 Runwell Road / A132 / Runwell Road	Standard rbt	1.07	1.34	1.48	1.48	1.02	0.74	1.00
W2	A132 Golden Jubilee Way/Radwinter Ave/ A129 London Rd	Standard rbt	0.85	1.00	1.11	1.08	1.08	1.16	1.06
W3	A132 Runwell Road / Church End Lane	Priority	1.34	X	X	X	1.66	1.13	1.50
W4	A129 London Road / Nevendon Road / High Street	Signal	0.73	0.90	0.99	0.83	0.83	0.75	0.76
W5	A132 / Cranfield Park Road / Nevendon Road	Standard rbt	0.63	0.69	1.03	1.03	1.03	0.34	0.83
Wider Highway Schemes									
Ba30	Sadlers Farm A130/A13/London Road	Signal rbt	1.12	1.09	1.17	1.17	1.11	Not tested	0.82
Ba32	Fairglen Interchange A127/A1246	Standard rbt	0.92	1.01	1.24	Fairglen mitigation considered separately		1.57	Not tested
W6	Rettendon Turnpike Lane A1245/A132	Standard rbt	1.12	1.79	2.29	0.85	0.85	0.76	0.97

2 Glossary of Terms

ARCADY	See 'Junctions 9'
Assignment model	A highway assignment model identifies the most likely route a trip will be made by trips within a highway network, allocating trips to the best route based on time and distance to make that trip.
BBC	Basildon Borough Council
DfT	Department for Transport
ECC	Essex County Council
Publication Local Plan	Also referred to as Publication Local Plan Growth or Final Growth, for the purposes of this report this refers to the additional traffic generated by the level of development included within the Publication Local Plan March 2018 and updated in October 2018.
EH	Essex Highways. Essex is the Highway Authority responsible for the operation and maintenance of the roads in the County. Essex is supported by Ringway Jacobs who represent Essex as the Highways Authority.
HE	Highways England is responsible for the operation, management and maintenance of the UK motorway and trunk road strategic network.
HELAA sites	Sites from the <i>Housing and Economic Land Availability Assessment</i> which have been proposed for allocation within the Local Plan, or reasonable alternatives, taken forward from the Draft Local Plan and New and Alternative sites consultations.
Junctions 9	A computer modelling software package that models the capacity of mini and standard roundabouts, providing information on queue lengths and delays. It also includes PICADY which measures the capacity of priority junctions.
LinSig	A modelling package used primarily for junctions with traffic signal control, and models the effect on traffic capacities and queuing. LINSIG also optimises signal timings to reduce delay or increase capacity at junctions.
NTM / NTEM	See 'Traffic Growth'
RLA	<i>Residential Land Available</i> , which are defined as development sites with planning permission (Committed Development sites).
TAG	The web-based ' <i>Transport Analysis Guidance</i> ' published by the DfT which consists of software tools and guidance on transport modelling and appraisal

methods which are applicable for highways and public transport interventions.

TEMPro	See 'Traffic Growth'
Trafficmaster / Teletrac Data	GPS data used to derive average vehicle journey times across the UK's strategic and urban road network from a large sample of individual journey time observations. The data can be used to determine average link speeds and areas of congestion on the road network (by measuring observed speed in relation to free-flow speed).
Traffic Growth (NTM / NTEM / TEMPPro)	Observed traffic flows have been factored up to forecast year levels using the DfT's national road traffic forecasts from the NTM (National Transport Model) by road type, which have been factored further by using National Trip End Model (NTEM) forecasts using TEMPPro (Trip End Model Presentation Programme) to determine a growth rate based on growth in local development trips in Basildon (at a Borough level), adjusted in line with current Local Plan development assumptions. TEMPPro is the name of the software that presents the NTEM data set.
THIA	Transport Highways Impact Assessment, this document forms the highways impact assessment for the Basildon Local Plan and has been produced in line with the guidance set out in the National Planning Policy Framework for Transport Evidence Bases published in March 2015.
TRICS	The ' <i>Trip Rate Information Computer System</i> ' serving as a database of trip rates for developments surveyed in the UK. The database is used in transport planning to quantify the number of trips generated by new developments.
Vissim	A microsimulation modelling package which is typically utilised to model a series of junctions situated within close proximity, and has been used to assess the impacts of the Basildon Town Centre / Masterplan.
Visum	An area-wide assignment modelling package which has been used to build a 'skeleton' model of the urban and strategic road network across the Borough. For this study, the model software has been used to assign Local Plan development traffic to the fastest route determined by applied average speed data taken from the Trafficmaster database.

2.1 Reference Documents

- *'Basildon Local Plan Part 2 – Publication Local Plan Transport & Highway Impact Assessment'*: Essex Highways, March 2018 (EV069_BC)
- *'Basildon Local Plan Part 2 Transport & Highway Impact Assessment (March 2018) Addendum'*: Essex Highways, August 2018 (EV075_BC)
- *'A127/A130 Fairglen Interchange Transport Assessment Report'*: Essex Highways, May 2019 (CC/BAS/28/19)
- *'Chelmsford Infrastructure Delivery Plan Final Report'*: Troy Planning + Design & Navigus Planning, July 2019 (EB 018C)
- *'Design Manual for Roads and Bridges Volume 5: Assessment and Preparation of Road Schemes Section 1: Preparation and Implementation - Part 3 TA 79/99 Amendment No. 1. Traffic Capacity of Urban Roads'*: May 1999

3 Introduction

3.1 Background

- 3.1.1 Basildon Borough Council (BBC) has prepared a Publication Local Plan providing the planning framework for future growth and development within the Basildon Borough area up to and beyond 2034.
- 3.1.2 Previous work undertaken by Essex Highways (EH) since 2014 has been used to inform the development of the Local Plan through Regulation 18 public consultation to Regulation 19 Public Examination.
- 3.1.3 The most recent EH transport appraisal report was published in March 2018 titled: 'Basildon Local Plan Part 2 – Publication Local Plan Transport & Highway Impact Assessment'. This was followed by an August 2018 Addendum which considered the transport impact of minor changes to the allocation of residential development in the Borough. These documents form the transport evidence base to take forward to Examination and are published online via the Basildon Local Plan portal¹.

3.2 Study Scope

- 3.2.1 A scope of work was discussed with BBC and Essex County Council (ECC) in May 2019 to undertake further modelling of a proposed grade-separated junction improvements at the A127 junctions with Pound Lane and Cranfield Park Road (referred to as “A127 grade-separated junction” in this report) alongside lower-cost alternative mitigation. This was considered necessary to strengthen the Local Plan evidence base and to assess whether infrastructure could be delivered to best mitigate the impact of planned development if the A127 grade-separated junction proposals could not be realised.
- 3.2.2 The scope of work undertaken for this latest study covers the following assessments:
- A comparison of Local Plan highway impact in 2034 with and without the A127 grade separated junction
 - An assessment of alternative mitigation in 2034 without the A127 grade-separated junction improvements
 - An assessment of alternative mitigation in a 2025 assessment year without the A127 grade-separated junction improvements
 - A capacity evaluation of Pound Lane and connecting junctions

¹ <https://www.basildon.gov.uk/article/7438/Local-Plan-Examination-Evidence-Base>

- 3.2.3 An outline economic appraisal of the A127 grade-separated junction has also been undertaken and has been reported separately in a companion technical note titled: “Local Plan Transport & Highway Impact Assessment – Outline Economic Appraisal of grade separated junction proposals at A127, Pound Lane & Cranfield Park Road”, produced by Essex Highways in October 2019.
- 3.2.4 To maintain a consistent approach, all assessments bar the economic appraisal have been undertaken within the strategic Local Plan modelling framework, adopting the same modelling approach adopted for the March 2018 Transport & Highway Impact Assessment (THIA) and uses the latest development numbers from the August 2018 addendum (as reported in the October 2018 Publication Local Plan). It is therefore intended for this study to be considered as a further addendum to the earlier appraisal.
- 3.2.5 The purpose of both studies combined is to determine the likely economic value of an A127 grade-separated junction and to demonstrate that reasonable effort has been made to identify developer-funded lower-cost alternatives should the junction not be delivered within the Local Plan period.
- 3.2.6 Analysis and findings from this study are presented with recognition of the work being undertaken through both the South Essex Joint Strategic Plan and the A127 Economic Growth Corridor Task Force to facilitate economic growth in the county. The viability and deliverability of larger schemes such as the A127 grade-separated junction, will necessarily be influenced by wider proposals being considered for the strategic road network in South Essex.

3.3 Proposals for the A127 Grade-Separated Junction

- 3.3.1 A new all movement grade separated junction on the A127 between the Nevendon and Fairglen Interchanges has been proposed to be in the vicinity of Pound Lane and Cranfield Park Road. This is intended to mitigate the impact of development traffic at the existing left-in / left-out restricted junctions either side of the A127. Additionally, the junction would provide a new development-enabling link road between Basildon and Wickford, via Pound Lane / Cranfield Park Road / Tresco Way, alleviating traffic from the Nevendon Interchange and the A132 corridor through Wickford by providing a link to new and existing housing to the east and south of the town.

3.4 Visum Modelling Approach

- 3.4.1 Consistent with the preceding THIA studies, a ‘skeleton’ Visum model of the Basildon Borough has been used to assign development-only traffic to the road network. It should be noted that this is not a full assignment model and is informed only by current average link speeds derived from Trafficmaster/Teletrac datasets. The development traffic assigned by this model is then added to background traffic, within a spreadsheet model, based on current assignment patterns and NTM/NTEM growth. Therefore, no capacity restrictions are applied or coded into the model, and network delays are considered separately as part of overall junction modelling outputs and network performance.

- 3.4.2 The Visum model covers the weekday AM and PM peak hours for the following periods:
- AM Weekday 0800-0900
 - PM Weekday 1700-1800
- 3.4.3 Further details on the Visum model development including the extent of the modelled network can be found in the March 2018 THIA report.

3.5 Format of this Report

- 3.5.1 This document sets out the methodology and findings of the latest THIA addendum study for the Basildon Publication Local Plan, and is structured as follows:

Section 1	Executive Summary
Section 2	Glossary of Terms
Section 3	Introduction
Section 4	Additional Scenario Modelling
Section 5	Alternative Mitigation
Section 6	Development Phasing
Section 7	Appraisal of Pound Lane Link & Junctions
Section 8	Summary & Conclusions

4 Additional Scenario Modelling – Without A127 Grade-Separated Junction

4.1 Introduction

- 4.1.1 The first stage of this addendum study considers the impact of Local Plan development traffic without provision of the A127 grade-separated junction. By modelling an additional scenario without the A127 junction upgrade, it is possible to establish the specific network benefits attributed to the scheme and appraise its importance within the package of Local Plan mitigation under consideration.

4.2 Study Area

- 4.2.1 To provide a constructive focus on the scope of work, the study area has been limited to the local and strategic road network around the Pound Lane / Cranfield Park Road junction, covering Wickford, East Basildon, North Benfleet and Bowers Gifford.

- 4.2.2 Within this area, the following junctions - previously considered in the 2018 THIA, have been identified for further capacity assessment:

- Ba4 - A127/A132 Nevendon Interchange Junction
- Ba7 - Broadmayne / South Mayne / Ashlyns
- Ba15 - Cranes Farm Road / A132 East Mayne
- Ra1 - A1245 Chelmsford Road / A129 London Road
- W1 - A132 Runwell Road / A132 / Runwell Road
- W2 - A132 Golden Jubilee Way/Radwinter Ave/ A129 London Rd
- W3 - A132 Runwell Road / Church End Lane
- W4 - A129 London Road / Nevendon Road / High Street
- W5 - A132 / Cranfield Park Road / Nevendon Road

- 4.2.3 The following strategic junctions have also been included in the study owing to their prominence within the defined study area:

- Ba30 - Sadlers Farm A130/A13/London Road (existing layout)
- Ba32 - Fairglens Interchange A127/A1246 (Short-Term Scheme)
- W6 - Rettendon Turnpike Lane A1245/A132

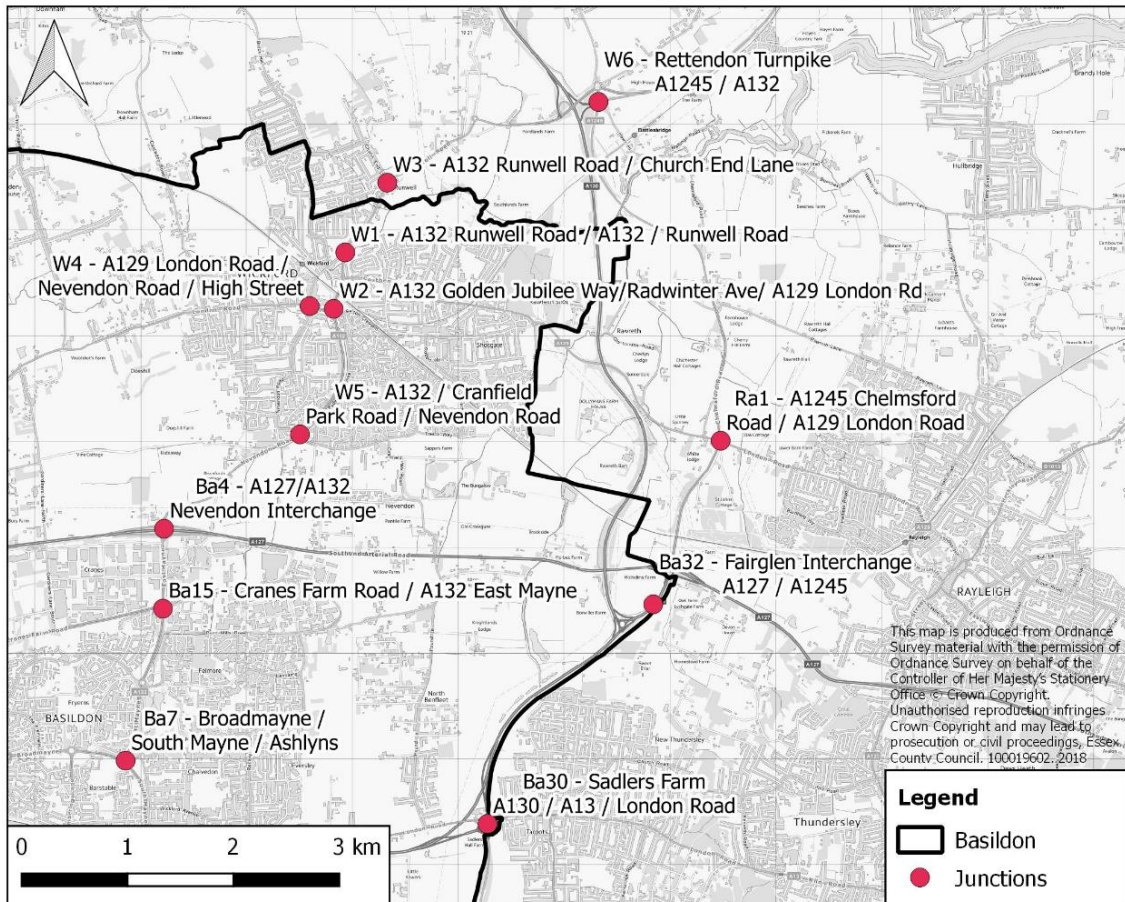


Figure 4-1 - Location of assessed junctions within study area

4.2.4 The junction layouts modelled without Local Plan mitigation are consistent with those modelled for the 2018 THIA. As such, detail on the wider highway schemes modelled at the three strategic junctions is summarised below for context:

(BA32) – A127 / A130 Fairglen Interchange Short-Term Scheme

4.2.5 The A127 / A130 Fairglen Interchange short-term scheme is expected to address existing and anticipated capacity issues over an interim-period whilst long-term improvements are developed and funded. Latest published material related to the Fairglen Interchange improvements can be found via the online planning application².

4.2.6 Amongst the accessible files, the Transport Assessment: ‘A127/A130 Fairglen Interchange Transport Assessment Report’ produced by Essex Highways in May 2019, determines that the short-term improvements proposed at the junction should accommodate predicted traffic flows in 2036, beyond the Basildon Local Plan period.

² <https://planning.essex.gov.uk/planningapplication.aspx?AppNo=CC/BAS/28/19>

- 4.2.7 With both short and long-term proposals being developed and delivered outside the assessment framework of the Local Plan, a decision was made not to include the Fairglen Interchange (Ba32) in the latest junction capacity modelling.
- 4.2.8 Modelling of the Fairglen Interchange in the March 2018 THIA suggested that the junction would exceed capacity by 2034 with the proposed short-term capacity improvements included. However, Section 8.5.1 of the March 2018 report states that; '(The) separate modelling (for the Business Case) adds additional layers of assessment, over and above the outputs of the modelling used to assess the Publication Local Plan and will potentially arrive at different results'. Consequently, the capacity outputs presented (in the THIA) for the junction are intended for 'information purposes only'.
- 4.2.9 Given the apparent differences between methodologies for undertaking the Fairglen junction capacity modelling, it was felt inappropriate to continue assessing the junction using the Local Plan modelling framework, and it has therefore been omitted from this addendum study.

(W6) – A1245 / A132 Rettendon Turnpike Roundabout

- 4.2.10 The scheme falls within the neighbouring authority of Chelmsford City Council. However, given the proximity to the A130 / A132 interchange and Borough boundary, the assessment of proposed improvements has been included. The scheme proposals include minor alterations to the existing layout including road widening on the southern A1245 and northern Main Road approaches. Measures are also being considered by Chelmsford City Council to mitigate the Local Plan impact of development in South Woodham Ferrers (SWF). These include possible bus priority measures between SWF and Wickford rail station. Further details can be found in the Chelmsford Infrastructure Delivery Plan Final Report - EB 018C (latest update – July 2019)³.

(BA30) – A130 / A13 / London Road 'Sadlers Farm' Roundabout

- 4.2.11 The earlier THIA did not model Sadlers Farm junction (Ba30) as part of the 2034 Final Growth Scenario with full mitigation (Scenario 4). This was because the junction was, at the time, subject to a design study to investigate early options for improvements, with no preferred scheme determined. This addendum study considers one example capacity improvement at the junction to demonstrate that the junction might reasonably accommodate Local Plan traffic without the development of the A127 grade-separated junction. It is nevertheless acknowledged that a separate package of improvement measures is being considered and implemented at the roundabout separate to Local Plan mitigation⁴.

³ <https://www.chelmsford.gov.uk/planning-and-building-control/planning-policy-and-new-local-plan/new-local-plan/evidence-base/>

⁴ <https://www.essexhighways.org/highway-schemes-and-developments/completed-schemes/completed-multi-district-schemes/a13-a130-sadlers-farm-junction.aspx>

4.3 Modelling Methodology

- 4.3.1 Additional scenario modelling for this study follows the previous methodology and assumptions on development and infrastructure established and documented in the March 2018 THIA.
- 4.3.2 A '2034 Final Growth Without A127 Grade-Separated Mitigation' Visum modelled scenario (Scenario 3a) was specifically developed for comparison with the existing '2034 Final Growth Scenario With Mitigation' (Scenario 4) developed in 2018.
- 4.3.3 The scenario removes the proposed highway mitigation at the A127 junction with Pound Lane / Cranfield Park Road, along with associated road upgrades to the north and south, and the proposed Burnt Mills link road.
- 4.3.4 To simplify the network build process, the base Visum model network was used. As a result, the latest modelling also excludes wider highway network changes such as the South West Relief Route in Billericay and the access link road in Dunton. However, a check of development trip assignment in the Visum model demonstrated that this infrastructure had no impact on the assignment of wider Local Plan development flows within the East Basildon/Wickford study area and through the proposed A127 grade separated junction.
- 4.3.5 Development flows from the '2034 Final Growth Without A127 Grade-Separated Mitigation' Visum model were incorporated into the previous junction models built for the 2018 THIA. To construct the latest 2034 junction matrices, the assigned Visum development flows were added to the existing 2034 background flows sourced from observed traffic data and factored using NTM/NTEM growth rates minus household and job growth in Basildon during the Local Plan period 2019-2034 (to avoid double counting).
- 4.3.6 Of the junctions modelled within the study area, three (Ra1, W2 and W4) included Local Plan mitigation from the 2018 THIA. The Nevendon Interchange (Ba4) also included capacity improvements implemented outside of the Local Plan mitigation. These are detailed in Table 4-1 below.

Table 4-1 – Original junction layout changes taken from 2018 THIA

Junction ID	Junction Location	Existing Junction Type	2034 Background	2034 Final Growth Scenario with Mitigation
Basildon				
Ba4	A127/A132 Nevendon IC	Signal Rbt	Additional lane on circulatory and entry lanes	
Ba7	Broadmayne / South Mayne / Ashlyns	Standard Rbt		
Ba15	Cranes Farm Road / A132 East Mayne	Standard Rbt		
Ra1	A1245 Chelmsford Road / A129 London Road	Standard Rbt		Dedicated A1245 N to A129 E slip & widening
Wickford				
W1	A132 Runwell Road / A132 / Runwell Road	Standard Rbt		
W2	A132 Golden Jubilee Way / Radwinter Avenue / A129 London Road	Standard Rbt		Widened approach on A132 Golden Jubilee Way North
W3	A132 Runwell Road / Church End Lane	Priority (3-arm)		
W4	A129 London Road / Nevendon Road / High Street	Signal (4-arm)		Traffic redistribution on London Road (E) + Widened carriageway on London Road (W)
W5	A132 / Cranfield Park Road / Nevendon Road	Standard Rbt		

- 4.3.7 It should be clarified that mitigation modelled at junction Ra1 included carriageway widening and the provision of a slip-lane from the A1245 to the A129. The March 2018 THIA also considered the introduction of traffic signals at the junction (and this is stated as such in Table 7-1 of the March 2018 report). However, the capacity results reported in March 2018 did not include signalisation of the junction, and therefore the mitigation has not been modelled for this addendum study.
- 4.3.8 This study follows the same approach to capacity analysis as that used for the March 2018 THIA. Specifically, junctions modelled to operate with a Ratio of Flow to Capacity (RFC) of between 1.00 and 1.15 are acknowledged as being over-capacity but assumed to have excess peak hour traffic flow that could potentially be accommodated through successful implementation of sustainable transport measures.

4.4 Junction Capacity Appraisal

- 4.4.1 The junction capacity modelling results for the latest scenario test without the A127 grade-separated junction mitigation are summarised in Table 4-2 & Table 4-3 under the column 'Scenario 3a' on the following page.
- 4.4.2 It should be noted that capacity values have only changed for those junctions subject to mitigation measures. The remaining junctions without mitigation would be expected to have capacity analysis results that match 'Scenario 2'.
- 4.4.3 Based on the results of the capacity appraisal, the following junctions show an RFC which exceeds 1.15 either in the AM or PM peak without the proposed A127 grade-separated junction scheme:
- Ba7 - Broadmayne / South Mayne / Ashlyns
 - Ba15 - Cranes Farm Road / A132 East Mayne
 - W1 - A132 Runwell Road / A132 / Runwell Road
 - W3 - A132 Runwell Road / Church End Lane
 - Ba30 - Sadlers Farm A130/A13/London Road (existing layout)
- 4.4.4 It can be inferred from the Scenario 3a capacity analysis results that the improvements offered by the A127 grade-separated junction scheme help to reduce traffic flows through existing junctions within the East Basildon and Wickford study area. Without the scheme in place, five of the eleven junctions assessed will unlikely be able to accommodate predicted levels of growth within the Local Plan period without alternative mitigation considered.
- 4.4.5 A further three junctions (Ba4, W2 and W5) are modelled as operating marginally over-capacity. Consistent with the analysis presented in the 2018 THIA, these junctions will likely require investment in sustainable measures to mitigate Local Plan development impact.
- 4.4.6 The highlighted junctions above will be considered for further mitigation as an alternative to the proposed A127 grade-separated junction. This is documented in Section 5 of this report.

Table 4-2 – Junction capacity results for Scenario 3a – 2034 Final Growth Scenario: Initial mitigation without A127 grade-separated junction – AM Peak

Junction ID	Junction Location	Existing Junction Type	Performance Summary (Ratio of Flow to Capacity)				
			AM Peak				
			Scenario 0	Scenario 1	Scenario 2	Scenario 3a	Scenario 4
			2014 Base	2034 Background Growth	2034 Final Growth Scenario - No Mitigation	2034 Final Growth Scenario: Initial mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial mitigation with A127 grade-separated junction
Basildon							
Ba4	A127/A132 Nevendon Interchange Junction	Signal rbt	0.99	1.00	1.03	1.03	0.50
Ba7	Broadmayne / South Mayne / Ashlyns	Standard rbt	0.97	1.18	1.52	1.52	1.05
Ba15	Cranes Farm Road / A132 East Mayne	Standard rbt	1.04	1.11	1.24	1.24	0.99
Ra1	A1245 Chelmsford Road / A129 London Road	Standard rbt	0.76	0.86	0.86	0.86	0.66
Wickford							
W1	A132 Runwell Road / A132 / Runwell Road	Standard rbt	1.07	1.19	1.42	1.42	1.12
W2	A132 Golden Jubilee Way/Radwinter Ave/ A129 London Rd	Standard rbt	0.81	0.96	1.02	1.02	1.04
W3	A132 Runwell Road / Church End Lane	Priority	0.57	1.86	X	X	1.06
W4	A129 London Road / Nevendon Road / High Street	Signal	0.88	1.00	1.15	0.89	0.92
W5	A132 / Cranfield Park Road / Nevendon Road	Standard rbt	0.80	0.77	0.87	0.87	0.41
Wider Highway Schemes							
Ba30	Sadlers Farm A130/A13/London Road	Signal rbt	0.91	1.00	1.11	1.11	Not tested
Ba32	Fairglen Interchange A127/A1246	Standard rbt	0.91	1.02	1.13	Fairglen mitigation considered separately	1.85
W6	Rettendon Turnpike Lane A1245/A132	Standard rbt	0.75	0.82	0.86	0.82	0.73

Table 4-3 – Junction capacity results for Scenario 3a – 2034 Final Growth Scenario: Initial mitigation without A127 grade-separated junction – PM Peak

Junction ID	Junction Location	Existing Junction Type	Performance Summary (Ratio of Flow to Capacity)				
			PM Peak				
			Scenario 0	Scenario 1	Scenario 2	Scenario 3a	Scenario 4
			2014 Base	2034 Background Growth	2034 Final Growth Scenario No Mitigation	2034 Final Growth Scenario: Initial mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial mitigation with A127 grade-separated junction
Basildon							
Ba4	A127/A132 Nevendon Interchange Junction	Signal rbt	0.90	0.89	0.97	0.97	0.37
Ba7	Broadmayne / South Mayne / Ashlyns	Standard rbt	0.84	0.99	1.13	1.13	0.81
Ba15	Cranes Farm Road / A132 East Mayne	Standard rbt	0.85	0.90	1.04	1.04	0.62
Ra1	A1245 Chelmsford Road / A129 London Road	Standard rbt	0.95	1.14	1.09	0.89	0.91
Wickford							
W1	A132 Runwell Road / A132 / Runwell Road	Standard rbt	1.07	1.34	1.48	1.48	0.74
W2	A132 Golden Jubilee Way/Radwinter Ave/ A129 London Rd	Standard rbt	0.85	1.00	1.11	1.08	1.16
W3	A132 Runwell Road / Church End Lane	Priority	1.34	X	X	X	1.13
W4	A129 London Road / Nevendon Road / High Street	Signal	0.73	0.90	0.99	0.83	0.75
W5	A132 / Cranfield Park Road / Nevendon Road	Standard rbt	0.63	0.69	1.03	1.03	0.34
Wider Highway Schemes							
Ba30	Sadlers Farm A130/A13/London Road	Signal rbt	1.12	1.09	1.17	1.17	Not tested
Ba32	Fairglen Interchange A127/A1246	Standard rbt	0.92	1.01	1.24	Fairglen mitigation considered separately	1.57
W6	Rettendon Turnpike Lane A1245/A132	Standard rbt	1.12	1.79	2.29	0.85	0.76

5 Alternative Mitigation

5.1 Scheme Proposals

- 5.1.1 For junctions in the study area shown to exceed capacity with an RFC of 1.15 or greater in the latest modelled scenario without the A127 grade-separated junction, local junction capacity improvements have been considered in addition to those already included as part of the Local Plan package of mitigation measures.
- 5.1.2 A range of mitigation options were considered following an iterative process of junction modelling and engagement with the Essex Highways design team.
- 5.1.3 The following mitigation proposals were put forward - with preferred options identified through consideration of capacity performance, indicative cost and practical implementation.

Table 5-1 – Alternative Junction Mitigation

Area	Junction	Description	Mitigation Option
Basildon	Ba7	Broadmayne / South Mayne / Ashlyns	<u>Preferred Option</u> <ul style="list-style-type: none"> South Mayne approach as 3-lane entry and provide 3-lane circulatory between South Mayne and Broadmayne arms
Basildon	Ba15	Cranes Farm Road / A132 East Mayne	<u>Preferred Option</u> <ul style="list-style-type: none"> Widen 3-lane East Mayne southern approach to 3.5m per lane
Wickford	W1	A132 Runwell Road / A132 / Runwell Road	<u>Preferred Option</u> <ul style="list-style-type: none"> Part-time signalisation of A132 Golden Jubilee Way
Wickford	W3	A132 Runwell Road / Church End Lane	<u>Preferred Option</u> <ul style="list-style-type: none"> Convert junction to mini-roundabout
Wider Highway Schemes	Ba30	Sadlers Farm A130 / A13 / London Road	<u>Preferred Option</u> <ul style="list-style-type: none"> Extend A13 Westbound approach arm from 3 lanes to 4 lanes instead of flare

- 5.1.4 A further scheme was reviewed for Junction W1 which considered the redesign of the existing roundabout to provide space for a filter lane accommodating movements from Runwell Road (south) to the A132 Runwell Road (north). This scheme was considered likely to provide longer-term capacity improvements compared with the part time signalisation of the roundabout, but was shown to be significantly more expensive (see Section 5.3) relative to the additional capacity benefits offered. It was therefore not taken forward as a preferred alternative mitigation scheme.

5.2 Junction Capacity Appraisal

- 5.2.1 The capacity performance of the alternative mitigation proposed at junctions within the study area is documented in this study as 'Scenario 3b'.
- 5.2.2 The junction model results for Scenario 3b are summarised in Table 5-2 and Table 5-3 for the AM and PM peaks respectively. It should be noted that the junction modelling outputs have only changed for those junctions which have preferred mitigation applied as shown in Table 5-1.
- 5.2.3 Based on capacity modelling results, a single junction - A132 Runwell Road / Church End Lane in Wickford (W3) is shown to remain over capacity. This is the case in both the AM peak – with an RFC of 1.38, and the PM peak – with an RFC of 1.66.
- 5.2.4 In light of the challenges faced when looking to accommodate traffic at the A132 Runwell Road / Church End Lane junction, further mitigation options were considered as follows:
- Left-turn exit only from Church End Lane
 - Banning right-turn movements to Church End Lane
 - A dedicated right-turn lane for movements to Church End Lane
- 5.2.5 Restricting turning movements at the junction was, however, shown to increase traffic along residential roads in Runwell, as well as adding to capacity pressures at the Runwell Road / A132 Golden Jubilee Way roundabout to the south. A dedicated right turn lane on the A132 to Church End Lane was also shown to require land from St. Mary's Church, whilst safety risks were also identified given the curved alignment of the A132 on the southbound approach to the junction.
- 5.2.6 The junction performance with proposed mitigation (mini-roundabout) at A132 Runwell Road / Church End Lane in Scenario 3b is nevertheless an improvement over the existing junction with 2034 background growth in Scenario 1. This at least suggests that the proposed scheme would mitigate the impact of Local Plan development trips, and a proportion of background traffic growth – despite the junction expected to operate significantly over capacity.
- 5.2.7 Commensurate with the scope of the modelling required for a strategic appraisal of Local Plan impact across Basildon Borough, the approach adopted for the THIA uses fixed model assignment and fixed demand matrices. This provides a 'worst-case' assessment of possible development impact at junctions for use in developing robust mitigation schemes (prioritising sustainable measures) where required. Where junctions are modelled to remain over capacity following mitigation, it would be reasonable to expect demand flows to be tempered as a result of changes in route choice or time of travel outside of peak hours. Consequently, it would be reasonable to expect the RFC of congested junctions to be lower in reality than the indicative values presented in this report.

Table 5-2 – Junction capacity results for Scenario 3b – 2034 Final Growth Scenario: Initial + further mitigation without A127 grade-separated junction – AM Peak

Junction ID	Junction Location	Existing Junction Type	Performance Summary (Ratio of Flow to Capacity)					
			AM Peak					
			Scenario 0	Scenario 1	Scenario 2	Scenario 3a	Scenario 3b	Scenario 4
			2014 Base	2034 Background Growth	2034 Final Growth Scenario - No Mitigation	2034 Final Growth Scenario: Initial mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial + further mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial mitigation with A127 grade-separated junction
Basildon								
Ba4	A127/A132 Nevendon Interchange Junction	Signal rbt	0.99	1.00	1.03	1.03	1.03	0.50
Ba7	Broadmayne / South Mayne / Ashlyns	Standard rbt	0.97	1.18	1.52	1.52	1.09	1.05
Ba15	Cranes Farm Road / A132 East Mayne	Standard rbt	1.04	1.11	1.24	1.24	1.15	0.99
Ra1	A1245 Chelmsford Road / A129 London Road	Standard rbt	0.76	0.86	0.86	0.86	0.86	0.66
Wickford								
W1	A132 Runwell Road / A132 / Runwell Road	Standard rbt	1.07	1.19	1.42	1.42	1.02	1.12
W2	A132 Golden Jubilee Way/Radwinter Ave/ A129 London Rd	Standard rbt	0.81	0.96	1.02	1.02	1.02	1.04
W3	A132 Runwell Road / Church End Lane	Priority	0.57	1.86	X	X	1.38	1.06
W4	A129 London Road / Nevendon Road / High Street	Signal	0.88	1.00	1.15	0.89	0.89	0.92
W5	A132 / Cranfield Park Road / Nevendon Road	Standard rbt	0.80	0.77	0.87	0.87	0.87	0.41
Wider Highway Schemes								
Ba30	Sadlers Farm A130/A13/London Road	Signal rbt	0.91	1.00	1.11	1.11	0.91	Not tested
Ba32	Fairglen Interchange A127/A1246	Standard rbt	0.91	1.02	1.13	Fairglen mitigation considered separately		1.85
W6	Rettendon Turnpike Lane A1245/A132	Standard rbt	0.75	0.82	0.86	0.82	0.82	0.73

Table 5-3 - Junction capacity results for Scenario 3b – 2034 Final Growth Scenario: Initial + further mitigation without A127 grade-separated junction – PM Peak

Junction ID	Junction Location	Existing Junction Type	Performance Summary (Ratio of Flow to Capacity)					
			PM Peak					
			Scenario 0	Scenario 1	Scenario 2	Scenario 3a	Scenario 3b	Scenario 4
			2014 Base	2034 Background Growth	2034 Final Growth Scenario No Mitigation	2034 Final Growth Scenario: Initial mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial + further mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial mitigation with A127 grade-separated junction
Basildon								
Ba4	A127/A132 Nevendon Interchange Junction	Signal rbt	0.90	0.89	0.97	0.97	0.97	0.37
Ba7	Broadmayne / South Mayne / Ashlyns	Standard rbt	0.84	0.99	1.13	1.13	1.09	0.81
Ba15	Cranes Farm Road / A132 East Mayne	Standard rbt	0.85	0.90	1.04	1.04	1.04	0.62
Ra1	A1245 Chelmsford Road / A129 London Road	Standard rbt	0.95	1.14	1.09	0.89	0.89	0.91
Wickford								
W1	A132 Runwell Road / A132 / Runwell Road	Standard rbt	1.07	1.34	1.48	1.48	1.02	0.74
W2	A132 Golden Jubilee Way/Radwinter Ave/ A129 London Rd	Standard rbt	0.85	1.00	1.11	1.08	1.08	1.16
W3	A132 Runwell Road / Church End Lane	Priority	1.34	X	X	X	1.66	1.13
W4	A129 London Road / Nevendon Road / High Street	Signal	0.73	0.90	0.99	0.83	0.83	0.75
W5	A132 / Cranfield Park Road / Nevendon Road	Standard rbt	0.63	0.69	1.03	1.03	1.03	0.34
Wider Highway Schemes								
Ba30	Sadlers Farm A130/A13/London Road	Signal rbt	1.12	1.09	1.17	1.17	1.11	Not tested
Ba32	Fairglen Interchange A127/A1246	Standard rbt	0.92	1.01	1.24	Fairglen mitigation considered separately		1.57
W6	Rettendon Turnpike Lane A1245/A132	Standard rbt	1.12	1.79	2.29	0.85	0.85	0.76

5.3 Scheme Costs

- 5.3.1 Outline cost estimates for a selection of junction mitigation measures are provided in Table 5-4 below and include an allowance for utility diversions, contingency and risk. These will require further investigation to determine a more detailed and robust cost estimate going forward.

Table 5-4 – Outline Mitigation Scheme Costs

Scheme	Area	Description	Cost Estimate
Ba7 - Broadmayne / South Mayne / Ashlyns	Basildon	South Mayne approach as 3-lane entry and provide 3-lane circulatory between South Mayne and Broadmayne arms	£560,000
Ba30 - Sadlers Farm A130 / A13 / London Road	Sadlers Farm	Extend A13 Westbound approach arm from 3 lanes to 4 lanes instead of flare	£360,000
W1 - A132 Runwell Road / A132 / Runwell Road (Preferred Option)	Wickford	Part time signalisation of A132 Golden Jubilee Way	£250,000
W1 - A132 Runwell Road / A132 / Runwell Road (Long-Term Option)	Wickford	Redesign of roundabout to provide space for filter lane accommodating movements from Runwell Road (south) to A132 Runwell Road (north)	£1,650,000

- 5.3.2 Scheme drawings and a detailed breakdown of scheme costs are included in Appendix A for the Broadmayne / South Mayne / Ashlyns junction (Ba7) and Sadlers Farm Roundabout (Ba30).
- 5.3.3 Although not fully developed at this stage, an indicative cost estimate for the part time signalisation of the A132 Golden Jubilee Way at junction W1 is included in the table above for information purposes. Costs include a broad allowance for contingency, utility diversions and risk.
- 5.3.4 An indicative cost estimate for the provision of a filter lane between Runwell Road (south) to A132 Runwell Road (north) at Junction W1 is also included. This option was not taken forward as a preferred alternative mitigation scheme in the modelling of Scenario 3B on the basis of the high cost estimate relative to the capacity benefits afforded.
- 5.3.5 At this stage, the mini-roundabout option at A132 Runwell Road / Church End Lane (W3) has not been designed or costed as the scheme is modelled to have limited ability to accommodate future traffic growth. Should the mitigation be taken forward regardless, scheme design and an estimate of cost will be produced as part of a separate commission of work.

5.3.6 Scheme design and costs for the proposed widening of the southern approach along East Mayne to the junction with Cranes Farm Road (Ba15) are also not covered in this report. Whilst modelling shows that road widening will have a positive impact on junction capacity, further consideration of design is needed beyond the scope of this study to ensure that the modelled benefits can be realised.

6 Development Phasing (2025 scenario)

6.1 Introduction

- 6.1.1 In response to concerns around the ability of mitigation to accommodate future traffic flows in East Basildon and Wickford without the provision of the A127 grade-separated junction, a 2025 interim assessment year was modelled. This included Local Plan development and background growth up to a 2025 future year to coincide with a scheduled five-year review of the Local Plan.
- 6.1.2 By 2025, it is anticipated that proposals for the A127 grade-separated junction would have progressed through a full Business Case, providing clarity around deliverability of the scheme. Alternatively, or in addition, it is expected that strategic infrastructure proposals for the A127 corridor will, by 2025, have been developed through the South Essex Joint Strategic Plan via the A127 Economic Growth Corridor Task Force.
- 6.1.3 Analysis of a 2025 interim Local Plan assessment year therefore provides a short-term evaluation of the highway impact of the smaller-scale Local Plan mitigation considered in the March 2018 THIA and this addendum study, before strategic-level infrastructure is developed to support economic growth across Basildon and the wider region.

6.2 Development Assumptions

- 6.2.1 For the year 2025, housing and employment numbers were obtained from BBC with the former determined from the latest published Local Plan housing delivery schedule. These documents are included in Appendix B of this report.
- 6.2.2 To maintain consistency with the modelling analysis carried for the earlier 2018 study, it was important to use the same modelled development assumptions as a basis for the interim year assessment.
- 6.2.3 The Local Plan housing delivery schedule used to determine dwelling numbers in 2018 was not directly compatible with the list of developments included in the earlier THIA modelling (included in the March 2018 report appendices). Therefore, housing numbers were taken from the delivery schedule in 2025 and 2034 and used to derive growth factors for four geographic areas: Basildon Urban Area, Billericay, Wickford and East Basildon/Bowers Gifford.
- 6.2.4 Dependent on location, these factors were then applied to the housing site allocations used in the 2018 modelling to bring housing numbers down from 2034 to 2025 levels.
- 6.2.5 In some instances, it was noted that the latest employment assumptions for a 2025 interim year exceeded the total allocation in the 2018 modelling for the 2034 assessment year. Under such circumstances it was assumed that the full allocation of employment modelled in 2018 would be taken up by 2025.

6.2.6 Updated housing and employment site lists with assumed 2025 build-out rates are included in Appendix C of this report.

6.3 2025 Junction Capacity Appraisal

6.3.1 All junctions within the study area shown in Figure 4-1 are included within the 2025 scenario modelling – with the exception of the Fairglen Interchange (Ba32).

6.3.2 As documented earlier, both short and long-term phases of the proposed capacity improvements at the Fairglen Interchange are being developed outside the assessment framework of the Local Plan and the junction has therefore been excluded from this latest assessment.

6.3.3 The performance of the initial junction mitigation and latest alternative mitigation (without the grade-separated junction scheme) in a 2025 assessment year is documented in this study as 'Scenario 5'.

6.3.4 The junction model results for Scenario 5 are summarised in Table 6-1 and Table 6-2 for the AM and PM peaks respectively, with summary analysis covered in the following paragraphs.

6.3.5 When compared with Scenario 3b, the reduction in background traffic growth and phased development up to 2025 results in small improvements to the capacity performance of the assessed junctions within the study area. Some junctions, however, remain marginally over-capacity, suggesting the practical need for sustainable transport measures to be implemented early within the Local Plan period.

6.3.6 Of particular note, the junction of A132 Runwell Road / Church End Lane (W3) is shown to operate noticeably overcapacity in 2025 in both peak periods, despite reconfiguration of the junction as a mini-roundabout.

6.3.7 This suggests that, whilst the proposed mitigation at the Church End Lane junction will have longer-term benefits such that Local Plan development trips might be expected to have a nil-detriment impact on capacity, the redesign of the junction may still be unable to accommodate short-term background traffic growth in full.

Table 6-1 - Junction capacity results for Scenario 5 – 2025 Phased Growth Scenario: Initial + further mitigation without A127 grade-separated junction – AM Peak

Junction ID	Junction Location	Existing Junction Type	Performance Summary (Ratio of Flow to Capacity)						
			AM Peak						
			Scenario 0	Scenario 1	Scenario 2	Scenario 3a	Scenario 3b	Scenario 4	Scenario 5
			2014 Base	2034 Background Growth	2034 Final Growth Scenario - No Mitigation	2034 Final Growth Scenario: Initial mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial + further mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial mitigation with A127 grade-separated junction	2025 Phased Growth Scenario: Initial + further mitigation without A127 grade-separated junction
Basildon									
Ba4	A127/A132 Nevendon Interchange Junction	Signal rbt	0.99	1.00	1.03	1.03	1.03	0.50	0.96
Ba7	Broadmayne / South Mayne / Ashlyns	Standard rbt	0.97	1.18	1.52	1.52	1.09	1.05	0.87
Ba15	Cranes Farm Road / A132 East Mayne	Standard rbt	1.04	1.11	1.24	1.24	1.15	0.99	1.14
Ra1	A1245 Chelmsford Road / A129 London Road	Standard rbt	0.76	0.86	0.86	0.86	0.86	0.66	0.85
Wickford									
W1	A132 Runwell Road / A132 / Runwell Road	Standard rbt	1.07	1.19	1.42	1.42	1.02	1.12	0.95
W2	A132 Golden Jubilee Way/Radwinter Ave/ A129 London Rd	Standard rbt	0.81	0.96	1.02	1.02	1.02	1.04	1.07
W3	A132 Runwell Road / Church End Lane	Priority	0.57	1.86	X	X	1.38	1.06	1.30
W4	A129 London Road / Nevendon Road / High Street	Signal	0.88	1.00	1.15	0.89	0.89	0.92	0.88
W5	A132 / Cranfield Park Road / Nevendon Road	Standard rbt	0.80	0.77	0.87	0.87	0.87	0.41	0.78
Wider Highway Schemes									
Ba30	Sadlers Farm A130/A13/London Road	Signal rbt	0.91	1.00	1.11	1.11	0.91	Not tested	1.02
Ba32	Fairglen Interchange A127/A1246	Standard rbt	0.91	1.02	1.13	Fairglen mitigation considered separately		1.85	Not tested
W6	Rettendon Turnpike Lane A1245/A132	Standard rbt	0.75	0.82	0.86	0.82	0.82	0.73	0.80

Table 6-2 - Junction capacity results for Scenario 5 – 2025 Phased Growth Scenario: Initial + further mitigation without A127 grade-separated junction – PM Peak

Junction ID	Junction Location	Existing Junction Type	Performance Summary (Ratio of Flow to Capacity)						
			PM Peak						
			Scenario 0	Scenario 1	Scenario 2	Scenario 3a	Scenario 3b	Scenario 4	Scenario 5
			2014 Base	2034 Background Growth	2034 Final Growth Scenario No Mitigation	2034 Final Growth Scenario: Initial mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial + further mitigation without A127 grade-separated junction	2034 Final Growth Scenario: Initial mitigation with A127 grade-separated junction	2025 Phased Growth Scenario: Initial + further mitigation without A127 grade-separated junction
Basildon									
Ba4	A127/A132 Nevendon Interchange Junction	Signal rbt	0.90	0.89	0.97	0.97	0.97	0.37	0.86
Ba7	Broadmayne / South Mayne / Ashlyns	Standard rbt	0.84	0.99	1.13	1.13	1.09	0.81	0.97
Ba15	Cranes Farm Road / A132 East Mayne	Standard rbt	0.85	0.90	1.04	1.04	1.04	0.62	1.01
Ra1	A1245 Chelmsford Road / A129 London Road	Standard rbt	0.95	1.14	1.09	0.89	0.89	0.91	0.85
Wickford									
W1	A132 Runwell Road / A132 / Runwell Road	Standard rbt	1.07	1.34	1.48	1.48	1.02	0.74	1.00
W2	A132 Golden Jubilee Way/Radwinter Ave/ A129 London Rd	Standard rbt	0.85	1.00	1.11	1.08	1.08	1.16	1.06
W3	A132 Runwell Road / Church End Lane	Priority	1.34	X	X	X	1.66	1.13	1.50
W4	A129 London Road / Nevendon Road / High Street	Signal	0.73	0.90	0.99	0.83	0.83	0.75	0.76
W5	A132 / Cranfield Park Road / Nevendon Road	Standard rbt	0.63	0.69	1.03	1.03	1.03	0.34	0.83
Wider Highway Schemes									
Ba30	Sadlers Farm A130/A13/London Road	Signal rbt	1.12	1.09	1.17	1.17	1.11	Not tested	0.82
Ba32	Fairglen Interchange A127/A1246	Standard rbt	0.92	1.01	1.24	Fairglen mitigation considered separately		1.57	Not tested
W6	Rettendon Turnpike Lane A1245/A132	Standard rbt	1.12	1.79	2.29	0.85	0.85	0.76	0.97

7 Appraisal of Pound Lane Link and Junctions

7.1 Introduction

- 7.1.1 The August 2018 THIA Addendum report considers various alignments of a proposed Pound Lane link road built to accommodate forecast traffic flows from nearby development in North Benfleet and Bowers Gifford and wider flows linked to the proposed grade-separated junction on the A127.
- 7.1.2 This latest study assesses the continued need for capacity improvements along Pound Lane and at the junctions with the A127 to the north and B1464 London Road to the south - should a grade-separated junction on the A127 not be built, to accommodate future development in North Benfleet and Bowers Gifford, to be delivered through a neighbourhood plan in accordance with a target for the area set out in the emerging Basildon Local Plan.

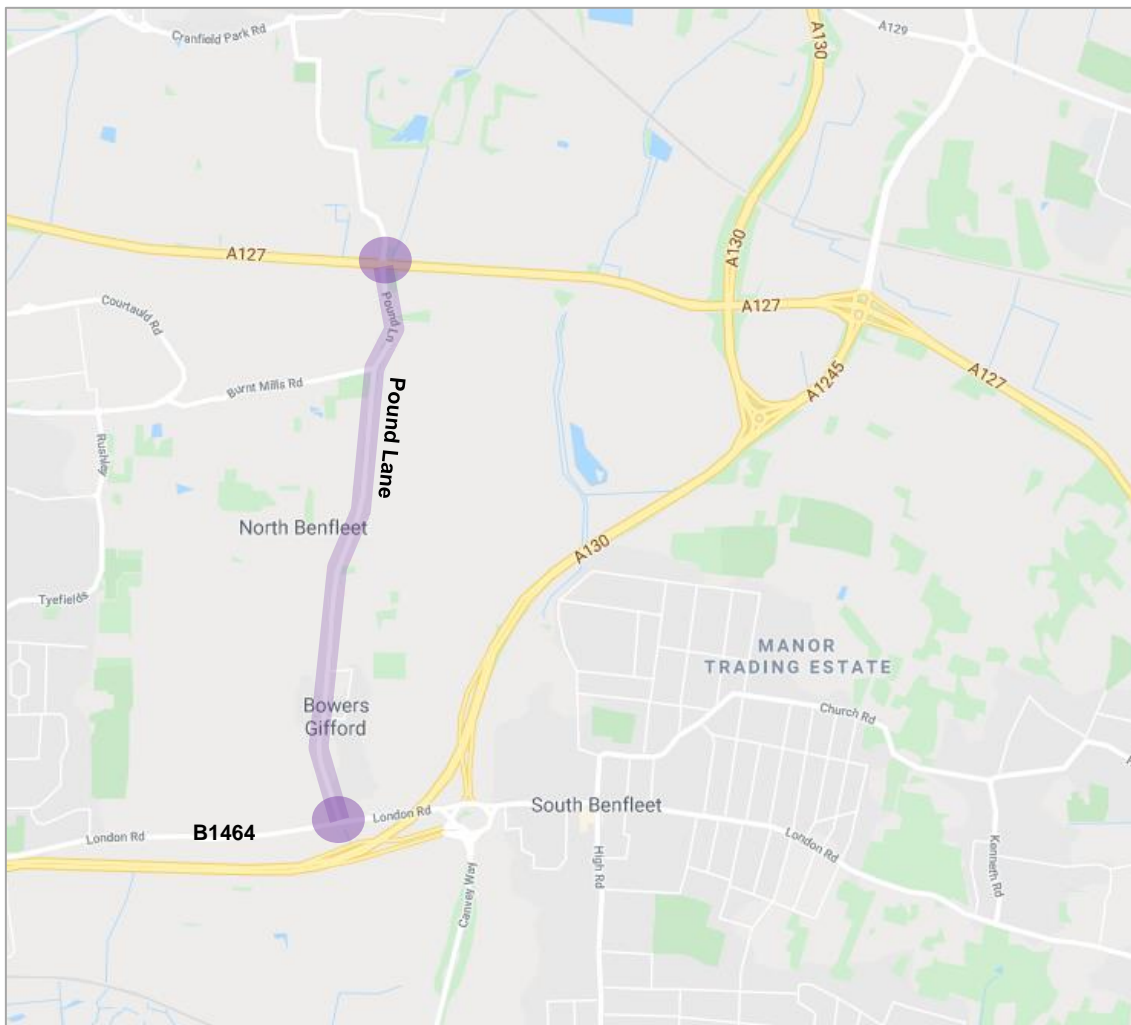


Figure 7-1 – Location of Pound Lane and junctions with A127 and B1464 London Road

7.1.3 The strategic-level assessment considers only the modelled highway capacity of both the Pound Lane link and connecting junctions. Separate assessments will be required as part of Neighbourhood Plan preparation to consider further local impacts of development traffic with regards to the built environment and safety along the corridor (for example).

7.2 Link Capacity Analysis of Pound Lane

7.2.1 Figure 7-3 below provides an illustration of future traffic flows modelled along Pound Lane in 2034 assuming existing link and junction layouts – i.e. without the grade-separated junction proposals on the A127.

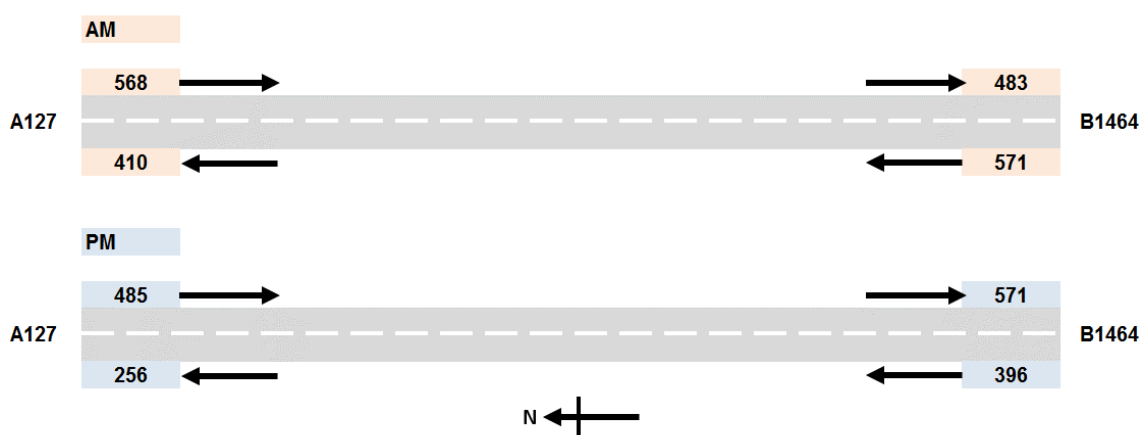


Figure 7-2 – 2034 forecast link flows along Pound Lane assuming current link and junction layout

7.2.2 Forecast background traffic flows along Pound Lane were based on observed peak hour flows taken from a one-day 12hr junction count carried out at the junction of Pound Lane with the A127 and at the signalised junction of Pound Lane with the B1464 on 26th June 2019.

7.2.3 The observed 2019 flows were factored up to a 2034 forecast year using TEMPro/NTM adjusted growth factors minus housing and job growth in Basildon (to avoid double counting the Local Plan growth modelled separately), as follows:

AM Peak – 1.07 PM peak – 1.068

7.2.4 2034 development flows modelled along Pound Lane were then taken from the Visum skeleton model and added to the factored background traffic flows to determine total traffic volumes at the northern and southern end of the link. Link flow plots taken from the 2034 Visum model are presented in Appendix D of this report.

7.2.5 With reference to DMRB Vol 5 Section 1 Part 3 TA 79/99 - TRAFFIC CAPACITY OF URBAN ROADS, it has been assumed that Pound Lane falls into the category UAP3 as shown in Table 7-1 below.

Table 7-1 - DMRB Vol 5 Section 1 Part 3 TA 79/99 – Road Type Classification

Feature	ROAD TYPE				
	Urban Motorway	Urban All-purpose			
	UM	UAP1	UAP2	UAP3	UAP4
General Description	Through route with grade separated junctions, hardshoulders or hardstrips, and motorway restrictions.	High standard single/dual carriageway road carrying predominantly through traffic with limited access.	Good standard single/dual carriageway road with frontage access and more than two side roads per km.	Variable standard road carrying mixed traffic with frontage access, side roads, bus stops and at-grade pedestrian crossings.	Busy high street carrying predominantly local traffic with frontage activity including loading and unloading.
Speed Limit	60mph or less	40 to 60 mph for dual, & generally 40mph for single carriageway	Generally 40 mph	30 mph to 40 mph	30mph
Side Roads	None	0 to 2 per km	more than 2 per km	more than 2 per km	more than 2 per km
Access to roadside development	None. Grade separated for major only.	limited access	access to residential properties	frontage access	unlimited access to houses, shops & businesses
Parking and loading	none	restricted	restricted	unrestricted	unrestricted
Pedestrian crossings	grade separated	mostly grade separated	some at-grade	some at-grade	frequent at-grade
Bus stops	none	in lay-bys	at kerbside	at kerbside	at kerbside

7.2.6 With an average two-way single carriageway width of 6.3m, Pound Lane would be expected to have available capacity of around 900 vehicles in either direction – as highlighted in the DMRB Capacities table in Table 7-2 below.

Table 7-2 - DMRB Vol 5 Section 1 Part 3 TA 79/99 – Capacities by Road Type

		Two-way Single Carriageway- Busiest direction flow (Assumes a 60/40 directional split)								Dual Carriageway				
		Total number of Lanes								Number of Lanes in each direction				
		2		2-3	3	3-4	4	4+	2		3	4		
Carriageway width		6.1m	6.75m	7.3m	9.0m	10.0m	12.3m	13.5m	14.6m	18.0m	6.75m	7.3m	11.0m	14.6m
Road type	UM	Not applicable									4000	5600	7200	
	UAP1	1020	1320	1590	1860	2010	2550	2800	3050	3300	3350	3600	5200	*
	UAP2	1020	1260	1470	1550	1650	1700	1900	2100	2700	2950	3200	4800	*
	UAP3	900	1110	1300	1530	1620	*	*	*	*	2300	2600	3300	*
	UAP4	750	900	1140	1320	1410	*	*	*	*	*	*	*	*

7.2.7 Analysis therefore suggests that the Pound Lane link itself might be expected to operate at around 63% of capacity in either peak hour in 2034 – if the existing routing patterns of background traffic flow remain consistent.

7.2.8 Results therefore suggest that, when looking exclusively from a link capacity point of view, upgrades or replacements to the existing Pound Lane route would unlikely be required within the Local Plan period.

7.3 Capacity Analysis of Pound Lane / A127 Junction

7.3.1 In the absence of a grade-separated junction layout, the performance of the existing Pound Lane / A127 junction was reviewed to determine whether the junction would require alternative mitigation to accommodate 2034 traffic volumes.

7.3.2 The existing junction layout was modelled using Vissim software in a 2019 and 2034 assessment year. Vissim microsimulation was deemed to be the most suitable tool for this assessment to best model the merge behaviour of vehicles from Pound Lane on to the A127 westbound carriageway.

7.3.3 A simple Vissim model was therefore constructed covering the Pound Lane / A127 junction in isolation, using trip matrices derived from observed counts at the junction, factored to a 2034 forecast year using TEMPro/NTM alternative growth assumptions (see para 6.2.3) with development flows added from the Visum skeleton model.

7.3.4 Figure 7-3 provides an illustration of queue lengths on Pound Lane and the concentration of vehicle flows modelled along the A127 in the 2034 AM peak hour. This is shown to be the busier of the two peaks at the junction due to the tidal nature of flows along the A127, with greater volumes of westbound traffic heading towards London.

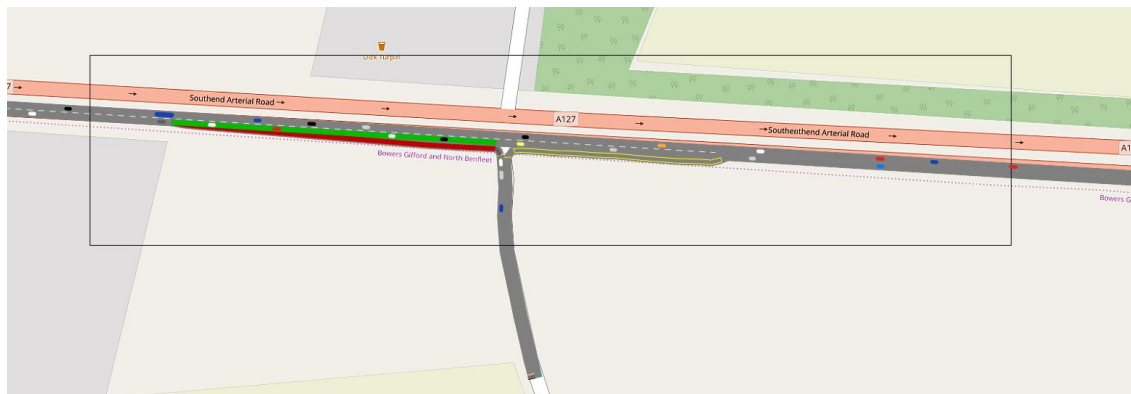


Figure 7-3 – Vissim model of Pound Lane/A127 junction in 2034 (AM screenshot)

7.3.5 Table 7-3 below shows the modelled delay at the existing junction for movements from Pound Lane to the westbound carriageway of the A127. Results show that movements onto the A127 currently experience an average delay of 24 seconds in the AM peak and 6 seconds in the PM peak. By 2034, with the addition of development traffic from nearby developments, left-turn movements onto the A127 experience an average delay of 37 seconds in the AM peak and 12 seconds in the PM peak.

Table 7-3 – Pound Lane to A127 westbound turning movements (modelled in Vissim)

Scenario	Average Queue Length (m)	Number of Vehicles	Average Vehicle Delay (s)
2019 AM	7.46	266	24.29
2019 PM	0.66	202	6.18
2034 AM	17.62	409	36.75
2034 PM	2.55	258	11.79

7.3.6 To put into context, delays modelled in Vissim at the Pound Lane junction in 2034 could be considered comparable to a typical red-phase at a signalised junction.

7.3.7 Looking exclusively at forecast vehicle delay at the junction, it might therefore be reasonable to expect the existing Pound Lane junction layout to accommodate local traffic flows within the Local Plan period.

7.4 Capacity Analysis of Pound Lane / B1464 Junction

- 7.4.1 In the absence of a grade-separated Pound Lane / A127 junction layout, the performance of the existing Pound Lane / B1464 London Road junction was reviewed to determine whether the junction would require alternative mitigation to accommodate 2034 traffic volumes.
- 7.4.2 The existing signalised junction was modelled using LinSig software. As before, trip matrices were built from observed count data at the junction, factored to a 2034 forecast year using TEMPro/NTM alternative growth assumptions (see para 6.2.3) with development flows added from the Visum skeleton model.
- 7.4.3 Figure 7-4 below illustrates the LinSig network layout diagram for the junction.

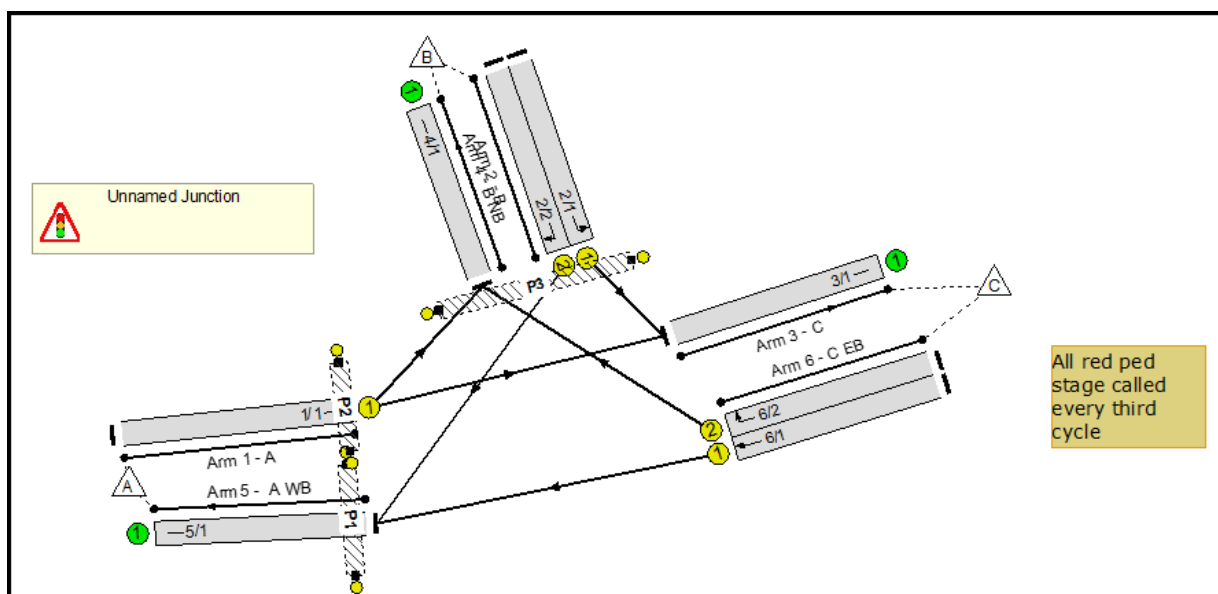


Figure 7-4 – Network layout diagram of Pound Lane / B1464 London Road signalised junction

- 7.4.4 Table 7-4 below shows the percentage degree of saturation for each approach arm lane to the signalised junction based on 2019 observed flows. Results suggest that the junction is currently operating within capacity.

Table 7-4 - Pound Lane / B1464 London Road signalised junction analysis results – 2019

2019 Lane Description	AM Peak		PM Peak	
	Degree Saturation (%)	Average Delay per PCU (s)	Degree Saturation (%)	Average Delay per PCU (s)
B1464 eastbound	53.0	34.9	54.0	28.6
Pound Lane left turn	26.1	17.0	57.3	29.9
Pound Lane right turn	41.6	47.7	24.5	41.7
B1464 westbound	14.5	7.5	9.0	8.4
B1464 westbound right turn	36.3	9.4	13.2	8.9

7.4.5 Table 7-5 below shows the capacity performance of the signalised junction in 2034 with background traffic growth and Local Plan development traffic included in the model matrices, without signal optimisation.

Table 7-5 - Pound Lane / B1464 London Road signalised junction capacity results – 2034

2034 with existing signal times	AM Peak		PM Peak	
Lane Description	Degree Saturation (%)	Average Delay per PCU (s)	Degree Saturation (%)	Average Delay per PCU (s)
B1464 eastbound	70.4	40.9	74.0	35.3
Pound Lane left turn	27.9	17.3	61.1	31.0
Pound Lane right turn	102.3	191.9	49.3	46.8
B1464 westbound	15.5	7.6	9.6	8.5
B1464 westbound right turn	38.9	9.7	14.1	8.9

7.4.6 Results of the capacity assessment suggest that with no changes to signal timings, the existing junction will operate over capacity in the 2034 AM peak, with the percentage degree of saturation for right-turn movements out of Pound Lane exceeding the 100% threshold.

7.4.7 However, optimisation of signal timings to better balance traffic flow through the junction is shown to be sufficient in bringing all lanes back within capacity. This is shown in Table 7-6 below.

Table 7-6 - Pound Lane / B1464 London Road junction capacity results – 2034 with signal optimisation

2034 with signal optimisation	AM Peak		PM Peak	
Lane Description	Degree Saturation (%)	Average Delay per PCU (s)	Degree Saturation (%)	Average Delay per PCU (s)
B1464 eastbound	62.5	26.6	79.5	31.0
Pound Lane left turn	39.1	20.2	80.6	38.1
Pound Lane right turn	63.4	34.4	52.8	36.4
B1464 westbound	19.9	10.3	10.8	8.5
B1464 westbound right turn	50.0	13.7	15.9	9.0

7.4.8 It is important to note that without use of a full highway assignment model, the results from this assessment are based on an assumption that routing patterns of background traffic flows remain consistent between 2019 and 2034.

8 Summary & Conclusions

8.1 Overview

- 8.1.1 The scope of work undertaken for this latest study covered the following assessments:
- A comparison of Local Plan highway impact with and without the A127 grade-separated junction
 - An assessment of alternative mitigation without the A127 grade-separated junction improvements
 - An assessment of alternative mitigation in a 2025 assessment year without A127 grade-separated junction improvements
 - A capacity evaluation of Pound Lane and connecting junctions
- 8.1.2 An outline economic appraisal of the A127 grade-separated junction has also been undertaken and has been reported separately in a companion technical note titled: “Local Plan Transport & Highway Impact Assessment – Outline Economic Appraisal of grade separated junction proposals at A127, Pound Lane & Cranfield Park Road”, produced by Essex Highways in October 2019.
- 8.1.3 Improvements to accessibility offered by an A127 grade-separated junction scheme help to reduce traffic flows through existing junctions within the East Basildon and Wickford study area. Without the scheme in place, five of the eleven junctions assessed will unlikely to be able to accommodate predicted levels of growth within the Local Plan period without alternative mitigation considered.
- 8.1.4 Alternative mitigation has been considered at the junctions shown to operate noticeably over-capacity without grade-separated infrastructure.
- 8.1.5 With alternative mitigation in place, only the A132 Runwell Road / Church End Lane junction in Wickford (W3) is shown to remain noticeably over capacity.
- 8.1.6 The capacity performance of the proposed mitigation (mini-roundabout) at A132 Runwell Road / Church End Lane junction is nevertheless an improvement over the existing junction with 2034 background growth alone. This at least suggests that the proposed scheme would mitigate the impact of Local Plan development trips, and a proportion of background traffic growth.
- 8.1.7 In a 2025 interim assessment year with phased Local Plan development, a number of assessed junctions are modelled to operate slightly over-capacity, suggesting the practical need for sustainable measures to be implemented early within the Local Plan period.
- 8.1.8 The A132 Runwell Road / Church End Lane junction (W3) also operates over-capacity in 2025, despite reconfiguration of the junction as a mini-roundabout.

- 8.1.9 This suggests that, whilst the proposed mitigation at the Church End Lane junction will have longer-term benefits, the redesign of the junction may still be unable to accommodate short-term background traffic growth in full.
- 8.1.10 Without a grade-separated junction on the A127, analysis suggests that the Pound Lane link operates at around 63% of capacity in either peak hour in 2034. This suggests that upgrades or replacements to the existing route would unlikely be required within the Local Plan period (at least from a capacity perspective) without grade-separation of the junction with the A127.
- 8.1.11 Modelled delay at the existing junction for movements from Pound Lane to the westbound carriageway of the A127 is averaged at 37 seconds per vehicle in the 2034 AM peak. This could be considered comparable to a typical red-phase at a signalised junction and suggests that the existing junction will accommodate local traffic flow growth within the Local Plan period.
- 8.1.12 Optimisation of the signal timings at the junction of Pound Lane with the B1464 London Road is shown in modelling to enable the junction to operate within capacity by 2034.
- 8.1.13 It should be noted that this assessment considers only the modelled highway capacity of both the Pound Lane link and connecting junctions. Separate assessments will be required to consider further local impacts of development traffic with regards to the built environment and safety along the corridor arising from the submitted Local Plan growth in East Basildon and South of Wickford, for example, as part of the emerging Neighbourhood Plan preparation to consider further local impacts. These separate assessments will further inform the mitigation required in this vicinity.
- 8.1.14 It is also important to note, that findings across the study are based on an assumption that routing patterns of background traffic flows remain consistent between 2019 and 2034.

Appendices

Appendix A: Scheme Drawings and Cost Breakdown

Figure A – Ba7 Scheme Drawing

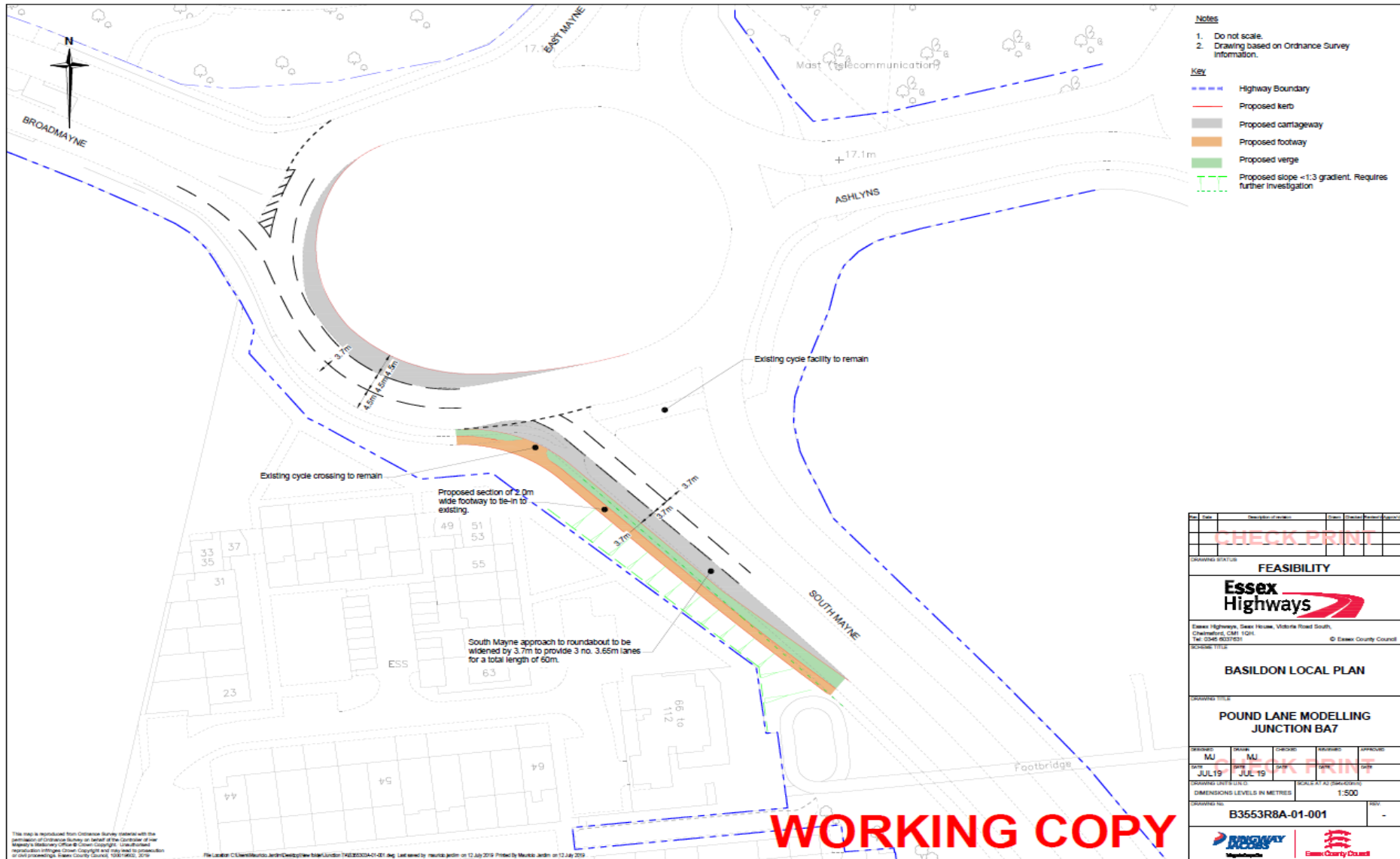


Figure B – Ba30 Scheme Drawing

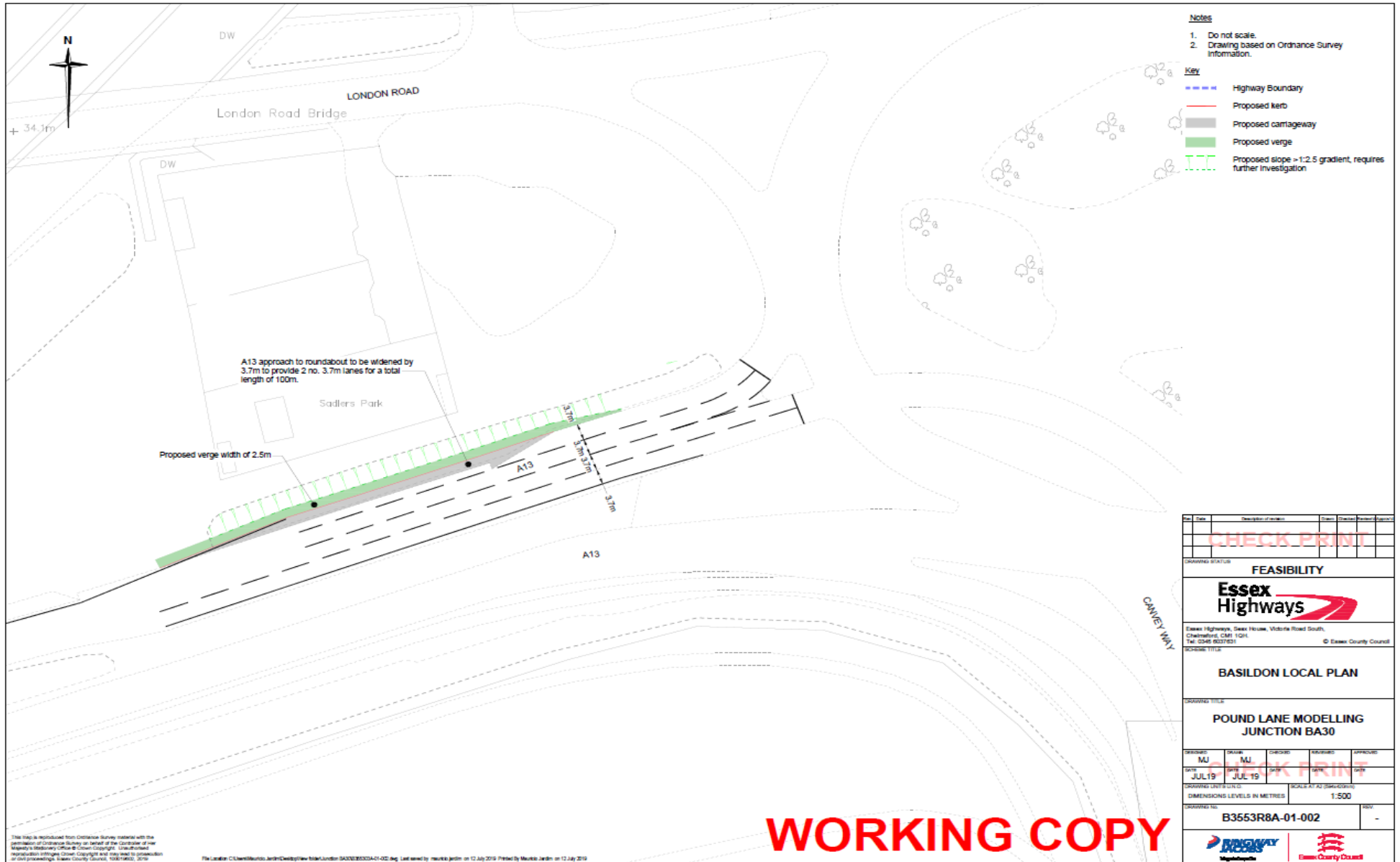


Table A - Costings for Ba7

Cost	Procurement Method: Self Delivery
£61,791	Series 100 – Prelims - Estimated at 20% of Series and Additional Allowances
£8,051	Series 200 - Site Clearance
£0	Series 300 - Fencing
£0	Series 400 - Road Restraint Systems
£85,069	Series 500 - Drainage and Service Ducts
£50,494	Series 600 - Earthworks
£132,434	Series 700 - Pavements
£17,695	Series 1100 - Kerbs, Footways and Paved Areas
£10,646	Series 1200 - Traffic Signs and Road Markings
£4,567	Series 1300 - Road Lighting Columns and Brackets, CCTV Masts and Cantilever Masts
£0	Series 1400 - Electrical Work for Road Lighting and Traffic Signs
£0	Series 1500 - Motorway Communications
£0	Series 1700 - Structures
£0	Series 3000 - Landscaping and Ecology
£0	Additional Allowances Excluding Stats
-£2,613	Regional Adjustment and uplift from 2019 Rates
£368,134	Today's Value Civils Cost
£2,687	Civils Inflation to Mid-Point of Scheme Using a BCIS Construction Index of 0.01
£370,821	Inflated Civils Cost
£19,283	RJ Uplift (Civils)
£390,104	Uplifted Inflated Civils Cost
£0	Statutory Undertaker Diversions Inclusive of Inflation
£78,021	20% Risk applied to STATs and Uplifted Inflated Civils Cost
£468,125	Construction Cost
£55,220	Today's Development & Design Costs
£0	Development & Design Inflation of 3% Compounded Annually to Payment Date
£55,220	Inflated Development & Design Costs
£2,871	RJ Uplift (Development & Design Costs)
£58,092	Development & Design Cost
£7,416	Contract Administration
£22,249	Supervision
£1,543	RJ Uplift (Contract Administration & Supervision)
£0	Land Purchase Inflated at 3% Compound Annually to Payment Date
£0	Land Rent Inflated at 3% Compound Annually to Payment Date
£31,208	Implementation Cost
£557,424	Total

Notes: The total is made up of the "Construction Cost", "Development & Design Cost" and the "Implementation Cost". Inflation calculated as a percentage, compounded annually, to the nearest whole year.

Table B - Costings for Ba30

Cost	Procurement Method: Self Delivery
£40,084	Series 100 – Prelims - Estimated at 20% of Series and Additional Allowances
£5,239	Series 200 - Site Clearance
£0	Series 300 - Fencing
£2,489	Series 400 - Road Restraint Systems
£19,829	Series 500 - Drainage and Service Ducts
£90,195	Series 600 - Earthworks
£65,730	Series 700 - Pavements
£1,832	Series 1100 - Kerbs, Footways and Paved Areas
£3,936	Series 1200 - Traffic Signs and Road Markings
£1,171	Series 1300 - Road Lighting Columns and Brackets, CCTV Masts and Cantilever Masts
£0	Series 1400 - Electrical Work for Road Lighting and Traffic Signs
£0	Series 1500 - Motorway Communications
£10,000	Series 1700 - Structures
£0	Series 3000 - Landscaping and Ecology
£0	Additional Allowances Excluding Stats
-£1,695	Regional Adjustment and uplift from 2019 Rates
£238,809	Today's Value Civils Cost
£1,743	Civils Inflation to Mid-Point of Scheme Using a BCIS Construction Index of 0.01
£240,552	Inflated Civils Cost
£12,509	RJ Uplift (Civils)
£253,061	Uplifted Inflated Civils Cost
£0	Statutory Undertaker Diversions Inclusive of Inflation
£50,612	20% Risk applied to STATs and Uplifted Inflated Civils Cost
£303,673	Construction Cost
£35,821	Today's Development & Design Costs
£0	Development & Design Inflation of 3% Compounded Annually to Payment Date
£35,821	Inflated Development & Design Costs
£1,863	RJ Uplift (Development & Design Costs)
£37,684	Development & Design Cost
£4,811	Contract Administration
£14,433	Supervision
£1,001	RJ Uplift (Contract Administration & Supervision)
£0	Land Purchase Inflated at 3% Compound Annually to Payment Date
£0	Land Rent Inflated at 3% Compound Annually to Payment Date
£20,245	Implementation Cost
£361,602	Total

Notes: The total is made up of the "Construction Cost", "Development & Design Cost" and the "Implementation Cost". Inflation calculated as a percentage, compounded annually, to the **nearest** whole year.

Appendix B: 2025 Housing & Employment Figures

Table C - Housing Trajectory

Source of Supply	Settlement	Urban / GB	Site Size (ha)	Other Land Uses			Potential Yield	Anticipated Phasing					Notes
				Need	Size (ha)	Density (duph)		2014-2018	2018-2023	2023-2028	2028-2034	Beyond 2034	
Plotlands / Green Belt Infill	Multiple	GB	multiple	-	-	-	135		20	50	65		Figure from Green Belt Infill Review adjusted to remove supply from Hovefield and Honiley in short term
Serviced Settlements	Ramsden Crays	GB	multiple	-	-	-	65		19	19	27		Figure from Serviced Settlements Review
	Ramsden Bellhouse	GB	multiple	-	-	-	39		11	11	17		
Completions to date (2014-2018)	Basildon UA	Urban	multiple	-	-	-	1709	1709					
	Billericay	Urban	multiple	-	-	-	73	73					
	Wickford	Urban	multiple	-	-	-	458	458					
	Other	Mixed	multiple	-	-	-	7	7					
Extant Consents @ April 2018	Basildon UA	Urban	multiple	-	-	-	1846		1449	397	0	0	
	Billericay	Urban	multiple	-	-	-	156		156	0	0	0	
	Wickford	Urban	multiple	-	-	-	618		320	131	108	59	
	Other	Mixed	multiple	-	-	-	21		21	0	0		
TC Regeneration without consent @ April 2018	Basildon UA	Urban	multiple	-	-	-	1039		110	375	554		Uplifted by 6.4% based on evidence of past supply
	Wickford	Urban	multiple	-	-	-	125		60	65	0		
Urban HELAA @ April 2018	Basildon UA	Urban	multiple	-	-	-	1161		859	231	71		
	Billericay	Urban	multiple	-	-	-	22		17	5	0		
	Wickford	Urban	multiple	-	-	-	78		46	32	0		
	Other	Urban	multiple	-	-	-	0		0	0	0		
Windfall	Multiple	Mixed	multiple	-	-	-	880			400	480		Windfall Assessment 2017. NPPF says not during first 5 years.
H5: Gardiners Lane	Basildon UA	Urban	37.35	Employment, Playing pitch retention and consolidation, 3fe Primary	22.4	56	747				442	305	HLDF Mid Option with extant consents discounted. Phasing to reflect need to relocate playing pitches. Potential for acceleration.
H7: Land at London Road, Vange	Basildon UA	GB	24.57	Open space outside allocation to south of London Road, open space on site to north of London Road (not within LWS), plus buffering to LWS. LWS and associated landlocked land removed from site area	6	35	650			110	540		Phasing based on HELAA build out rate assumptions. Subject to S106 contributions / S278 works for education and highways, no reason to hold back delivery. Therefore, could be accelerated.
H8: West Basildon Urban Extension	Basildon UA	GB	18	7.8 ha for community sports hub	7.8	35	300			125	175		Phasing based on HELAA Build out rate assumptions. Subject to S106 contributions / S278 works for education and highways, and transfer of land for playing pitch provision, no reason to hold back delivery. Therefore, could be accelerated.
H9: Land West of Steeple View	Basildon UA	GB	9.4	On site open space provision, plus buffering to A127	2.4	35	245			125	120		Phasing based on HELAA build out rate assumptions. However, due to proximity to section of A127 with air quality constraints, and the need to ensure provision of extension to Noak Bridge School, these are not considered to be sites that can be accelerated.
H10: Land East of Noak Bridge	Basildon UA	GB	12	On site 2fe primary. Open space outside allocation	2.3	45	400			125	275		Phasing based on HELAA build out rate assumptions. This site is in multiple ownerships and is constrained by the need to relocate leisure provision later in the plan period. This is not considered a site that can be accelerated
H11: East Basildon	Basildon UA	GB	53	Secondary school, and leisure	23	32 av	650			125	525		Phasing based on HELAA build out rate assumptions. This site is in multiple ownerships and is constrained by the need to relocate leisure provision later in the plan period. This is not considered a site that can be accelerated
Bowers Gifford and North Benfleet NA	Other	GB	multiple	2FE Primary			1350			125	600	625	The exact sources of supply are for the neighbourhood area to determine. However, it is anticipated to comprise urban intensification within the plotlands, which may come forward earlier than anticipated, and one or more large Greenfield sites. Infrastructure requirements for the large Greenfield sites, including the provision of a new junction on the A127 mean this development will require significant intervention to accelerate delivery.
H12: Land South of Wickford	Wickford	GB	28.7	On site 2fe primary. Environmental mitigation around watercourse. Open space outside allocation	4	45	1112				650	462	Infrastructure requirements for this site include a new junction on the A127, which means this site will require significant intervention to accelerate delivery.
H13: Land at Shotgate	Wickford	GB	15.6	Open space provision outside allocation. Environmental buffering within allocation to account for odour.	7.5	35	284			125	159		Phasing based on HELAA build out rate assumptions. Subject to S106 contributions / S278 works for education and highways, no reason to hold back delivery. Therefore, could be accelerated.

H14: Barn Hall, Wickford	Wickford	GB	14.4	Open space provision outside allocation. Some environmental buffering.	2.4	45	540			110	430	Density to reflect proximity to Station and Town Centre. Phasing based on HELAA Build out rate assumptions. Subject to S106 contributions / S278 works for education and highways, and transfer of land for playing pitch provision, no reason to hold back delivery. Therefore, could be accelerated.	
H15: Land North of the London Road, Wickford	Wickford	GB	13.5	Open space provision on site, plus flood risk avoidance and retention of trees	5	35	298			125	173	Phasing based on HELAA build out rate assumptions. Subject to S106 contributions / S278 works for education and highways, no reason to hold back delivery. Therefore, could be accelerated.	
H16: North of Potash Road, Billericay	Billericay	GB	10.77	Open space provision on site plus environmental buffering	2.27	30	255			125	130	Phasing based on HELAA build out rate assumptions. Subject to S106 contributions / S278 works for education and highways, no reason to hold back delivery. Therefore, could be accelerated.	
H17: SW Billericay	Billericay	GB	106	Open space, 2 fe Primary, Road	38.73	35	1700			125	700	875	HLDf Preferred Option. Due to the need to relocate playing pitches, the need for on-site infrastructure provision, and the need to secure the Billericay relief route, and other highway improvements, this site is phased late. However, development in this location is highly viable, and it is therefore within the gift of the developers to bring this site forward alongside the required infrastructure at an accelerated rate, if these matters can be resolved.
H18: South of Windmill Heights, Billericay	Billericay	GB	7.8	Open space provision on site, buffering to roads etc	2	35	203			125	78	Phasing based on HELAA build out rate assumptions. Subject to S106 contributions / S278 works for education and highways, no reason to hold back delivery. Therefore, could be accelerated.	
H19: East of Green Farm Lane, Billericay	Billericay	GB	12.2	Open space provision outside allocation. Some environmental buffering.	1	35	400			125	275	Phasing based on HELAA build out rate assumptions. Subject to S106 contributions / S278 works for education and highways, and on-site provision of strategic open space, no reason to hold back delivery. Therefore, could be accelerated.	
H20: East of Southend Road, Great Burstead	Billericay	GB	7	Open space provision on site. Environmental mitigation around watercourse.	1.5	35	193			120	73	Phasing based on HELAA build out rate assumptions. Subject to S106 contributions / S278 works for education and highways, no reason to hold back delivery. Therefore, could be accelerated.	
Self Build: Land at Maitland Lodge, Great Burstead	Billericay	GB	1.45	-	-	-	20		10	10		Self build plots	
Self Build: Land Adj The Mount, Billericay	Billericay	GB	0.6	-	-	-	6		6			Self build plots	
Self Build: East of Laindon Road, Billericay	Billericay	GB	0.8	-	-	-	6		6			Self build plots	
TOTAL							17791	2247	3110	3441	6667	2326	
Supply 2014 to 2034 (SHMA)							15465						
Supply 2018 to 2034 (Standard Method 20 Sep 18)							13218						
Supply from Basildon UA							8747	1709	2418	1613	2702	305	
Supply from Billericay							3034	73	195	635	1256	875	
Supply from Wickford							3513	458	426	588	1520	521	
Supply from Other / Windfall							2497	7	71	605	1189	625	
Average Delivery Rate against SHMA							773						
Average Delivery Rate against Standard Method 20 Sep 18							826						
Minimum Delivery Rates based on Supply									562	622	688	1111	

Table D - 2025 Employment from BBC

Basildon LP Residential Development
Draft Local Plan Growth and High Growth Scenario

Hectares to m² conversion = 10,000

BBC Ref	Site Ref	Address:	Site Type	Employment Land Use Class														
				B1a/b (Office)			B2/B1c (Light Industry/Industrial Estate)			B8 (Warehousing)			A? (Retail)			(Commercial Leisure)		
				Gross Floor Area (m ²)			Gross Floor Area (m ²)			Gross Floor Area (m ²)			Gross Floor Area (m ²)			Gross Floor Area (m ²)		
E8	PE9	East Basildon Extension	Potential Employment Sites - Green Belt															
E8b		Burnt Mills Safeguarded Area	Potential Employment Sites - Green Belt															
E7	PE1/PE2	Dunton Extension & Dunton Wayletts Extension	Potential Employment Sites - Green Belt															
E5		Gardiners Lane (protected under BAS E1)	Key Employment Site	24,543			57,267											
E3	VE11	Ford Technical	Vacant/Underutilised Land	25,841			34,454			25,841								
E2	VE4	Cranes Industrial Estate	Vacant/Underutilised Land	3,600			14,404			18,006								
E2	VE3	Burnt Mills	Vacant/Underutilised Land	2,000			4,000			14,000								
E2	VE7	Pipps Hill	Vacant/Underutilised Land				7,920			7,920								
E2	VE6	Festival Business Park	Vacant/Underutilised Land							21,500								
E6		Terminus Drive Pitsea (protected under BAS E2)	Key Employment Site							17,676								
E2		Basildon Town Centre	Existing Employment Site - Urban Area	10,000									2,000			5,000		
E2	VE2	Radford Way	Vacant/Underutilised Land	282			1,128											
E2	VE1	Wickford Business Park	Vacant/Underutilised Land							2,000								
E2		Wickford Town Centre	Existing Employment Site - Urban Area	500									2,000			500		
E9		Bluehouse Farm	Existing Employment Site - Rural Area	800						800								
E9		White Bridge Farm	Existing Employment Site - Rural Area							3,000								
E9		Annwood Lodge	Existing Employment Site - Rural Area				1,520			1,520								
R6		Billericay Town Centre	Retail										1,000			500		
R3		Laindon Town Centre	Retail	1,580									4,922			250		
R4		Pitsea Town Centre	Retail										2,000			250		
H13		East of Basildon	Retail										0					
H14		Land South of Wickford	Retail										0					
H23		Land East of Frithwood Lane	Retail										500					
				69,146	0	0	120,693	0	0	137,263	0	0	12,422	0	0	6,500	0	0

Appendix C: Modelled 2025 Housing & Employment

Table E - Modelled 2025 Housing Assumptions

Site Ref	Address:	Town	Site Type	Site Size (Ha):	Site Housing Yield for 2025:
SS0064	Land east of Pound Lane, Laindon	Basildon	HELAA	1.31	8
SS0063	Land on corner of Pound Lane and Arterial Road, Laindon	Basildon	HELAA	0.19	4
SS0069	Open Space and garages at rear of 1-53 Paprills, 318-334 Great Gregorie and 156-184 The Knares, Lee Chapel South	Basildon	HELAA	0.59	8
SS0076	Land North of Nethermayne, South of 35 Toucan Way, including car park and outbuildings at Basildon Golf Course	Basildon	HELAA	2.02	5
SS0087	Open Space and garages at rear of 2-12 Priors Close, 94-114 Pinmill and 442-510 Long Riding, Barstable	Basildon	HELAA	0.23	3
SS0090	Basildon Integrated Support Service (Lincewood County Infants School Annexe) High Road, Langdon Hills	Basildon	HELAA	0.37	7
SS0096	Land at corner of Mandeville Way and West Mayne/North of 75-92 Menzies Avenue, Laindon	Basildon	HELAA	0.59	6
SS0101	Land north of Church Hill, Laindon	Basildon	HELAA	9.29	110
SS0105	Ashleigh Centre & Fryerns Library, Whitmore Way	Basildon	HELAA	0.95	14
SS0107	Land at Long Riding, north of Napier Close, Barstable	Basildon	HELAA	1.83	37
SS0108	Open Space opposite 113-151 Church Road and South of Fairhouse County Primary School, Vange	Basildon	HELAA	1.14	23
SS0118	Open Space, North of 59-67 Bardfield and adjacent to 37-45 Bardfield, Vange, Basildon	Basildon	HELAA	0.31	5
SS0120	Open Space at rear of 26-54 Dencourt Crescent and rear of 34-54 The Greensted, Barstable, Basildon	Basildon	HELAA	0.53	7
SS0122	Open Space between 5-25 and 83 Meredene and 37-59 Stagden Cross, Barstable, Basildon	Basildon	HELAA	0.52	7
SS0123	Former Fryerns School and Social Services Offices, Broadmayne, Craylands, Basildon	Basildon	HELAA	3.31	38
SS0139	Open Space to the rear of 22-30 The Fold and opposite 24-30 Honeypot Lane, Fryerns	Basildon	HELAA	0.19	2
SS0147	Land at Parklands, rear of 5-29 Parkside, Northlands	Basildon	HELAA	0.36	4
SS0182	Land adjacent to the south side of Cranes Farm Road, Basildon, from Ghyllgrove to the field of Pendle Drive/ Pendle Close	Basildon	HELAA	0.96	16
SS0691	Land at Menzies Avenue and Fraser Close, Basildon SS15 6SX	Basildon	HELAA	0.58	11

SS0678	Pound Lane Central, Basildon SS15 4EX	Basildon	HELAA	0.26	2
SS0693	Pounders Hall, Pound Lane, Basildon SS15 5SP	Basildon	HELAA	2.16	12
SS0685	Garages at Woolmer Green, Basildon SS15 5LL	Basildon	HELAA	0.23	3
SS0696	Garages located at Great Knightleys and Swan Close, Basildon SS15 5GE	Basildon	HELAA	0.22	3
SS0697	Garages located at Little Lullaway, Basildon SS15 5JH	Basildon	HELAA	0.21	3
SS0698	Garages to the south of 13 Falstones, Basildon SS15 5BU	Basildon	HELAA	0.19	2
SS0699	Garages to the north of 84 Falstones, Basildon SS15 5BX	Basildon	HELAA	0.15	2
SS0700	Garages to the north of 108 Falstones, Basildon SS15 5DF	Basildon	HELAA	0.3	4
SS0701	Garages to the north of 86 Paprills, Basildon SS16 5QX	Basildon	HELAA	0.28	4
SS0705	Garages to the south of 11 Culverdown, Basildon SS14 2AL	Basildon	HELAA	0.21	3
SS0689	St Chad's Church, Clay Hill Road, Basildon	Basildon	HELAA	0.65	12
SS0680	Glenmere, Basildon SS16 4QR	Basildon	HELAA	0.13	3
SS0681	Littlethorpe, Basildon SS16 4LH	Basildon	HELAA	0.51	5
SS0695	Garages located at Downey Close, Basildon SS14 2NF	Basildon	HELAA	0.17	2
SS0706	Garages to the north of 87 Nether Priors, Basildon SS14 1LS	Basildon	HELAA	0.22	3
SS0710	Land at Fairlop Gardens, Basildon	Basildon	HELAA	0.3	4
SS0679	Rayside, Basildon SS14 1NB	Basildon	HELAA	0.11	3
SS0684	Swan Mead Centre, Church Road, Basildon SS16 4AG	Basildon	HELAA	0.54	6
SS0707	Garages to the west of 85 Great Mistley, Basildon SS16 4BE	Basildon	HELAA	0.29	4
SS0690	Bower Lane, Basildon SS14 3PQ	Basildon	HELAA	0.14	2
SS0694	Land west of Burnt Mills Road and east of East Mayne, Basildon SS13 1RF	Basildon	HELAA	0.91	8
SS0692	Littlebury Green, Basildon SS13 1RF	Basildon	HELAA	0.38	9
SS0708	East of Northlands Park, Basildon	Basildon	HELAA	0.55	10
SS0682	Pitsea Housing Office/The Place, Northlands Pavement, Basildon SS13 3DU	Basildon	HELAA	0.71	11
SS0683	Land east of Paslowes, Basildon SS16 4LS	Basildon	HELAA	0.26	4
SS0704	Garages north and west of 1 Cadogan Terrace, Basildon SS13 2BD	Basildon	HELAA	0.2	5
BAS/1080/12	Land at Nethermayne, Kingswood	Basildon	HELAA	40.64	300
SS0249	Land west of Mandeville Way, Laindon, Basildon	Basildon	HELAA	15.52	124
SS0390	Land west of Steeple View, Dunton Road, Laindon	Basildon	HELAA	9.89	101
SS0130	Land South of Wash Road, West of Pippis Hill Road North and East of Eastfield Road, Basildon	Basildon	HELAA	17.76	199
SS0373	Land at Bensons Farm, North of Wash Road, Basildon	Basildon	HELAA	11.61	145
SS0210	Land east of Tyefields, south of Burnt Mills Road, Basildon	Basildon	HELAA	34.06	451

SS0658	Land at Eversley, Pitsea	Basildon	HELAA	10.65	141
SS0633	Louisa Cottage, Eversley Road, Basildon SS13 2DQ	Basildon	HELAA	2.29	30
SS0709	Upsons Field, Eversley Road, Pitsea SS13 2DG	Basildon	HELAA	2.15	29
SS0659	Land North of London Road, East of Ilfracombe Avenue and West of Pound Lane, Bowers Gifford	Basildon	HELAA	1.08	14
SS0163	Land North of London Road, East of Ilfracombe Avenue and West of Pound Lane, Bowers Gifford	Basildon	HELAA	6.06	80
SS0218	Land to the west of Eversley Road, Pitsea	Basildon	HELAA	3.04	40
SS0598	Land rear of The Bull Public House, London Road, Pitsea	Basildon	HELAA	1.08	14
BAS/0877/09	Jackmans Farm, London Road, Bowers Gifford	Basildon	RLA		0
BAS/1425/15	Gifford House, London Road, Bowers Gifford	Basildon	RLA		12
BAS/0041/14	The Bull. London Road, Pitsea	Basildon	RLA		10
SS0536	Land off Gardiners Lane South, Basildon	Basildon	HELAA	38	309
BAS/0652/15	Pine Lodge Gardiners Close Basildon Essex SS14 3AN	Basildon	HELAA		18
SS0370	Land at junction of London Road and Brickfield Road, Vange, Basildon	Basildon	HELAA	2.42	24
SS0191	Land north of Vange Primary School and Basildon Zoo	Basildon	HELAA	15.03	156
SS0235	Land at Tompkins Farm, London Road, Vange	Basildon	HELAA	6.6	67
SS0236	Basildon zoo site, London road, Vange.	Basildon	HELAA	2.1	22
	Crooked Brook	Basildon	HELAA		2
	Bells Hill Road / Hawkesbury Bush Lane	Basildon	Plotland		1
	Bells Hill Road / Leonard Road	Basildon	Plotland		1
	Stormont Way Infill area	Basildon	Plotland		0
	Northlands Infill area	Basildon	Plotland		1
	North Benfleet Infill area	Basildon	Plotland		14
BAS/0045/12	Leighton Dunton Road Laindon	Basildon	RLA		0
BAS/0137/15	82A Railway Approach, Laindon, Essex	Basildon	RLA		1
BAS/0952/13	Winifred, Windsor Road, Bowers Gifford, North Benfleet	Basildon	RLA		0
BAS/1376/11	Land To The Rear Of 83, Pound Lane, Laindon, Basildon	basildon	RLA		1
BAS/0048/13	The Old Rectory, Church Road, Bowers Gifford, Basildon, SS13 2HG	Basildon	RLA		0
BAS/0063/12	25 Brackendale Avenue, Pitsea	Basildon	RLA		0
BAS/0090/13	2 The Mead, Laindon, Basildon	Basildon	RLA		0
BAS/0395/15	Land Adjacent To 124 Chesterford Green, Basildon	Basildon	RLA		0
BAS/0523/09	7 Tenterfields, Pitsea.	Basildon	RLA		2

BAS/0951/12	Dunton Fields, Southend Arterial Road, Dunton, Basildon	Basildon	RLA		53
BAS/0840/13	Dunton Fields, Southend Arterial Road, Dunton, Basildon	Basildon	RLA		41
BAS/1405/14	Dunton Fields, Southend Arterial Road, Dunton, Basildon	Basildon	RLA		67
BAS/0998/12	Adj 1 Clay Hill Road, Basildon.	Basildon	RLA		1
BAS/1065/12	Land South of Felmores, Northlands Park, Basildon.	Basildon	RLA		10
BAS/1239/12	49A Kirby Road, Basildon.	Basildon	RLA		1
BAS/1370/11	Land At Russell Close Laindon	Basildon	RLA		2
BAS/0778/13	Land To The Rear Of 83 Pound Lane Laindon	Basildon	RLA		1
BAS/0689/16	Land between Bramley & Longdene, Dunton Road, Basildon	Basildon	RLA		0
BAS/0052/14	61 Kings Road, Laindon, Basildon	Basildon	RLA		0
BAS/0658/13	29 Osier Drive, Basildon	Basildon	RLA		0
BAS/0227/15	Black Horse House, Bentalls, Basildon	Basildon	RLA		12
BAS/0315/14	75 Whitmore Way, Basildon	Basildon	RLA		0
BAS/1169/13	Land adjacent 271 Whitmore Way, Basildon	Basildon	RLA		0
BAS/0898/16	Craylands Estates, Fryerns, Basildon	Basildon	RLA		136
BAS/0002/07	Craylands Estate & former Fryerns School, Craylands, Basildon	Basildon	RLA		30
BAS/1238/12	311 Church Road, Basildon	Basildon	RLA		1
BAS/9003/85/O	Laindon 14 & 14B, Basildon	Basildon	RLA		40
BAS/0312/14	93 Pound Lane, Laindon, Basildon	Basildon	RLA		0
BAS/0869/10	Ashtons, High Road, Laindon	Basildon	RLA		2
BAS/0560/12	Dunton Hall, Church Road, Dunton	Basildon	RLA		0
BAS/0731/16	90 Railway Approach, Laindon	Basildon	RLA		2
BAS/0273/14	41 Bedford Road, Laindon	Basildon	RLA		0
BAS/0401/14	14 Basildon Drive, Basildon	Basildon	RLA		0
BAS/1108/13	Land at Fallowfield, Grays Avenue, Langdon Hills, Basildon	Basildon	RLA		1
BAS/0513/14	57 Russetts, Langdon Hills, Basildon	Basildon	RLA		0
BAS/0474/13	Land north of Tesco, Mandeville Way	Basildon	RLA		8
BAS/0411/14	Land west of High Warren, Lee Chapel Lane, Langdon Hills	Basildon	RLA		2
BAS/0012/07/REM	125 & 129 Gt Berry Lane, Basildon	Basildon	RLA		1
BAS/1490/15	Nevendon Hall, Nevendon Road Basildon, Essex, SS13 1BX	Basildon	RLA		0
BAS/1053/13	Land at The Triangle, Basildon	Basildon	RLA		2
BAS/1119/13	Land at Falstones, Laindon	Basildon	RLA		2
BAS/1507/06	2011 - P/S/Seded by BAS/0294/10 - 10/00294 (24126) x 4,	Basildon	RLA		31
BAS/0643/00	40 Trindehay	Basildon	RLA		1
BAS/1385/14	Trafford House, Station Way, Basildon	Basildon	RLA		159
BAS/0029/06	Essex Ford, Cherrydown, Basildon	Basildon	RLA		86

BAS/1213/04	Marsh Farmhouse, Marsh Farm, Brickfield Road, Basildon	Basildon	RLA		0
BAS/1454/16	Site of 70-77 Bockingham Green, Basildon	Basildon	RLA		2
BAS/0923/14	67 Great Ranton, Pitsea	Basildon	RLA		0
BAS/1196/14	15 Plumleys, Pitsea	Basildon	RLA		0
BAS/0601/14	1 Plumleys Pitsea	Basildon	RLA		0
BAS/1313/14	299 Pound Lane, Pitsea	Basildon	RLA		0
BAS/0728/01	221 Pound Lane	Basildon	RLA		0
BAS/0516/14	15 Delhi Road, Basildon	Basildon	RLA		0
BAS/0039/15	3 Rectory Road, Pitsea	Basildon	RLA		0
BAS/0492/13	Tudor Chambers, Station Lane, Pitsea	Basildon	RLA		2
BAS/0784/11	218 Pound Lane, Bowers Gifford	Basildon	RLA		2
BAS/1382/14	11 East Square, Basildon	Basildon	RLA		4
BAS/0777/13	Phase 1b Westside North, Broadmayne, Basildon	Basildon	RLA		41
BAS/0111/11	Basildon Westside North, (Gloucester Park) Phase 1A	Basildon	RLA		5
BAS/0098/13	The Dental Surgery, 11 Southview Road, Vange	Basildon	RLA		2
BAS/0152/13	3 St Teresa's Close, Basildon	Basildon	RLA		2
BAS/1576/15	Land to the east of 24 St Teresa's Close, Basildon	Basildon	RLA		1
BAS/0083/13	533 Clay Hill Road, Basildon	Basildon	RLA		1
BAS/0819/15	14 Quendon Road, Basildon, Essex SS14 3PD	Basildon	RLA		2
BAS/1116/15	Garages South Of No. 70 Victoria Road, Laindon, Essex	Basildon	RLA		2
BAS/1179/15	22 Roberts Road, Laindon, Basildon, SS15 6AY	Basildon	RLA		4
BAS/1454/15	95 Pound Lane, Laindon, Essex SS15 5SP	Basildon	RLA		0
BAS/0657/16	35 Somerset Road, Laindon, Basildon, SS15 6PE	Basildon	RLA		0
BAS/1066/16	Catherine, Cromer Avenue, Laindon, Essex, SS15 6HU	Basildon	RLA		1
BAS/1070/15	185 Great Berry Lane, Langdon Hills, Basildon, SS16 6BS	Basildon	RLA		0
BAS/1134/16	Youth Centre, Long Lynderswood Basildon, Essex, SS15 5AU	Basildon	RLA		8
BAS/1754/16	9 The Glade, Kingswood Basildon, Essex, SS16 5JE	Basildon	RLA		0
BAS/0611/15	Northgate House, High Pavement Basildon, Essex, SS14 1EA	Basildon	RLA		36
BAS/0889/15	Land to the East of Ballards Walk, Basildon	Basildon	RLA		56
BAS/1219/16	Kelting House, Southernhay Basildon, Essex, SS14 1EQ	Basildon	RLA		21
BAS/0031/16	The Icon, Southernhay, Basildon Essex, SS14 1FG	Basildon	RLA		2
BAS/1022/16	Land Adjacent To Dengayne, Basildon, Essex	Basildon	RLA		2
BAS/1318/16	Eastgate Business Centre, Southernhay, Basildon, Essex SS14 1EB	Basildon	RLA		1

BAS/0062/15	210 Clay Hill Road, Basildon, Essex SS16 4AA	Basildon	RLA		1
BAS/0742/16	9 Kelly Road, Bowers Gifford	Basildon	RLA		0
BAS/1321/16	43 High Road North, Laindon Essex, SS15 4DH	Basildon	RLA		1
BAS/0239/17	42 Pound Lane Central, Laindon Basildon	Basildon	RLA		2
BAS/0189/15	Formerly Tower Radio, High Road Vange, Essex, SS16 4TG	Basildon	RLA		4
BAS/0464/15	55 Edinburgh Way, Pitsea, Basildon, SS13 3RL	Basildon	RLA		0
BAS/1180/15	166 Rectory Road, Pitsea Essex, SS13 2AN	Basildon	RLA		1
BAS/1414/15	Junction Of Pound Lane, Osborne Road, Bowers Gifford, Basildon Essex	Basildon	RLA		0
BAS/1051/15	302 Noak Hill Road, Laindon, Basildon, Essex, SS15 4DE	Basildon	RLA		1
BASILDON TC		Basildon	Town Centre		460
LAINDON TC		Basildon	Town Centre		65
SS0168	Open Space, Community Hall and garages, r/o 3-83 Langham Crescent, Great Burstead	Billericay	HELAA	0.66	9
SS0020	Land adjacent to 26 The Mount, Billericay	Billericay	HELAA	0.63	9
SS0189	Maitland Lodge, Southend Road, Great Burstead	Billericay	HELAA	1.48	17
SS0387	Land south of 115 Laindon Road, Billericay	Billericay	HELAA	0.77	12
SS0339	Land rear of 23-41 Potash Road	Billericay	HELAA	7.64	111
SS0580	65 Potash Road, Billericay CM11 1DL	Billericay	HELAA	3.16	45
SS0329	Land at Curds Farm, Tye Common Road	Billericay	HELAA	1.32	28
SS0231	Land East of Tye Common Road and west of Wiggins Lane, Little Burstead (Salmons Farm/Richdan Farm)	Billericay	HELAA	0.99	20
SS0532	Land at Kingsmans Farm	Billericay	HELAA	15.95	354
SS0388	Land south of London Road	Billericay	HELAA	1.19	23
SS0389	Land west of Heath Close	Billericay	HELAA	2.4	29
SS0328	Billericay Cricket Club, Blunts Wall Road	Billericay	HELAA	5.66	70
SS0005	Land North of Mayflower House, Heath close	Billericay	HELAA	0.2	2
SS0555	Greenleas Nursery, Land South of London Road, Billericay	Billericay	HELAA	2.79	53
SS0161	Land west of Mountnessing Road, north of London Road and south of the Railway line	Billericay	HELAA	18.03	332
SS0386	Land east of Frithwood Lane	Billericay	HELAA	18.5	321
SS0669	Langhams, Kennel Lane, east of the A176, Billericay (inclusive of Langhams Kennel Lane	Billericay	HELAA	0.22	4
SS0333	Land north of Kennel Lane, east of A176	Billericay	HELAA	7.85	126
SS0012	Land east of Greens Farm Lane, west of Outwood Common Road, north of Outwood Farm Road	Billericay	HELAA	9	156
SS0524	Snails Hall, Greens Farm Lane	Billericay	HELAA	0.84	15

SS0198	Thatched Cottage and land to the rear of Thatched Cottage, Southend Road	Billericay	HELAA	2.56	42
SS0307	Southend Farm, Southend Road, South Green	Billericay	HELAA	4.5	77
	Green Lane, Little Burstead	Billericay	Plotland		2
	Broomhills Chase, Little Burstead	Billericay	Plotland		4
SS0221	Land adjacent to Copper Beeches, Orchard Avenue	Ramsden Bellhouse	HELAA	0.55	1
SS0223	Land south of Ramsden Park Road	Ramsden Bellhouse	HELAA	1.88	3
SS0481	Adjacent Cassetta, Land East of Orchard Avenue, Ramsden Bellhouse	Ramsden Bellhouse	HELAA	0.45	1
SS0222	Land adjacent to Sliverwood Lodge, Orchard Avenue, Ramsden BellHouse	Ramsden Bellhouse	HELAA	0.11	0
SS0482	Land along the end of Orchard Avenue, Ramsden Bellhouse	Ramsden Bellhouse	HELAA	1.16	1
SS0634	Land at Church Road, south of Lorna Doone, Ramsden Bellhouse, Billericay	Ramsden Bellhouse	HELAA	0.79	3
SS0531	Land east of Church Road, Ramsden Bellhouse	Ramsden Bellhouse	HELAA	2.1	8
SS0599	Land at Ramsden Park Farm	Ramsden Bellhouse	HELAA	0.57	1
SS0505	Rear of Barnsfield	Crays Hill	HELAA	1.04	5
SS0606	Land north of London Road (west of Bean End Cottage)	Crays Hill	HELAA	1.01	5
SS0662	Land north of Southend Road, Crays Hill	Crays Hill	HELAA	2.23	7
SS0319	Land between London Road and Corner Road, Crays Hill	Crays Hill	HELAA	0.69	4
SS0320	Land opposite South Lodge, Approach Road, Crays Hill	Crays Hill	HELAA	0.22	1
SS0321	Land east of South Lodge, Approach Road, Crays Hill	Crays Hill	HELAA	0.13	3
SS0605	Land east of Corner Road	Crays Hill	HELAA	0.36	1
SS0607	Land north of London Road (east of Annawest)	Crays Hill	HELAA	0.26	1
SS0192	Land rear of, and including, Ravenscroft and Saremma, Gardiners Lane North, Crays Hill	Crays Hill	HELAA	0.97	2
SS0456	Land at South Lodge, Southlands Road, Crays Hill	Crays Hill	HELAA	2.46	2
SS0608	Land north of London Road (east of Hughendon)	Crays Hill	HELAA	0.4	3
	Crays Hill Infill Area	Crays Hill	Plotland		10
BAS/0016/13	Rear of 69 High Street Billericay, Essex CM12 9AU	Billericay	RLA		3
BAS/0236/17	14 Bromfelde Road, Crays Hill, Billericay	Billericay	RLA		1
BAS/0961/13	Land Adjacent To Whites Bridge Cottage, Crays Hill, Billericay	Billericay	RLA		1
BAS/0224/12	1 Chapel Street, Billericay.	Billericay	RLA		2
BAS/0362/12	70 Norsey Road, Billericay.	Billericay	RLA		1
BAS/0640/11	Land at Uplands, Chantry Way, Billericay, CM11 2AP	Billericay	RLA		2
BAS/0911/12	52 Chapel Street, Billericay.	Billericay	RLA		1
BAS/1087/11	Chestnuts Service Garage Crays Hill, Billericay	Billericay	RLA		2
BAS/0046/11	Elizabeth Cottages, 4 High Street, Billericay.	Billericay	RLA		2

BAS/0080/15	20B High Street Billericay	Billericay	RLA		1
BAS/0486/16	428 Outwood Common Road	Billericay	RLA		1
BAS/0704/12	Walman Huse, St Ediths Court, Billericay	Billericay	RLA		12
BAS/0014/13	62 Chestnut Avenue, Billericay	Billericay	RLA		1
BAS/0680/14	16 Hillside Road, Billericay	Billericay	RLA		2
BAS/0708/14	112 Norsey Road, Billericay	Billericay	RLA		1
BAS/0934/14	Land at Britannia Close, Billericay	Billericay	RLA		4
BAS/0111/14	17 Potash Road, Billericay	Billericay	RLA		1
BAS/1004/13	103 Norsey Road, Billericay	Billericay	RLA		1
BAS/1225/13	Link House, 1st & 2nd Floor, 56-70 High Street Billericay	Billericay	RLA		6
BAS/1132/13	Unit 1 King George's Court, High Street, Billericay	Billericay	RLA		2
BAS/0224/14	Rear of 195 & 197 Mountnessing Road, Billericay	Billericay	RLA		1
BAS/0468/15	1A Lake Avenue, Billericay	Billericay	RLA		2
BAS/0300/14	27 Tylers Avenue, Billericay	Billericay	RLA		1
BAS/1122/14	5 Stock Road, Billericay	Billericay	RLA		3
BAS/0223/14	The Anchorage, Buckwyns Chase, Billericay	Billericay	RLA		1
BAS/0117/14	1 Station Court, Radford Way, Billericay	Billericay	RLA		4
BAS/0750/15	Adj 1 Fairview, Billericay	Billericay	RLA		1
BAS/0168/15	Noak Hill Golf Course, 187 Noak Hill Road, Billericay	Billericay	RLA		2
BAS/0702/98	47 Laindon Road	Billericay	RLA		1
BAS/0843/13	1 Frithwood Lane, Billericay	Billericay	RLA		1
BAS/0456/15	120 Grange Road, Billericay	Billericay	RLA		1
BAS/0243/14	12 Patricia Gardens, Billericay	Billericay	RLA		4
BAS/0611/14	69 Church Street, Billericay	Billericay	RLA		1
BAS/0648/13	16 The Avenue, Billericay	Billericay	RLA		1
BAS/0582/15	58 Laindon Road, Billericay	Billericay	RLA		3
BAS/1057/13	17 West Park Crescent, Billericay	Billericay	RLA		1
BAS/1291/14	181 Noak Hill Road, Billericay	Billericay	RLA		1
BAS/1114/13	Gobians Farm, 120 Church Street, Billericay	Billericay	RLA		2
BAS/1260/13	Elm Cottage, Laindon Common Road, Little Burstead	Billericay	RLA		1
BAS/1495/14	Willows Barn, Clock House Road, Little Burstead	Billericay	RLA		1
BAS/1067/14	Land rear of Moby Dick, Church Road, Ramsden Bellhouse, Billericay	Ramsden Bellhouse	RLA		0
BAS/0106/13	All Saints Church & Community Centre, Crays Hill, Billericay	Crays Hill	RLA		1
BAS/0645/15	Unit 2 King George's Court, High Street, Billericay, Essex, CM12 9BY	Billericay	RLA		1
BAS/1059/15	273 Perry Street, Billericay Essex, CM12 0QP	Billericay	RLA		1
BAS/0949/15	Ballacraine, Crays Hill Road, Billericay, Essex, CM11 2YR	Billericay	RLA		1

BAS/0356/16	Sudburys Farm, Sudburys Farm Road, Little Burstead, Billericay Essex, CM12 9SP	Billericay	RLA		1
BAS/0914/14	47 Crown Road, Billericay, Essex	Billericay	RLA		1
BAS/0188/15	204 Norsey Road, Billericay Essex, CM11 1DB	Billericay	RLA		1
BAS/0731/15	21 Cavell Road, Billericay Essex, CM11 2HR	Billericay	RLA		3
BAS/1066/15	14 Chapel Street, Billericay Essex, CM12 9LU	Billericay	RLA		1
BAS/1572/15	43 Crown Road, Billericay, Essex, CM11 2AD	Billericay	RLA		1
BAS/0005/16	78 High Street, Billericay Essex, CM12 9BT	Billericay	RLA		3
BAS/0086/15	16 Orchard Avenue, Billericay, Essex, CM12 0SB	Billericay	RLA		1
BAS/0781/15	234 Perry Street, Billericay Essex, CM12 0QN	Billericay	RLA		1
BAS/0948/15	Oak Lodge, Buckwyns Chase, Billericay, Essex, CM12 0TN	Billericay	RLA		1
BAS/0971/15	9 Stock Road, Billericay, Essex CM12 0AD	Billericay	RLA		2
BAS/0712/16	Independant House, Radford Business Centre, Radford Way Billericay, Essex, CM12 0BZ	Billericay	RLA		6
BAS/1546/16	The Jays, 13 Norsey View Drive Billericay, Essex, CM12 0QR	Billericay	RLA		1
BAS/1784/16	Land At The Junction Of Stock Road & Radford Way, Billericay Essex	Billericay	RLA		1
BAS/0388/16	2 The Spinney Billericay Essex CM12 0AU	Billericay	RLA		1
BAS/0465/15	2 Sun Street, Billericay Essex, CM12 9LN	Billericay	RLA		8
BAS/0846/15	46 Rosslyn Road, Billericay Essex, CM12 9JN	Billericay	RLA		1
BAS/0961/15	30 Frithwood Lane, Billericay, Essex, CM12 9PJ	Billericay	RLA		1
BAS/0980/15	Strathmore, Tye Common Road Billericay	Billericay	RLA		1
BAS/1024/15	Raybourne Cottage, Rectory Road Billericay, Essex, CM12 9UA	Billericay	RLA		1
BAS/1228/15	10A Grange Road, Billericay Essex, CM11 2RB	Billericay	RLA		1
BAS/1226/16	1 Roman Way, Billericay Essex	Billericay	RLA		-9
BAS/1705/16	239 Noak Hill Road, Billericay Essex, CM12 9UN	Billericay	RLA		1
BAS/0134/17	101 Laindon Road, Billericay Essex, CM12 9LG	Billericay	RLA		1
BAS/1111/16	16 Scrub Rise, Billericay Essex, CM12 9PG	Billericay	RLA		1
BAS/1166/16	St Margarets Farm, Botney Hill Road, Billericay, Essex, CM12 9SJ	Billericay	RLA		2
BAS/0586/16	44 Mons Avenue, Billericay Essex, CM11 2HQ	Billericay	RLA		2
BAS/1336/14	The Ridings, Dunton Road, Billericay	Billericay	RLA		1
SS0035	Wickford market between Market Road and Woodlands Road, Wickford	Wickford	HELAA	0.45	16
SS0166	Land adjacent to Nevendon Rd (A132), east of Sutcliffe Close, to north of Champion Close	Wickford	HELAA	1.23	9

SS0177	Land at 157-167 Nevendon Road, Wickford	Wickford	HELAA	0.54	9
SS0206	Wickford Memorial Park community hall and car park, Rettendon View	Wickford	HELAA	0.22	5
SS0677	Cedar Avenue, Wickford	Wickford	HELAA	0.16	3
SS0036	Land at Market Avenue and market Road	Wickford	HELAA	0.1	6
SS0034	Wickford Car Park, rear of High Street and Lady gate Centre	Wickford	HELAA	0.78	42
SS0230	The Paddock, south of Salcott Crescent, east of Cranfield Park Road	Wickford	HELAA	1.17	21
SS0533	Larks Wood Park, Tresco Way	Wickford	HELAA	27.42	499
SS0187	Land north of Southend Road and east of the railway	Wickford	HELAA	11.42	133
SS0053	Land south and north of Barn Hall	Wickford	HELAA	8.46	142
SS0054	Land north and east of Station Avenue, Barn Hall	Wickford	HELAA	5.24	86
SS0164	The Wickford Education Centre, Alderney Gardens	Wickford	HELAA	1.59	25
SS0195	Downham View Farm, 47 Castledon Road, to rear of Studland Avenue and Southbourne Grove	Wickford	HELAA	2.24	28
SS0202	No 53 Castledon Road and Land from rear of No 53 to rear of No 81 Castledon Road	Wickford	HELAA	2.32	31
SS0550	Land r/o 200 London Road	Wickford	HELAA	5.34	70
SS0578	81 Castledon Road	Wickford	HELAA	0.38	6
SS0627	19 Castledon Road and adjoining land to the rear	Wickford	HELAA	0.47	6
SS0437	Land at Junction of Meadow Way and Hovefield Avenue, Basildon	Basildon	HELAA	0.93	17
SS0438	Land at Novedene, Hovefield Hovefield Avenue, Basildon	Basildon	HELAA	0.63	10
SS0279	Auckland, Hovefields Avenue, Wickford	Basildon	HELAA	0.39	6
SS0280	Sunnydene Farm, Hovefields Avenue, Wickford	Basildon	HELAA	1.92	33
SS0344	Lynview and Land West of Lyndale, Hovefields Drive, Wickford	Basildon	HELAA	0.55	10
SS0277	Lyndale, Hovefields Drive, Wickford	Basildon	HELAA	0.75	12
SS0345	Hawthorns, Hovefields Drive, Wickford	Basildon	HELAA	0.68	12
SS0278	Redlands, Hovefields Drive, Wickford	Basildon	HELAA	2.29	43
SS0248	Land at Faircroft, Hovefields Drive, Wickford	Basildon	HELAA	0.6	10
SS0250	Grangehurst, Honiley Avenue	Basildon	HELAA	0.29	4
SS0247	Land adjacent to Honiley, Honiley Avenue, Wickford	Basildon	HELAA	0.44	8
SS0500	Land off Honiley Avenue, Wickford	Basildon	HELAA	2.24	39
	Newhouse Farm Infill Area	Wickford	Plotland		10
	Ramsden View Road Infill Area	Wickford	Plotland		3
	Fairmead	Wickford	Plotland		7
	Wickford Lawns Plotland Infill Area, Shotgate	Wickford	Plotland		1
BAS/1028/15	2A Willowdale Centre, High Street Wickford, Essex, SS12 0RA	Wickford	RLA		3

BAS/0665/13	61 Station Avenue, Wickford, Essex	Wickford	RLA		3
BAS/0261/11	Play Area, Wethersfield Way, Shotgate, Wickford	Wickford	RLA		1
BAS/1310/11	29 Victoria Avenue, Wickford, Essex	Wickford	RLA		0
BAS/0056/12	Whitehouse Parade 285 - 291 London Road, Wickford	Wickford	RLA		3
BAS/0338/12	14-16 The Broadway, Wickford.	Wickford	RLA		0
BAS/0740/12	119 London Road Wickford	Wickford	RLA		1
BAS/0978/14	Bubbles Station Road Wickford	Wickford	RLA		0
BAS/0859/12	13 Cedar Avenue Wickford	Wickford	RLA		0
BAS/1084/11	Site to the rear of 1 Compton Terrace, Wickford, SS11 8QE	Wickford	RLA		0
BAS/1378/11	Land South Of Downham Road Downham Road, Wickford	Wickford	RLA		25
BAS/0244/06	Madley Lodge, 304 London Road, Wickford	Wickford	RLA		4
BAS/2171/79/D1	Land off Elizabeth Drive, Wickford	Wickford	RLA		0
BAS/0734/14	18 Wick Drive, Wickford	Wickford	RLA		0
BAS/0443/14	Irvon Cottage, Irvon Hill Road, Wickford	Wickford	RLA		4
BAS/0782/13	7 Alma Close, wickford	Wickford	RLA		0
BAS/0864/13	Land adjacent 3 Friern Gardens, Wickford	Wickford	RLA		0
BAS/0493/13	64 London Road, Wickford	Wickford	RLA		4
BAS/0876/14	Gibraltar House, Gibraltar Walk, Wickford	Wickford	RLA		8
BAS/0004/07	Land south of Southend Road, Wickford	Wickford	RLA		23
BAS/0387/14	Bakers Court, Hodgson Way, Wickford	Wickford	RLA		1
BAS/0481/10	Land north of Station Avenue, Wickford	Wickford	RLA		3
BAS/0791/15	Land adjacent to No. 41 Alicia Avenue, Wickford	Wickford	RLA		0
BAS/0654/05	1-29 Lower Southend Road, Wickford	Wickford	RLA		57
BAS/0001/06	3-31 Runwell Road, Wickford	Wickford	RLA		39
BAS/0329/13	1 Middle Mead, Wickford	Wickford	RLA		0
BAS/0372/13	1 Bruce Grove, Shotgate, wickford	Wickford	RLA		23
BAS/0382/11	Albion Snooker Club, 23-25 The Broadway, Wickford	Wickford	RLA		3
BAS/0524/11	The Old Bank, 2-8 The Broadway, Wickford	Wickford	RLA		5
BAS/1153/13	31-33 The Broadway, Wickford	Wickford	RLA		1
BAS/0727/14	Lyons Butchers, 324 Southend Road, Wickford	Wickford	RLA		0
BAS/0443/03	North Twinstead	Wickford	RLA		1
BAS/0443/13	Land north of Twinstead Road, Wickford	Wickford	RLA		3
BAS/0961/88/O	Phase 111, The Wick, Wickford	Wickford	RLA		68
BAS/1473/90/O	The Wick, Phase 2, Meadows	Wickford	RLA		52
BAS/1765/85/B	The Wick, Phase 2, Wickford	Wickford	RLA		9
BAS/1310/15	Riverview, London Road Wickford, Essex, SS12 0FE	Wickford	RLA		2

BAS/1124/16	70 London Road, Wickford, Essex SS12 0AN	Wickford	RLA		0
BAS/1448/16	65 Elder Avenue, Wickford, Essex SS12 0LP	Wickford	RLA		0
BAS/1459/16	7 - 8 Willowdale Centre, High Street, Wickford, Essex, SS12 0RA	Wickford	RLA		3
BAS/1756/16	Garage Block, Market Avenue Wickford, Essex	Wickford	RLA		2
BAS/1800/16	2 Nevendon Road, Wickford, Essex SS12 0QG	Wickford	RLA		0
BAS/0549/15	185 Swan Lane, Wickford, Essex SS11 7DJ	Wickford	RLA		0
BAS/0921/15	Broadway House, 1 - 7 The Broadway, Wickford, Essex	Wickford	RLA		8
BAS/1098/15	Rettendon Gardens Garages Rettendon Gardens Wickford Essex SS11 7ES	Wickford	RLA		1
BAS/0139/16	15 Jersey Gardens, Wickford, Essex, SS11 7AG	Wickford	RLA		1
BAS/0348/16	Diamond (Mechanical & Electrical) Engineering Services, Elm Court Southend Road, Wickford, Essex SS11 8DU	Wickford	RLA		4
BAS/1234/16	39 Southend Road, Wickford, Essex SS11 8BA	Wickford	RLA		1
BAS/1694/16	8 Fanton Walk, Shotgate, Wickford Essex, SS11 8QT	Wickford	RLA		0
BAS/1320/15	Land West Of Radwinter Avenue Wickford, Essex, SS12 9SH	Wickford	RLA		11
BAS/0330/16	Great Broomfields , Cranfield Park Road, Wickford, Essex, SS12 9EP	Wickford	RLA		0
BAS/0279/16	Land Adjacent 83 Grange Avenue Wickford, Essex, SS12 0LY	Wickford	RLA		1
BAS/0672/16	15 Castledon Road, Wickford, Essex SS12 0EF	Wickford	RLA		0
BAS/0554/15	Barn Farm, Cranfield Park Road, Wickford	Wickford	RLA		1
WICK TC	Wickford Town Centre	Wickford	Town Centre	22.38 ha	7

Table F - Modelled 2025 Employment Assumptions

BBC Policy Ref	Site Ref	Site Ref (EDNA)	Item ID (Vacant/Underutilised land)	Address:	Site Type	Employment Land Use Class				
						B1a/b (Office)	B2/B1c (Light Industry/Industrial Estate)	B8 (Warehousing)	A? (Retail)	(Commercial Leisure)
						Final Growth Scenario (Floorspace m ²)	Final Growth Scenario (Floorspace m ²)	Final Growth Scenario (Floorspace m ²)	Final Growth Scenario (Floorspace m ²)	Final Growth Scenario (Floorspace m ²)
E8		B54a	25	East Basildon Extension	Potential Employment Sites - Green Belt	0	0	7,500		0
E8b		B54b	26	Burnt Mills Safeguarded Area	Potential Employment Sites - Green Belt	0	0	0		0
E5		B56	27	Gardiners Lane (protected under BAS E1)	Key Employment Site	11,044	13,744	0		0
E3	V11	B46	17	Ford Technical	Vacant/Underutilised Land	11,628	0	0		0
E3	V11	B47	18	Ford Technical	Vacant/Underutilised Land	0	0	0		0
E3	V11	B48	19	Ford Technical	Vacant/Underutilised Land	0	0	0		0
E2		B38	9	Cranes Industrial Estate	Vacant/Underutilised Land	0	3,457	0		0
E2		B41	12	Cranes Industrial Estate (Costa)	Vacant/Underutilised Land	0	0	0		0
E2	VE3	B32	3	Burnt Mills	Vacant/Underutilised Land	0		4,200		0
E2	VE3	B33	4	Burnt Mills	Vacant/Underutilised Land	0	0	0		0
E2	VE3	B34	5	Burnt Mills	Vacant/Underutilised Land	0	0	0		0
E2	VE3	B35	6	Burnt Mills	Vacant/Underutilised Land	0	0	0		0
E2	VE3	B36	7	Burnt Mills	Vacant/Underutilised Land	0	960	0		0
E2	VE3	B37	8	Burnt Mills	Vacant/Underutilised Land	0	0	0		0
E2	VE7	B45	16	Pipps Hill	Vacant/Underutilised Land	0	1,901	2,376		0
E2	VE6	B42	13	Festival Business Park	Vacant/Underutilised Land	0				0
E2	VE6	B44	15	Festival Business Park	Vacant/Underutilised Land	0	0	5,940		0
E6		B53a	24	Terminus Drive Pitsea (protected under BAS E2)	Key Employment Site	0	0	4,350		0
E2			28	Basildon Town Centre	Existing Employment Site - Urban Area	0	0	0	1,000	5,000
E2	VE2	B31	2	Radford Way	Vacant/Underutilised Land	0	271	0	0	0

E2	VE1	B30	1	Wickford Business Park	Vacant/Underutilised Land	0	0	600	0	0
E2			29	Wickford Town Centre	Existing Employment Site - Urban Area	0	0	0	1,900	500
E9		B26/B51	22	Bluehouse Farm	Existing Employment Site - Rural Area	0	0	240	0	0
E9		B49b	20	White Bridge Farm	Existing Employment Site - Rural Area	0	0	900	0	0
E9		B52	23	Annwood Lodge	Existing Employment Site - Rural Area	0	365		0	0
E9		B50	21	Sadlers Farm	Existing Employment Site - Rural Area	0	0	0	0	0
			30	Mayflower Retail Park	Retail	0	0	0	0	0
			31	Pipps Hill Retail Park	Retail	0	0	0	0	0
R6			32	Billericay Town Centre	Retail	0	0	0	500	100
R3			33	Laindon Town Centre	Retail		0	0	2,480	100
R4			34	Pitsea Town Centre (inc. Pitsea Retail Park)	Retail	0	0	0	1,000	250
H13			35	East of Basildon (Pitsea / Bowers Gifford)	Retail	0	0	0	0	0
H14			36	Land South of Wickford	Retail	0	0	0	0	0
H20-H23			37	South Billericay	Retail	0	0	0	0	0
			38	West Wickford	Retail	0	0	0	0	0
H23			39	Land East of Frithwood Lane	Retail	0	0	0		0
Hectares						2.3	2.07	2.6	0.7	0.60

Appendix D: Visum Link Flow Plots

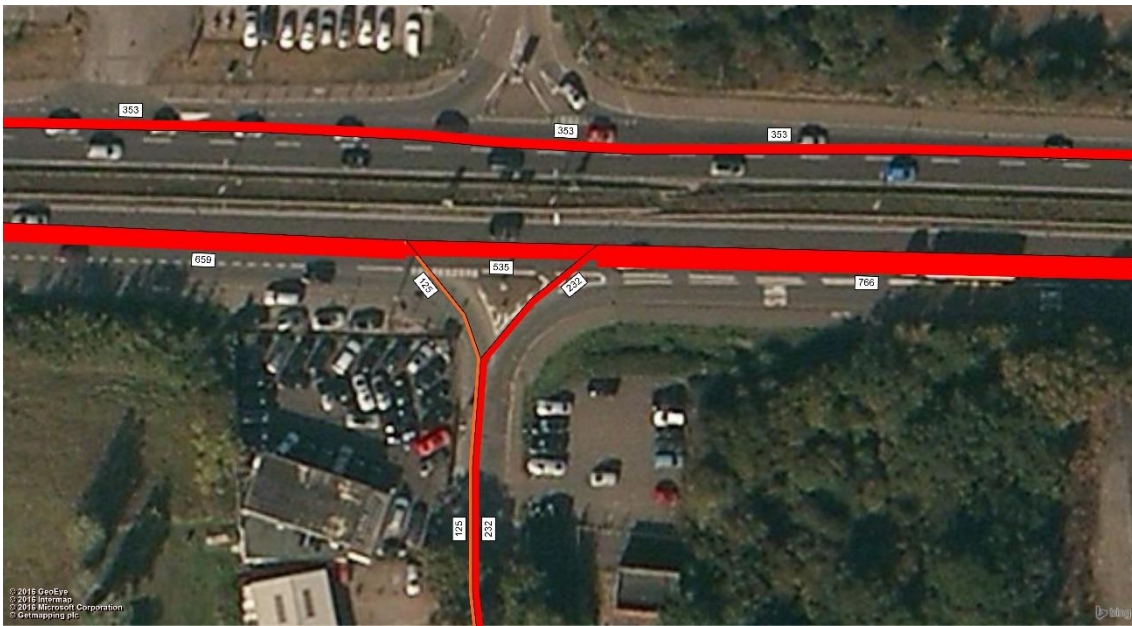


Figure C - 2034 AM peak hour development flows modelled at Pound Lane / A127 junction



Figure D - 2034 AM peak hour development flows modelled at Pound Lane / B1464 London Road junction

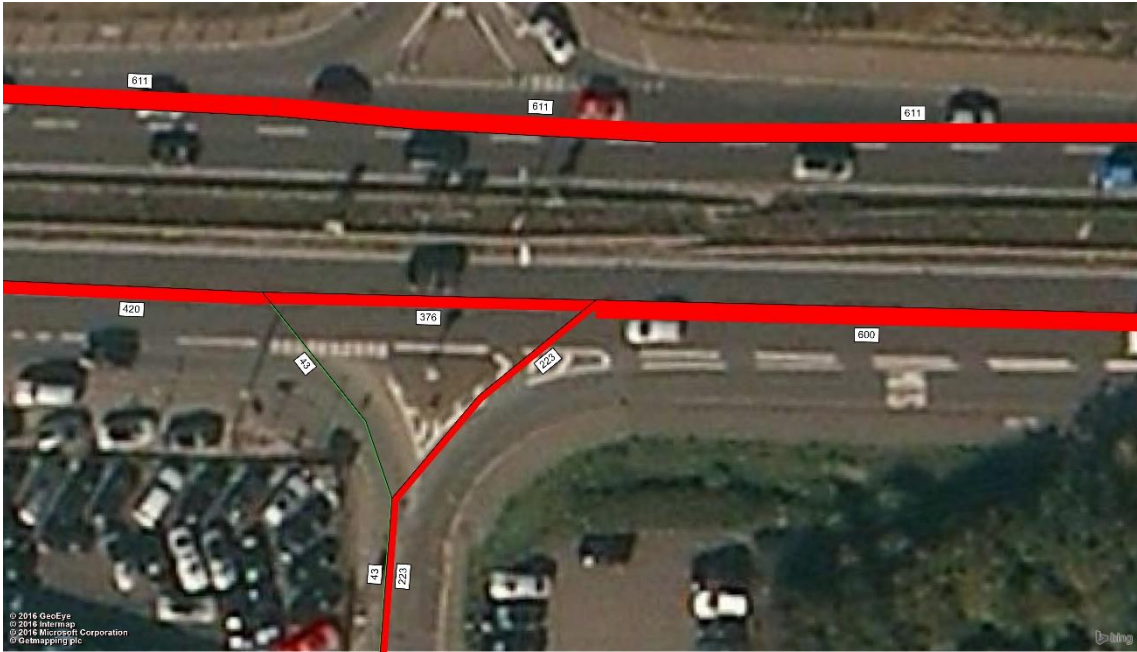


Figure E – 2034 PM peak hour development flows modelled at Pound Lane / A127 junction



Figure F – 2034 PM peak hour development flows modelled at Pound Lane / B1464 London Road junction